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Paul Tappan Award Winner Keynote Address:

The Justice Gap and the Promise of Criminological Research[1]

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In the little world in which children have their existence," says Pip in Charles Dickens's Great Expectations, "there is nothing so finely perceived and finely felt, as injustice.… But the strong perception of manifest injustice applies to adult human beings as well. What moves us, reasonably enough, is not the realization that the world falls short of being completely just—which few of us expect—but that there are clearly remediable injustices around us which we want to eliminate.

Amartya Sen, *The Idea of Justice* (2009, p. vii).

It is always an honor to receive an academic award, especially a career achievement award, because it serves as a recognition of the many lonely, and often invisible, hours, days, weeks, and years put into conducting and writing up research, as well as, presumably, the quality and impact of the research itself. But in highlighting the achievements of the individual, it is easy to lose sight of the influence of the collective. Very few things in life are done in isolation. Academic research and writing are no different: Scholarship is always a collective endeavor (Merton, 1965).

Like all of us, I owe a major debt of gratitude to those who have raised and socialized me into the discipline of criminology. In my career, I have had the good fortune to be mentored by a number of outstanding criminologists (such as Frank Zimring, Jerome Skolnick, Malcolm Feeley, and the late Sheldon Messinger), and later to be surrounded by excellent colleagues (such as Joan Petersilia, the late Gilbert Geis, Henry Pontell, Cheryl Maxson, Michael

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Gottfredson, and Elliott Currie), who have all been recipients of the Paul Tappan Award from the Western Society of Criminology. This is one, among many, of the reasons that receiving this Award is such an honor.

The research and scholarship of my former criminological mentors and colleagues, as well as that of virtually all (if not all) members of this Society, shares at least one common, unifying feature. Regardless of our methodological approach or theoretical bend, through our scholarship we all seek, in one form or another, to help the criminal justice system become more just—or, in the words of Nobel Prize-winning economist Amartya Sen, to eliminate "the clearly remedial injustices around us" (Sen, 2009, p. vii). I call this the justice gap. It can be defined as the difference between the promise of justice inherent in our formally democratic, legal institutions and the actual delivery of justice in these institutions on the ground.

So much of our best criminological scholarship seeks to understand and close the justice gap. Consider research on prisons and the effects of incarceration (Clear, 2009, 2014; Calavita & Jenness, 2013; Simon, 2014), plea bargaining and lower criminal courts (Feeley, 1979; Vera Institute, 1974), capital punishment (Baldus, Woodworth, & Pulaski, 1990; Kaplan, 2012; Zimring, 2003), juvenile justice (Feld, 1999; Zimring, 2005), and policing (Marx, 1988; Skolnick, 1966; Zimring, 2012), to take just a few examples. These studies tend to be purpose-driven and problem-based (Miller, 2011), and they demonstrate the promise that criminological research holds to expose the justice gap in specific legal practices and institutions and to lead the way to a better understanding of the reforms necessary to close (or at least mitigate) it. Criminologists are in a unique position to expose and study the justice gap in the American legal system. Bringing methodologically rigorous empirical research skills and data-driven knowledge to bear on these problems is our comparative advantage. Put differently, we are uniquely situated to identify and help redress the justice gap.

In the remainder of this article, I will discuss how several justice gaps in the American criminal justice system have motivated the arc of my research career so far. More specifically, I will describe my empirical interest in American police interrogation, false confessions and the wrongful conviction of the innocent, as well as my applied efforts to improve the quality and delivery of justice in these areas. Like so many of us, I am interested in studying a set of related problems in order to contribute to a collective body of knowledge that may help a variety of constituencies—researchers, criminal justice officials, the media, policy-makers, and ordinary individuals—better understand why certain justice gaps occur and what can be done to remedy them. My hope is that this essay will offer broader scholarly lessons beyond the study of American interrogation, false confessions to police, and the erroneous conviction of the innocent.

The (Coercive) Interrogation and (False) Confession of Bradley Page

In the fall of 1984, I was a senior at the University of California, Berkeley. So was Bradley Page, though I did not know him. On November 4, 1984, his girlfriend Roberta "Bibi" Lee, also a Berkeley undergraduate, disappeared after jogging in the Redwood Regional Park in the Oakland Hills. She would be found murdered—from three massive breaks at the back of her skull—in the same area five weeks later on December 9, 1984. Although there was zero evidence linking Page to the crime, the Oakland police detectives investigating the homicide assumed from the moment that Lee's body was found that Page had murdered Lee—for no other reason than that he was the victim's boyfriend, as one of the detectives would later explain on national television—and asked him to come in for questioning on the very next day. After more than 16 hours of sustained, high pressure interrogation and custody, Page eventually gave a vague, confused, and speculative confession statement to murdering Bibi Lee as well as to raping her dead body. A jury would eventually acquit Page of first degree and second degree intentional murder at his first trial in 1986, but he was later convicted of voluntary manslaughter at his second trial in 1988 and served almost three years in state prison.

Numerous social scientists have analyzed Page's case and concluded that there is overwhelming evidence that his confession statement is false, and no evidence either corroborating it or linking him to the crime has been found (Davis, 2010; Leo & Ofshe, 1998, 2001; Pratkanis & Aronson, 1991; Wrightsman & Kassin, 1993). After extensively analyzing primary source documents in Page's case, I came to believe Page's confession statement to be completely false (Leo & Ofshe, 1998, 2001)—"bogus" in the words of the famous social psychologist Elliott Aronson ("Eye to Eye with Connie Chung," 1994) —and Page to be completely innocent of Lee's murder, for which he was wrongfully convicted and incarcerated. Page's confession statement contains numerous indicia of unreliability that we now know are the hallmarks of a false confession (see Leo, Neufeld, Drizin, & Taslitz, 2013). It is replete with provable errors, physical impossibilities, contradictions, inconsistencies, implausibilities, and incoherencies; it does not fit the known crime facts; it contains no details that only the true perpetrator and not the police would have known;

and it is not corroborated. Instead, Page's confession statement is contradicted and all but rendered impossible by the physical evidence. Consider, for example, the following facts:

1. Page stated that Lee died after he slapped her with the back of his hand, causing her to fall and become unconscious as a trickle of blood came from her nose. But the backhanded slap described in Page's confession statement could have not killed Lee because it could not have caused Lee's three large skull fractures, which neither the police nor Page were aware of at the time of his interrogation. (It was subsequently learned that Lee's death resulted from three separate blows to the head by a sharp-edged weapon.)

2. Page stated that he had sex with Bibi Lee's dead body (a police theory at the time) after killing her, but due to rigor mortis, it was later learned that this would have been impossible, and no semen was found during the autopsy.

3. Page stated that he made love to the dead body on the blanket taken from his car, but the blanket contained no evidence of any sexual activity; no bloodstains (which would have been expected from Lee's massive, and massively bloody, head injuries); no signs of having been washed; and no hairs from Lee.

4. Page stated that he used a spare hubcap that was in his vehicle to bury Lee, but the fibers and soil from the hubcap did not match either the fibers of Lee's clothing or the soil where Lee's body was found.

5. Page stated that he dragged Lee's body more than one-hundred yards before burying it, but no trail of blood was found by the 16 explorer scouts and six dog tracking teams who, beginning the day after Lee's disappearance, spent hundreds of hours combing the area where Lee's body was eventually found.

In addition, Oakland police and Alameda County prosecutors ignored eyewitness evidence pointing to another suspect in Lee's murder. A witness, Karen Marquardt, reported seeing a bearded man abducting a woman into a van near the Redwood Regional Park on the day Lee disappeared and subsequently identified Lee as the person she saw struggling with her apparent abductor. Twelve days later, a bloodhound picked up Lee's sent where Marquardt had observed the struggle and then lost it, which is consistent with a woman having gotten into vehicle there. Moreover, in 1994, the CBS news show "Eye to Eye" identified Michael Ihde as Lee's probable murderer. As Richard Ofshe and I wrote more than a decade ago,

> Ihde, a convicted multiple murderer, had told fellow prisoners in the State of Washington that he had killed several women in the San Francisco Bay Area, one of whom was non-White, a decade earlier. Ihde's appearance resembled the man seen hustling Lee into a van shortly before her disappearance. Lee was within Ihde's territory at the time, and her killing matched the victim type and murder-rape pattern Ihde had established. When Alameda County Sheriff's Department learned of Ihde, they re-opened several contemporaneous murder files and discovered that Ihde's DNA matched semen found in a woman who had been kidnapped (as was Lee according to eyewitness testimony), murdered (as was Lee), and raped (as Lee might have been) in the East Bay only three weeks after Lee's murder. (Leo & Ofshe, 2001, pp. 357–358)

Ihde not only fit the description of Lee's abductor, thus corresponding to Marquardt's identification, but also worked as a delivery man at the time and had access to a van only six miles away from where Lee was killed. But Alameda County prosecutors disregarded the evidence implicating Ihde and refused to re-open the case.

Whether or not Michael Ihde killed Bibi Lee, there was never any meaningful evidence that Bradley Page killed her or any meaningful evidence corroborating his bogus confession[2]. So why did Bradley Page falsely confess? The answer: psychologically deceptive, manipulative and coercive police pressures and strategies that, over the course of a lengthy interrogation, scared and confused a naive young man into (a) losing confidence in his memory; (b) temporarily believing that he might have blacked out and killed his girlfriend, if he killed her, despite having no memory of doing so, and then (c) speculating about how this might have hypothetically happened to satisfy the demands of his overbearing interrogators. From 10:12 A.M. on December 10, 1984 to 2:15 A.M. on December 11th, Page was repeatedly interrogated at the Oakland Police Department, first by two detectives (Sergeants Harris and Lacer), then by a polygraph examiner (Sergeant Furry), then by the Sergeants Harris and Lacer again, and finally by Alameda County Deputy District attorney Aaron Payne and Inspector Kevin Leong (see Davis, 2010 for a fuller account). Parts of Page's non-

confrontational interviews were recorded, but all of the interrogations, including the post-polygraph interrogation, were not.

During the many hours of unrecorded interrogation, Sergeants Harris and Lacer repeatedly accused Page of murdering Lee; repeatedly attacked his denials as false, implausible, or impossible; and repeatedly lied to him about overwhelming evidence that they pretended to have, claiming it objectively and irrefutably established his guilt beyond any doubt[3]. Sergeants Lacer and Harris repeatedly told Page that he failed the polygraph test, that eyewitnesses had seen him kill Bibi Lee, and that his fingerprints were found at the crime scene—none of which was true. Harris and Lacer's guilt-presumptive, accusatory interrogation techniques caused Page to lose confidence in the reliability of his memory, to doubt himself and to entertain the possibility that he may have blacked out and killed Lee without realizing it. When Page asked how he could possibly have killed Lee without any memory of it, Harris and Lacer repeatedly suggested that he had repressed his memory of the murder. If he tried to remember hard enough, it would come back. As the lengthy interrogation wore on, Page became more confused, exhausted, desperate, and uncertain.

Lacer and Harris continued to pressure Page by threatening him with the specter of spending the rest of his life in prison if he did not admit to killing Lee and supply them with details of the crime. Convinced by Lacer and Harris that he must have somehow killed Lee and frightened that he would go to prison for the rest of his life if he did not come up with a story that satisfied them, Page began to confabulate an account of how he might have killed Lee even though he possessed no memory of the event. Harris and Lacer persuaded Page to imagine a scenario in which he could have killed Lee. After Lacer asked Page to close his eyes and try to remember what happened, Page began to describe the images that came to him but could not remember a time, place, or motive for these images. According to Page, the detectives then educated him about the details of the crime—such as the location of Bibi Lee's body, the location of her head and nose injuries, and the method of burial—and they rehearsed his account of the crime. As Davis (2010) notes,

> Page reported that the officers would suggest something, and he would imagine their suggestion, or they would ask if something happened and he would put it into the scenario (such as if he had a branch or rock, or she had hit her head on something—things the detectives would have expected based on what they knew of the location of the body and the nature of her injuries). Page later described the process as using his imagination to construct a story, much like making a movie, recounting how he would have killed her if he had killed her. (p. 2016)

After hours of unrecorded interrogation, Harris and Lacer turned the tape recorder back on, walked Page through the rehearsed story, and recorded Page's confession statement.

Page retracted his confession statement almost immediately after it was given, first to the district attorney who subsequently questioned him at the Oakland Police Department and later to detectives Harris and Lacer. But Page's retraction did not matter. As social science studies would many years later show, once prosecutors decided to introduce Bradley Page's confession statement into evidence against him at trial, it was almost certain that he would be convicted (see Drizin & Leo, 2004; Gould, Carrano, Leo, & Hail-Jares, 2014; Kassin, 2012). It did not matter that his confession statement was vague, hypothetical, inconsistent, contradictory, and not supported by any independent evidence. As the United States Supreme Court noted in the same year as Page's first trial (Colorado v. Connelly, 1986),

> No other class of evidence is so profoundly prejudicial…. Triers of fact accord confessions such heavy weight in their determinations that the introduction of a confession makes the other aspects of trial in court superfluous, and the real trial, for all practical purposes, occurs when the confession is obtained. (p. 182)

Notwithstanding the "profoundly prejudicial" impact of confession evidence on jurors, Bradley Page was a victim out of time. He had falsely confessed, but the modern social science of false confessions had not yet arrived—Kassin and Wrightman's (1985) seminal book chapter that described, typologized, and, in effect, defined a field of study would be published one year after Bradley Page had falsely confessed. He was convicted years before the DNA revolution in criminal justice would set free scores of innocent prisoners, some on death row, who had been convicted of crimes they did not commit (Garrett, 2011; Scheck, Neufeld, & Dwyer, 2000;). Bradley Page was falsely accused and factually innocent, but he did not have a conceptual language with which to persuasively express his innocence. Bradley Page's lawyers had not been trained in how to analyze police interrogation techniques, understand the psychology of police coercion and contamination, or how to put on a false confession defense—because criminal defense

attorneys in that era had yet to develop an understanding of these areas. In 1984, it was still widely assumed that "false confessions are made by freaks and occur freakishly" (Ayling, 1984, p. 1155). Bradley Page's defense attorney hired one of the leading social psychologists in the world, but Professor Elliott Aronson, like virtually all social psychologists of his era, had never actually studied the psychology of police interrogations or interrogation-induced false confessions.

In other words, in a historical sense, the deck was stacked against Bradley Page. Had Page falsely confessed one decade later in 1994, there would have been a thriving social science research literature on interrogation, coercion, and police-induced false confessions; his defense attorney would have been schooled in interrogation techniques and how to put on a false confession defense; and numerous academic experts would have been available to testify at his trial, explaining to the jury how and why psychological police interrogation methods can, and sometimes do, elicit false confessions from the innocent (Gudjonsson, 1992; Ofshe, 1989; Wrightsman & Kassin, 1993).

Although I did not know Bradley Page, his case has stayed with me over the years. When he "confessed" to Oakland Police, we were the same age and in the same graduating class at UC Berkeley, though Page would not graduate. Under different circumstances, I could have been Bradley Page. The Oakland Police had not only coerced a false confession statement from Page that led to an erroneous arrest, prosecution, conviction, and incarceration but also, as in so many other cases of false confession and wrongful conviction (see Leo & Ofshe, 1998; Warden & Drizin, 2009), the police interrogators who coerced his false statements on December 10, 1984 had essentially wrecked his life (Page, 1998). And, if Michael Ihde really did kill Bibi Lee, the Oakland police effectively enabled the true perpetrator to rape and murder other young women.

Inside the Interrogation Room

Bradley Page was still in prison in the fall of 1990 when I entered the graduate program in Jurisprudence and Social Policy Program at U.C. Berkeley. My research interests at the time were focused broadly on the history and practice of police interrogation in America and its implications for law, public policy, and justice. More specifically, I was interested in whether police interrogation in routine felony cases resembled the kinds of interrogations described in appellate court opinions, particularly those by the United States Supreme Court—in what used to be called the study of law in action (Gould & Barclay, 2012). In my initial library research on the subject, I was surprised to learn that there was not a thriving empirical criminological literature describing and analyzing what occurred, on the ground, in police interrogation rooms across the country. In fact, there was almost no empirical criminological research describing and analyzing what occurred, on the ground, in police interrogation rooms across the country. It was this void that my doctoral dissertation sought to contextualize and fill.

My doctoral research involved the analysis of archival and historical materials (e.g., government commission reports, newspaper stories, court cases, early police interrogation training manuals and materials, etc.), as well as contemporary case documents (e.g., police interrogation tapes and transcripts, police reports, pre-trial and trial transcripts, contemporary police interrogation training manuals and materials, etc.). Perhaps most significantly, I contemporaneously observed 122 felony interrogations inside the Oakland Police Department—yes, the same police department that had wrung a false confession from Bradley Page less than a decade earlier—as well as another 60 felony interrogations by videotape in the nearby Hayward and Vallejo Police Departments. I also attended and participated in numerous introductory police interrogation training courses and seminars across the country, including one inside the Criminal Investigation Division of the Oakland Police Department, and I interviewed many police interrogators, criminal suspects, and criminal justice officials, such as police managers, prosecutors, and judges. Among those I interviewed were Sergeant Ralph Lacer, who (along with Sergeant Harris) had extracted Bradley Page's false confession statement, and Kenneth Burr, who had successfully prosecuted Bradley Page.

The empirical findings and analysis of my doctoral research (Leo, 1994) were published in several articles preceding and following the dissertation itself (Leo, 1992, 1996a, 1996b). I was the first criminologist to contemporaneously observe and analyze, both qualitatively and quantitatively, the interrogation process in America (Leo, 1996a, 1996b; see also Feld, 2013). The results of this empirical research carried implications for understanding and closing the justice gap. My big picture analysis documented and analyzed a historical shift from physically coercive interrogation techniques to psychologically manipulative and deceptive ones that had occurred over the course of the twentieth century, as well as a corresponding normative shift in public attitudes and a significant increase in police professionalism. This research also documented smaller changes such as the various psychological

interrogation techniques police used (e.g., accusation, confrontation with false evidence, overcoming denials, appeals to self-interest, minimization, etc.); which interrogation techniques were more and less successful at eliciting admissions and confessions; overwhelming police compliance with the letter of the required fourfold Miranda warnings, but nevertheless various police strategies to induce criminal suspects to waive their Miranda rights; that most criminal suspects waive their Miranda rights and consent to interrogation, though this is far less likely among suspects with prior criminal records (especially felony records); and that most routine felony interrogations last less than an hour in length (Leo, 1992, 1996a, 1996b). This research was designed to shed light on one of the earliest and most influential stages of the legal process.

Shortly after publishing my doctoral research, I turned my attention to the social psychology of police interrogation and confession-taking to explain the process of influence and decision-making through which police elicit admissions and confessions. After analyzing more than 150 case files, Richard Ofshe and I argued that police interrogation in America is a sequential two-step process of psychological pressure and persuasion (Ofshe & Leo, 1997a, 1997b). In the first step of interrogation the investigator usually relies on several well-known interrogation techniques and strategies to persuade the suspect that he is caught and thus powerless to change his situation. The investigator is likely to accuse the suspect of committing the crime, cut off the suspect's denials, block any objections, and interrupt or ignore the suspect's assertions of innocence. If the suspect offers an alibi, the interrogator will attack it as inconsistent, contradicted by all of the case evidence, implausible or simply impossible. One of the most effective techniques used to persuade a suspect that his situation is hopeless is to confront him with seemingly objective and incontrovertible evidence of his guilt, whether or not any actually exists (Drizin & Leo, 2004; Moston, Stephenson & Williamson, 1992; Ofshe & Leo, 1997a).

Richard Ofshe and I first named this technique the false evidence ploy (Ofshe & Leo, 1997a), and it has since been studied extensively by psychologists (Forrest, Woody, Brady, Batterman, Stastny, & Bruns, 2012; Kassin & Keichel, 1996; Kebbell, Hurren, & Roberts, 2006; Nash & Wade, 2009; Perillo & Kassin, 2011; Redlich & Goodman, 2003; Woody & Forrest, 2009; Woody, Forrest, & Yendra, 2014; Wright, Wade, & Watson, 2013). American police often confront suspects with fabricated evidence, such as nonexistent eyewitnesses, false co-conspirator testimony, false fingerprints, make-believe videotapes, and fake polygraph results (as in the case of Bradley Page). The purpose of false evidence ploys is to convince the suspect that the state's case against him is so compelling and irrefutable that his guilt can be established beyond any conceivable doubt and therefore that arrest, prosecution, and conviction are inevitable. These techniques—accusation, cutting off of denials, attacking alibis, confronting the suspect with real or non-existent evidence—are often repeated as the pressures of interrogation escalate. They are designed to increase a suspect's anxiety and reduce a suspect's subjective self-confidence that he will survive the interrogation without being arrested, effectively conveying that there is no way out of his predicament (Davis & O'Donohue, 2004; Leo, 2008; Ofshe & Leo, 1997a, 1997b).

The second step of interrogation is designed to persuade the suspect that the benefits of compliance and confession outweigh the costs of resistance and denial—and thus that the only way to improve his otherwise hopeless situation is by admitting to some version of the offense. In this part of the interrogation process, the investigator presents the suspect with inducements that communicate that he will receive some personal, moral, communal, procedural, material, legal, or other benefit if he confesses, but that he will experience some corresponding personal, moral, communal, procedural, material, legal, or other cost if he fails to confess. Ofshe and Leo (1997a, 1997b) have suggested that these inducements can be arrayed along a continuum ranging from appeals to morality (at the low end) to appeals to how the criminal justice system is likely to react to the suspect's denial versus confession (in the mid-range) to implicit or explicit promises or suggestions of leniency and threats or harsher treatment or punishment (at the high end). Interrogators sometimes communicate—either indirectly through pragmatic implication (Davis, Leo, & Follette, 2010; Horgan, Russano, Meissner, & Evans, 2012; Kassin & McNall, 1991; Klaver, Lee, & Rose, 2008 Narchet, Meissner, & Russano, 2011) or more explicitly—that the suspect will receive more lenient treatment if he confesses but harsher punishment if he does not (Leo, 2008). In some cases, the coercion involves blatant threats of punishment or harm (such as threats of longer prison sentences, the death penalty, or harm to one's family members) and/or explicit promises of leniency and/or immunity (such as offers of outright release from custody, counseling instead of prison, or reduced charges).

Many suspects confess only after the techniques and strategies of the interrogator have persuaded them that—in light of what they perceive to be their limited options and the consequences of choosing denial over silence—confession is the most rational course of action (Leo, 2008; Ofshe & Leo, 1997a, 1997b; Yang,

Madon, & Guyll, in press). The psychological logic of modern interrogation is that it makes the irrational— admitting to a crime that will likely lead to punishment—appear rational, especially if the suspect believes that he is inextricably caught or perceives his situation as hopeless and cooperating with authorities as the only viable course of action (Davis & O'Donohue, 2004; Leo, 2008; Ofshe & Leo, 1997a, 1997b). One of the reasons that the techniques of psychological interrogation are so effective is that they exert relentless time pressure on suspects to confess (Ofshe & Leo, 1997a, 1997b), interrupting their ability to evaluate the actual long-term consequences of making or agreeing to a confession by focusing instead on the immediate perceived benefits of escaping the short term pressures of interrogation (Madon, Guyll, Scherr, Greathouse, & Wells, 2012; Madon, Yang, Smalarz, Guyll, & Scherr, 2013; Ofshe & Leo, 1997a, 1997b; Yang et al., in press).

False Confessions: Causes and Consequences

An Overview

I have studied the psychological dynamics of interrogation techniques and their influence on the perceptions and decision-making of suspects inside police stations in order to better understand how and why they lead to true and false confessions in the real world (Leo, 2008). A number of social psychologists have subsequently studied how and why certain interrogation techniques lead to both true and false confessions inside the laboratory, including the greater risk that some techniques pose for eliciting false confessions (Horgan et al., 2012; Houston, Meissner, & Evans, 2014; Narchet et al., 2011; Russano, Meissner, Narchet, & Kassin, 2005). False confessions, and the wrongful convictions of the innocent that they sometimes spawn, profoundly implicate the justice gap in American criminal justice. As the Bradley Page case has illustrated, false confessions and wrongful convictions raise deeply troubling questions: In a system with so many constitutional rights and procedurals safeguards—a Fifth Amendment privilege against self-incrimination and proof "beyond a reasonable doubt," among them—how is it possible for an innocent suspect to be made to falsely incriminate himself and then be erroneously convicted? Why does it happen so often? And what can be done to prevent, or at least minimize, false confessions and the wrongful convictions they create?

While Bradley Page may have seemed like an outlier or a "freak" (Ayling, 1984) in 1984, in the last 30 years empirical social scientists have documented and analyzed hundreds of police-induced false confessions in the American criminal justice system (Bedau & Radelet, 1987; Drizin & Leo, 2004; Garrett, 2011, in press; Gould et al., 2014; Gross, Jacoby, Matheson, Montgomery, & Patel, 2005; Gross & Shaffer, 2012; Leo & Ofshe, 1998; Warden, 2003) and even more erroneous convictions of the innocent (Innocence Project, 2014; University of Michigan Law School, 2014). We now know the stories of hundreds of Bradley Pages in the American criminal justice system, many of whom have suffered more lengthy incarceration before their eventual release from prison. Moreover, in many of these cases, police elicited false confessions from multiple innocent suspects (Drizin & Leo, 2004). Given the historical values that underlie our system of criminal justice, there is arguably no worse error in the American legal system than the erroneous conviction of the innocent (Findley, 2008; Leo, 2008). And yet, as many as a quarter of all wrongful convictions involve interrogation-induced false confessions (Innocence Project, 2014). As the late Welsh White (2001) pointed out, "as soon as a police-induced false confession is accepted as true by the police, the risk that the false confession will lead to a wrongful conviction is substantial" (p. 185).

Despite their prevalence, false confessions to police remain highly counter-intuitive to most people, as multiple recent surveys of the American public have shown (Blandon-Gitlin, Sperry, & Leo, 2011; Chojnacki, Cicchini, & White, 2008; Costanzo, Shaked-Schroer, & Vinson, 2010; Henkel, Coffman, & Dailey, 2008; Leo & Liu, 2009). Most people are highly skeptical that an innocent person could be made to falsely confess during police interrogation and thus tend to assume that all confessions are true unless the suspect has been physically tortured or is mentally ill. Elsewhere I have called this the Myth of Psychological Interrogation (Leo, 2001). The recent survey studies mentioned above bear this out.

The myth of psychological interrogation persists for several reasons. Most people do not know what occurs during interrogation because they have not experienced it firsthand and do not know anyone who has. They are also not familiar with how police are trained to interrogate suspects or with studies that describe actual interrogation practices. Most people are therefore unaware of the highly deceptive, manipulative, and stress-inducing techniques and strategies that interrogators use to elicit confessions. Nor are they typically aware that these methods have led to numerous false confessions. Further, most people assume that individuals do not act against their self-interest or engage in self-destructive or irrational behaviors. They therefore assume that an innocent person would not confess to a crime he did not commit

unless there existed an understandable reason (like physical coercion or mental illness) for doing so.

Thus, most people cannot imagine that they themselves would falsely confess, especially to a serious crime. More generally, most people fall prey to what social psychologists have called the fundamental attribution error (Davis & Leo, 2010; Ross, 1977): the tendency to discount situational influences on behavior and assume that behavior is fundamentally voluntary, even in coercive environments. It is perhaps not surprising to social psychologists that most people continue to view false confessions as irrational; cannot understand why an innocent person would make one; and believe that they themselves could never be made to falsely confess to a crime, especially a serious crime, in response to psychological interrogation pressures.

Though highly counter-intuitive, false confessions are not a unitary phenomenon; they are caused by a combination of factors. Synthesizing the existing psychological and legal literature at the time, Kassin and Wrightsman (1985) first suggested three distinct types of false confession, which they called voluntary, coerced-compliant, and coerced-internalized false confessions. While other scholars have since critiqued, modified, and extended this typology (for a review, see Leo, 2008), what remains important to understand is that there are three conceptually distinct psychological processes at work in the production and elicitation of false confessions. Voluntary false confessions occur in the absence of police interrogation and are thus explained by the internal psychological states or needs of the confessor (Gudjonsson, 2003) or by external pressure brought to bear on the confessor by someone other than the police (McCann, 1998). Compliant false confessions are given in response to police coercion, stress, or pressure in order to achieve some instrumental benefit—typically, either to terminate and thus escape from an aversive interrogation process, to take advantage of a perceived suggestion or promise of leniency, or to avoid an anticipated harsh punishment. Internalized or persuaded false confessions are given in response to police interrogation methods that cause the innocent suspect to doubt his memory and become persuaded—usually temporarily—that it is more likely than not that he committed the crime, despite having no memory of doing so (Ofshe & Leo, 1997a). Bradley Page's was a persuaded false confession (Davis, 2010; Leo & Ofshe, 1998, 2001).

There is no single cause of false confession, and there is no single logic or type of false confession. Police-induced false confessions result from a multistep process and sequence of influence, persuasion and compliance, and they usually involve psychological coercion. Police are more likely to elicit false confessions under certain conditions of interrogation, however, and individuals with certain personality traits and dispositions are more easily pressured into giving false confessions. In the remainder of this section, I analyze the three sequential errors that occur in the social production of every false confessions: (a) investigators misclassify an innocent person as guilty; (b) they next subject him to a guilt-presumptive, accusatory interrogation that invariably involves lies about evidence (false evidence ploys) and often the repeated use of implicit or explicit promises and threats as well; and (c) once they have elicited a false admission, they pressure the suspect to provide a post-admission narrative that they jointly shape, often supplying the innocent suspect with the (public and non-public) facts of the crime. I have previously referred to these as the misclassification error, coercion error, and contamination error, respectively (Leo, 2008; Leo & Drizin, 2010).

The Sequence and Snowballing of Error

The Misclassification Error. The first mistake occurs when detectives erroneously decide that an innocent person is guilty. As Davis and Leo (2006) pointed out, "the path to false confession begins, as it must, when police target an innocent suspect. . . . Once specific suspects are targeted, police interviews and interrogations are thereafter guided by the presumption of guilt" (pp. 123–124). Whether to interrogate or not is therefore a critical decision point in the investigative process. Absent a classification error at this stage, there will be no false confession or wrongful conviction. Put another way, if police did not erroneously interrogate innocent people, they would never elicit false confessions. Because misclassifying innocent suspects is a necessary condition for all police-induced false confessions and wrongful convictions, it is both the first and arguably the most consequential error police will make.

Several related factors lead police to mistakenly classify an innocent person as a guilty suspect. The first stems from poor and erroneous interrogation training. American police are trained, falsely, that they can become human lie detectors capable of distinguishing truth from deception at high rates of accuracy (Inbau, Reid, Buckley, & Jayne, 2013; Kassin, 2006). Detectives are taught, for example, that subjects who avert their gaze, slouch, shift their body posture, fidget, touch their nose, adjust or clean their glasses, chew their fingernails, or stroke the back of their head are likely to be lying and thus guilty. Subjects who are guarded, uncooperative, and offer broad denials and qualified responses are also believed to be deceptive and therefore guilty (Inbau et al., 2013; Leo, 2008). These types of behaviors and responses are merely a few examples from lengthy laundry lists

of so-called non-verbal and verbal "behavior symptoms" of lying that police manuals, training materials, and trainers instruct detectives to look for when deciding whether to prejudge a suspect as guilty and subject him or her to an accusatorial interrogation (Masip, Barba, & Herrero, 2012; Masip & Herrero, 2013; Masip, Herrero, Garrido, & Barba, 2011; Vrij, Mann, & Fisher, 2006). Although police trainers usually mention that no single non-verbal or verbal behavior is, by itself, indicative of lying or truth-telling, they nevertheless teach detectives that they can reliably infer whether a subject is deceptive if they know how to interpret his body language, mannerisms, gestures, and style of speech. In the absence of any supporting evidence, some police trainers boast of extraordinarily high accuracy rates: The Chicago-based firm Reid & Associates, for example, claims that detectives can learn to accurately discriminate truth and deception 85% of the time (Kassin, 2006).

The deeply ingrained police belief that interrogators can be trained to be highly accurate human lie detectors is both wrong and dangerous (Leo, 2008). It is wrong because it is based on inaccurate speculation that is explicitly contradicted by the findings of virtually all the published scientific research on this topic (Bond & Depaulo, 2006; Depaulo, Lindsay, Malone, Muhlenbruck, Charlton, & Cooper, 2003; Vrij, 2008; Vrij, Fisher, Mann, & Leal, 2010). Social scientific studies have repeatedly demonstrated across a variety of contexts that people are poor human lie detectors and thus highly prone to error in their judgments about whether an individual is lying or telling the truth. Most people get it right at rates that are no better than chance (i.e., 50%) or the flip of a coin (Bond & DePaulo, 2006; Hartwig & Bond, 2011; Vrij, 2008). Social scientific studies have also shown that even professionals who make these judgments on a regular basis—such as detectives, polygraph examiners, customs inspectors, judges, and psychiatrists (Ekman & O'Sullivan, 1991)—typically cannot distinguish truth-tellers from liars at levels significantly greater than chance. Even specific studies of police interrogators have found that they cannot reliably distinguish between truthful and false denials of guilt at levels greater than chance; indeed, they routinely make erroneous judgments (Hartwig, Granhag, Stromwall, & Vrij, 2004; Kassin & Fong, 1999; Masip, Alonso, Garrido, & Herrero, 2009; Vrij, 2004). The method of behavior analysis taught by Reid and Associates has been found empirically to actually lower judgment accuracy, leading Kassin and Fong (1999) to conclude that "the Reid technique may not be effective—and, indeed, may be counterproductive—as a method of distinguishing truth and deception" (p. 512). Empirical studies have shown that detectives and other professional lie catchers are accurate approximately 45–60% of the time (Kassin & Gudjonsson, 2004), with a mean of 54% (Bond & DePaulo, 2006).

The reasons police interrogators misclassify the innocent as guilty so often are not hard to understand. There is no human behavior or physiological response that is unique to deception, and therefore no tell-tale behavioral signs of deception or truth telling (Lykken, 1998). The same behaviors, mannerisms, gestures and attitudes that police trainers believe are the deceptive reactions of the guilty may just as easily be the truthful reactions of the innocent. As Kassin and Fong (1999) note, "part of the problem is that people who stand falsely accused of lying often exhibit patterns of anxiety and behavior that are indistinguishable from those who are really lying" (p. 501). Police detectives acting as human lie detectors are therefore relying on cues that are simply not diagnostic of human deception (Vrij et al., 2006; Vrij et al., 2010; Masip et al., 2011). Instead, the manuals are replete with false and misleading claims—often presented as uncontested fact—about the supposed behavioral indicia of truth-telling and deception (Hirsch, 2014). At least one prominent police trainer, Reid & Associates president Joseph Buckley, has insisted with a straight fact that "we don't interrogate innocent people" (Kassin & Gudjonsson, 2004, p. 36). As Alan Hirsch has pointed out (2014), "extensive evidence belies the suggestion that Reid-trained investigators interrogate only the innocent" (p. 821).

This police-generated mythology of the interrogator as human lie detector is not only wrong but also dangerous for the obvious reason that it can easily lead a detective to make an erroneous judgment about an innocent suspect's guilt based on little or nothing more than his "body language" and then mistakenly subject him to an accusatorial interrogation that can lead to a false confession. For example, police in Escondido, California, decided that Michael Crowe was lying (and thus guilty of murdering his sister Stephanie) in large part because they believed he initially seemed "curiously unemotional" and thus, unlike other members of his family, was not grieving his sister's death normally (White, 2001). In Illinois, McHenry County Sheriff's deputies decided that Gary Gauger was lying to them and thus guilty of brutally slaying both of his parents because of what they perceived to be his unemotional response to the bloody murders (Lopez, 2002). Peekskill, New York detectives believed that Jeffrey Deskovic was lying and thus guilty of killing his high school classmate not because he was unemotional but because he was overly distraught at the classmate's death (Leo & Drizin, 2010). Crowe, Gauger, and Deskovic each falsely confessed to murders and were subsequently proven innocent (though Deskovic spent 16 years in

prison and Gauger spent two years in prison, on death row). The Crowe, Gauger, and Deskovic cases are not exceptional: The social science research literature is replete with case examples of innocent suspects who were coercively interrogated (and ultimately confessed falsely) only after they were misclassified as guilty because detectives misinterpreted their nonverbal behavior and demeanor and thereafter erroneously presumed their guilt (Drizin & Leo, 2004).

The human lie detector mythology is dangerous not only because it leads police to mistakenly classify the innocent as guilty on the flimsiest of criteria (see Risinger & Loop, 2002) but also because it significantly increases detectives' confidence in the accuracy of their erroneous judgments (Kassin & Fong, 1999; Masip et al., 2009; Meissner & Kassin, 2002, 2004). Misplaced confidence in one's erroneous judgments is a significant concern in investigative police work because the stakes—an innocent person's freedom and reputation, the escape of the guilty and their ability to commit additional crimes—can be so high. Erroneous prejudgments of deception lead to what Meissner and Kassin (2002, 2004) called the investigator response bias (i.e., the tendency to presume a suspect's guilt with near or complete certainty). The overconfident police detective who mistakenly decides an innocent person is a guilty suspect will be far less likely to investigate new or existing leads, evidence, or theories of the case that point to other possible suspects. As Kassin and others have demonstrated, erroneous but confidently-held prejudgments of deception also increase the likelihood that the investigators will subject the innocent suspect to an accusatorial interrogation in which they seek to elicit information and evidence that confirms their prejudgments of guilt and discount information and evidence that does not (Hill, Memon, & McGeorge, 2008; Kassin, Goldstein & Savitsky, 2003; Meissner & Kassin, 2002, 2004).

The findings of Kassin and his colleagues are consistent with my own field observations. Detectives sometimes refer to their superior human lie detection skills as stemming from a "sixth sense" common to police detectives (Leo, 1996c). The unfortunate effect is that interrogators will sometimes treat their hunch (or "gut reaction") as somehow constituting direct evidence of the suspect's guilt and then confidently move into an aggressive interrogation. In our analysis of both proven and disputed confession cases, I have found that interrogators are often more certain in their belief in a suspect's guilt than the objective evidence warrants and tenaciously unwilling to consider the possibility that their intuition or behavioral analysis is wrong (Drizin & Leo, 2004; Leo & Ofshe, 1998). These tendencies may be reinforced by an occupational culture that teaches police to be suspicious generally and does not reward them for admitting mistakes or expressing doubts in their judgments (Simon, 1991, 2012; Skolnick, 1966).

The human lie detector mythology is but one of many mythologies that can lead police officers to misclassify an innocent person as a suspect and then to subject that suspect to the kinds of confrontational and aggressive interrogation techniques that can lead to false confessions. A second mythology is that trained police officers can create a detailed and accurate profile of a suspect by reading police reports and examining crime scene photographs and other evidence related to the crime (Leo & Drizin, 2010). For example, nearly three months after Lori Roscetti was raped and murdered in 1986, Chicago detectives contacted FBI profiler Robert Ressler, and asked him to create a profile of the man or men who had murdered Roscetti. Ressler opined that the crime was committed by three to six young Black males between the ages of 15 and 20, who had previously been incarcerated and had lived close to the spot where Roscetti's body had been found (Drizin & Leo, 2004). With Ressler's profile in hand, Chicago detectives focused in on three 17-year-old Black teenagers, Marcellus Bradford, Larry Ollins, and Omar Saunders, all of whom lived in the nearby housing project and had done time as juveniles. On January 27, 1987, detectives brought the boys in for questioning. More than 15 hours after the start of the interrogations, police emerged with a confession from Bradford which implicated himself; Larry Ollins; and Larry's 14-year-old, learning-disabled cousin, Calvin, whom police then picked up and grilled until he confessed (Drizin & Leo, 2004).

Although early DNA testing of semen samples taken from the victim should have excluded the boys as the rapists, all four defendants were convicted at trial. Larry Ollins, Calvin Ollins, and Omar Saunders were sentenced to life in prison while Marcellus Bradford, who agreed to plead guilty and testify against Larry Ollins, was promised and received a 12-year sentence. In 2001, new DNA testing conclusively failed to link any of the defendants to the Roscetti rape and murder, and they were subsequently set free. Shortly afterwards, police arrested Duane Roach and Eddie "Bo" Harris, who gave videotaped confessions to raping and murdering Roscetti and were later linked to the crime through fingerprint and DNA testing. Roach and Harris also did not fit Ressler's profile. Harris, who was 46 years old at the time of his arrest, would have been 31 when Roscetti was killed, while Roach, who was 38 years old at the time of his arrest, would have been 23. Police believe that Roach and Harris were the only two men involved in the crime,

not six as Ressler had theorized (Possley, Ferkenhoof, & Mills, 2002).

Apart from their training, experience, and job culture, police detectives are—just like everyone else—subject to normal human decision-making biases and errors that cause people to believe things that are not true (Gilovich, 1991). These decision-making biases include the tendency to attribute more meaning to random events than is warranted, to base conclusions on incomplete or unrepresentative information, to interpret ambiguous evidence to fit one's preconceptions, and to seek out information that confirms one's pre-existing beliefs while discounting or disregarding information that does not. All of these normal human decision-making biases are not only amply present in police work, but also compounded by the adversarial nature of American criminal investigation (Findley & Scott, 2006; Leo, 2008). As I have argued elsewhere, police interrogators are not likely to recognize their misclassification errors (Leo, 2013).

The Coercion Error: Coercive Interrogation. Once detectives misclassify an innocent person as a guilty suspect, they will often subject him to an accusatorial interrogation. This is because getting a confession becomes particularly important when there is no other evidence against the suspect, and typically no credible evidence exists against an innocent but misclassified suspect. Thus detectives typically need a confession to successfully build a case. By contrast, when police correctly classify and investigate the guilty, there is often other case evidence, and so getting a confession may be less important. Interrogation and confession-taking also become especially important forms of evidence-gathering in high-profile cases where there is great pressure on police detectives to solve the crime and no other source of potential evidence to be discovered (Gross, 1996). Hence, the vast majority of documented false confessions cases occur in homicides and high profile cases (Drizin & Leo, 2004; Garrett, 2011, in press; Gross & Shaffer, 2012).

Once interrogation commences, the primary cause of police-induced false confession is psychologically coercive police methods that sequentially manipulate a suspect's perception of this situation, expectations for the future, and motivation to shift from denial to admission (Ofshe & Leo, 1997a). By psychological coercion, we mean either one of two things: police use of interrogation techniques that are believed to overbear a suspect's will—such as promises and threats—and are thus regarded as inherently coercive in psychology and law, or police use of interrogation techniques that, cumulatively, cause a suspect to perceive that he has no choice but to comply with the interrogators' demands. Usually these amount to the same thing. Psychologically coercive interrogation techniques include some examples of the old third degree, such as deprivations (of food, sleep, water, or access to bathroom facilities, for example), incommunicado interrogation, and inducing extreme exhaustion and fatigue. In the modern era, however, these techniques are rare. Instead, when today's police interrogators employ psychologically coercive techniques, it usually consists of (implicit or express) promises of leniency and threats of harsher treatment. As Ofshe and Leo (1997b) wrote, "the modern equivalent to the rubber hose is the indirect threat communicated through pragmatic implication" (p. 1115). Threats and promises can take a variety of forms, and they are usually repeated, developed, and elaborated over the course of the interrogation. The vast majority of documented false confessions in the post-Miranda era either have been directly caused by or involved promises or threats (Drizin & Leo, 2004; Leo & Ofshe, 1998).

The second form of psychological coercion—causing a suspect to perceive that he has no choice but to comply with the wishes of the interrogator—is not specific to any one technique but may be the cumulative result of the interrogation methods as a whole. The psychological structure and logic of contemporary interrogation can easily produce this effect. The custodial environment and physical confinement are intended to isolate and disempower suspects. Interrogation is designed to be stressful and unpleasant, and it becomes more stressful and unpleasant the more intensely it proceeds and the longer it lasts. Interrogation techniques are meant to cause suspects to perceive that their guilt has been established beyond any conceivable doubt, that no one will believe their claims to innocence, and that by continuing to deny the detectives' accusations, they will only make the situation (and the ultimate outcome of the case against them) much worse. Suspects may perceive that they have no choice but to comply with the detectives' wishes because of their fatigue, being worn down, or simply seeing no other way to escape an intolerably stressful experience. Some suspects—like Bradley Page—come to believe that the only way they will be able to leave is if they do what the detectives say. Others comply because they are led to believe that it is the only way to avoid a feared outcome (e.g., homosexual rape in prison). When suspects perceive there is no choice but to comply, their resulting compliance and confession are, by definition, involuntary and the product of coercion (Ofshe & Leo, 1997a, 1997b).

The Coercion Error: Vulnerable Suspects. Even though psychological coercion is the primary cause of police-induced false confessions, individuals differ in their ability to withstand interrogation

pressure and thus in their susceptibility to making false confessions (Gudjonsson, 2003). All other things being equal, those who are highly suggestible or compliant are more likely to falsely confess. Individuals who are highly suggestible tend to have poor memories, high levels of anxiety, low self-esteem, and low assertiveness—personality factors that also make them more vulnerable to the pressures of interrogation and thus likely to falsely confess (Kassin, Drizin, Grisso, Gudjonsson, Leo, & Redlich, 2010). Interrogative suggestibility tends to be heightened by sleep deprivation, fatigue, and drug or alcohol withdrawal (Blagrove, 1996; Frenda, Patihis, Loftus, Lewis, & Fenn, 2014; Harrison & Horne, 2000). Individuals who are highly compliant tend to be conflict avoidant, acquiescent, and eager to please, especially authority figures (Gudjonsson, 2003).

But highly suggestible or compliant individuals are not the only ones who are unusually vulnerable to the pressures of police interrogation. So are juveniles and people with intellectual disabilities, cognitive impairments, and mental illness.

***Intellectual disability*.** Intellectual disability (formerly known as mental retardation) is, of course, a cognitive disability that limits a person's ability to learn, process, and understand information (American Psychiatric Association, 2013). Psychologists typically measure a person's cognitive disability through IQ or other intelligence tests. The standard for intellectually disability is an IQ of 70 or below. There are four levels of intellectual disability: mild, moderate, severe, and profound. The vast majority of people with intellectual disabilities (close to 90%) fall into the mild range (Cloud, Shepherd, Barkoff, & Shur, 2002). Because a person's intellectual disabilities may not always be obvious, it can be easy to overestimate his or her intellectual capacity.

The mentally retarded are more likely to confess falsely for a variety of reasons (Clare & Gudjonsson, 1995; Cloud et al., 2002; Conley, Luckasson, & Bouthilet, 1992; Perske, 1991). First, because of their subnormal intellectual functioning—low intelligence, short attention span, poor memory, and poor conceptual and communication skills—they are simple-minded, slow-thinking, and easily confused. They do not always understand statements made to them or the implications of their answers. They often lack the ability to think in a causal way about the consequences of their actions. Their limited intellectual intelligence translates into a limited social intelligence as well: They do not always fully comprehend the context or complexity of certain social interactions or situations, particularly adversarial ones, including a police interrogation. They are not, for example, likely to understand that the police detective who appears to be friendly is really their adversary, or to grasp the long-term consequences of making an incriminating statement. They are, therefore, highly suggestible and easy to manipulate. They also lack self-confidence, possess poor problem-solving abilities, and have tendencies to mask or disguise their cognitive deficits and to look to others—particularly authority figures—for the appropriate cues to behavior. For all of these reasons, people with intellectual disabilities are highly susceptible to leading, misleading, and erroneous information. It is therefore easy to get them to agree with and repeat back false or misleading statements, even incriminating ones.

Second, as many researchers have noted, the people with intellectual disabilities are eager to please. They tend to have a high need for approval and thus are prone to being acquiescent. They have adapted to their cognitive disability by learning to submit to and comply with the demands of others, especially authority figures (Ellis & Luckasson, 1985; Gudjonsson, Clare, Rutter, & Pearse, 1993). Because of their desire to please, they are easily influenced and led to comply in situations of conflict. Some observers refer to this as "biased responding": people with intellectual disabilities answer affirmatively when they perceive a response to be desirable and negatively when they perceive it to be undesirable. They will literally tell the person who is questioning them what they believe he or she wants to hear. A related trait is the "cheating to lose" syndrome: people with intellectual disabilities eagerly assume blame or knowingly provide incorrect answers in order to please, curry favor with, or seek the approval of an authority figure (Ellis & Luckasson, 1985). It is not difficult to see how their compliance and submissiveness, especially with figures of authority, can lead people with intellectual disabilities to make false confessions during police interrogations.

Third, because of their cognitive disabilities and learned coping behaviors, people with intellectual disabilities are easily overwhelmed by stress. They simply lack the psychological resources to withstand the same level of pressure, distress, and anxiety as individuals whose intellectual functioning fall within normal parameters (Ellis & Luckasson, 1985; Gudjonsson et al., 1993). As a result, they tend to avoid conflict. They may experience even ordinary levels of stress—far below that felt in an accusatorial police interrogation—as overwhelming. They are therefore less likely to resist the pressures of confrontational police questioning and more likely to comply with the demands of their accusers, even if this means knowingly making a false confession. The point at which they are willing to falsely tell a detective what he wants to hear in order to escape an aversive interrogation is often far lower than for

people of typical intellectual functioning , especially if the interrogation is prolonged. There have been numerous documented cases of false confessions from people with intellectual disabilities in recent years (see, e.g., Drizin & Leo, 2004).

Juveniles. Youth is also a significant risk factor for police-induced false confessions (Drizin & Colgan, 2004; Owen-Kostelnik, Reppucci, & Meyer, 2006; Redlich, 2010). Many of the developmental traits that characterize people with intellectual disabilities may also characterize young children and adolescents. Many juveniles too are highly compliant. They tend to be immature, naively trusting of authority, acquiescent, and eager to please adult figures. They are thus predisposed to be submissive when questioned by police. Juveniles also tend to be highly suggestible. Like the people with intellectual disabilities, they are easily pressured, manipulated, or persuaded to make false statements, including incriminating ones. Youth (especially young children) also lack the cognitive capacity and judgment to fully understand the nature or gravity of an interrogation or the long-term consequences of their responses to police questions. Like the people with intellectual disabilities, juveniles also have limited language skills, memory, attention span, and information-processing abilities compared to normal adults. And juveniles too are less capable of withstanding interpersonal stress and thus more likely to perceive aversive interrogation as intolerable. All of these traits explain why they are more vulnerable to coercive interrogation and more susceptible to making false confessions.

Mental illness. Finally, people with serious mental illnesses (e.g., psychoses) are also disproportionately likely to falsely confess (Redlich, 2004; Redlich, Kulish, & Steadman, 2011), especially in response to police pressure. People with serious mental illness possess any number of psychiatric symptoms that make them more likely to agree with, suggest, or confabulate false and misleading information to detectives during interrogations. These symptoms include faulty reality monitoring, distorted perceptions and beliefs, an inability to distinguish fact from fantasy, proneness to feelings of guilt, heightened anxiety, mood disturbances, and a lack of self-control (Kassin et al., 2010). In addition, the mentally ill may suffer from deficits in executive functioning, attention, and memory; become easily confused; and lack social skills such as assertiveness (Redlich, 2004). These traits also increase the risk of falsely confessing. Although people with mental illness are likely to make voluntary false confessions, they may also be easily coerced into making compliant ones. As Salas (2004) points out, "Mental illness makes people suggestible and susceptible to the slightest form of pressure; coercion can take place much more easily, and in situations that a 'normal' person might not find coercive" (p. 264). As a result, people with mental illness "are especially vulnerable either to giving false confessions or to misunderstanding the context of their confessions, thus making statements against their own best interests that an average criminal suspect would not make" (p. 274).

It is important to emphasize, however, that police induce most false confessions from mentally normal adults (Drizin & Leo, 2004; Gross et al., 2005).

The Contamination Error. A confession is more than an "I did it" statement. It also consists of a subsequent narrative that contextualizes and attempts to explain the "I did it" statement. Though it has not received the scholarly attention it deserves, the post-admission narrative—and the interrogation process through which it is constructed—is central to properly understanding and evaluating confession evidence (Leo & Ofshe, 1998). Psychologically-coercive police methods (and how they interact with an individual's personality) may explain how and why a suspect is moved, often painstakingly, from denial to admission. But it is the post-admission narrative that transforms the fledgling admission into a fully formed confession. The post-admission narrative is the story that gets wrapped around the admission and thus makes it appear, at least on its face, to be a compelling account of the suspect's guilt. The content of and rhetorical force of a suspect's post-admission narrative explains, in part, why confessions are treated as such powerful evidence of guilt and sometimes lead to the arrest, prosecution, and conviction of the innocent (Appleby, Hasel, & Kassin, 2013; Leo, 2008).

Police detectives understand the importance of the post-admission phase of interrogation. They use it to influence, shape, and sometimes even script the suspect's narrative. The detective's goal is to elicit a persuasive account that successfully incriminates suspects and leads to their conviction. A persuasive post-admission narrative requires a convincing story line; it must tell, or provide the elements of, a story that will cohere and make sense to the audience evaluating it. Either implicitly or explicitly, a persuasive post-admission narrative must have a believable plotline; especially important is an explanation of the suspect's motive or motives for committing the crime. Interrogators are adept at inventing, suggesting, and/or eliciting an account of the suspect's motivation; indeed, the "theme development" technique is simply a method of attributing a motive to the suspect—typically one that minimizes his culpability—that the suspect agrees to and then repeats back, even if it is completely inaccurate. To incriminate the suspect, it is more

important that the story be believable than that it be reliable (Leo, 2008). To bolster the believability and persuasiveness of confessions, detectives will seek to make the confession seem credible and authentic. They will encourage the suspect to attribute the decision to confess to an act of conscience, to express remorse about committing the crime, and to provide vivid scene details that appear to corroborate the suspect's guilty knowledge and thus confirm his culpability. Interrogators will also try to make the admission appear to be voluntarily given, portraying the suspect as the agent of his own confession and themselves merely as its passive recipient.

The detective helps create the false confession by pressuring the suspect to accept a particular account and suggesting crime facts to him. The detective in effect contaminates the suspect's post-admission narrative. Unless he has learned the crime scene facts from percipient witnesses, community gossip or the media, an innocent person will not know either the mundane or the dramatic details of the crime (Leo & Ofshe, 1998). Thus the innocent suspect's post-admission narrative will be replete with errors when responding to questions for which the answers cannot easily be guessed by chance. Unless, of course, the answers are implied, suggested, or explicitly provided to the suspect—which, in fact, does occur, whether advertently or inadvertently, in many false confession cases (Garrett, 2010; Leo & Ofshe, 1998; Leo et al., 2013).

The contamination of the suspect's post-admission narrative is thus the third mistake in the trilogy of police errors that, cumulatively, lead to the elicitation and construction of a persuasive false confession. Elsewhere I have argued that

> Confession contamination occurs because (1) the guilt-presumptive psychology of American police interrogation is designed to trigger and perpetuate confirmation biases, which (2) lead investigators, seemingly inadvertently, to provide detailed case information to suspects as part of their pre- and post-admission accusatory interrogation strategies, but (3) there is no internal corrective mechanism to catch or reverse investigators' misclassification errors or their confirmatory, information-conveying interrogation techniques. Put differently, contamination is common in false confessions because the psychological design of American interrogation methods virtually dictate the contamination once detectives have selected an innocent target for questioning. (Leo, 2013, p. 211).

Police interrogation contamination during interrogation is both counter-intuitive and difficult to detect, thus creating a high risk of wrongful conviction (Leo et al., 2013). Contamination leads to what Gisli Gudjonsson (1992) has called misleading specialized knowledge, which refers to the misleading details incorporated into a suspect's confession narrative when police investigators feed the suspect unique non-public crime facts—facts that are not likely guessed by chance —and then insist that these facts originated with the suspect (Leo, 2008). Awareness of the facts is sometimes referred to as "guilty" or "inside" knowledge. When included in the suspect's post-admission narrative, the facts are believed to reveal that he possesses information that only the true perpetrator would know, and, therefore, he must be guilty. Unlike truly guilty knowledge, however, misleading specialized knowledge is pernicious because it is used so effectively to convict an innocent person. When police interrogators feed nonpublic crime facts to a false confessor and then insist, often under oath in court testimony, that these facts originated with him, they are, in effect, fabricating evidence against him (Garrett, 2010, in press).

Misleading specialized knowledge is powerful evidence because it appears to corroborate the defendant's confession. In many documented wrongful convictions, some or all of the following pattern emerges: When the reliability of the defendant's confession is called into question, police rely on misleading specialized knowledge to persuade prosecutors that the confession must be true, prosecutors rely on misleading specialized knowledge to persuade judges and juries that the confession must be true, defense attorneys rely on misleading specialized knowledge to persuade their clients to accept plea bargains, judges and juries rely on misleading specialized knowledge to convict false confessors, and appellate courts rely on misleading specialized knowledge to uphold their convictions (Leo & Davis, 2010).

Whether intentional or not, police use of misleading specialized knowledge poses a serious problem for the American criminal justice system because its presence in an unrecorded false confession virtually guarantees that the innocent defendant will be wrongfully convicted. Whether it is due to inadvertent influence, strong institutional pressure to solve cases (especially high-profile ones), or some other combination of factors, misleading specialized knowledge is present in many of the documented wrongful convictions based on police-induced false confessions. For example, in a study of the 63 DNA exonerations which involved false confessions, misleading specialized knowledge was used to convict innocent defendants in 59 (or 94%) of the cases

(Garrett, in press). Because misleading specialized knowledge is incorporated into the defendant's confession and taken by police and prosecutors as corroboration of the defendant's guilt, it is difficult to overcome.

The Consequences of False Confessions

Confessions are the most incriminating and persuasive evidence of guilt that the state can bring against a defendant. False confessions are therefore the most incriminating and persuasive false evidence of guilt that the state can bring against an innocent defendant. Former U.S. Supreme Court Justice William Brennan's observation that "no other class of evidence is so profoundly prejudicial" (Colorado v. Connelly, 1986, p. 182) that was noted earlier in this essay is amply supported by social science research (Drizin & Leo, 2004; Kassin & Neumann, 1997; Kassin & Sukel, 1997; Leo & Ofshe, 1998; Miller & Boster, 1977). Confessions strongly bias the perceptions and decision-making of criminal justice officials and jurors alike because most people assume that a confession—especially a detailed one—is, by its very nature, true. Confession evidence therefore tends to define the case against a defendant, usually overriding any contradictory information or evidence of innocence (Kassin, 2012; Leo & Ofshe, 1998). If introduced against a defendant at trial, false confessions are highly likely to lead to wrongful convictions—even when they are elicited by questionable interrogation methods and are not supported by other case evidence.

A confession sets in motion a seemingly irrefutable presumption of guilt among justice officials, the media, the public, and jurors (Kassin, 2012; Leo & Ofshe, 1998). This chain of events, in effect, leads each part of the system to be stacked against the confessor; he will be treated more harshly at every stage of the investigative and trial process (Leo, 1996a). He is significantly more likely to be incarcerated prior to trial, charged, pressured to plead guilty, and convicted. Moreover, the presence of a confession creates its own set of confirmatory and cross-contaminating biases (Findley & Scott, 2006), leading both officials and jurors to interpret all other case information in the worst possible light for the defendant. For example, a weak and ambiguous eyewitness identification that might have been quickly dismissed in the absence of a confession will instead be treated as corroboration of the confession's validity (Castelle & Loftus, 2001; Hasel & Kassin, 2009). As the case against a false confessor moves from one stage to the next in the criminal justice system, it gathers more force and the error becomes increasingly difficult to reverse.

The Role of Police. Once police obtain a confession, they typically close their investigation, deem the case solved, and make no effort to pursue any exculpatory evidence or other possible leads—even if the confession is internally inconsistent, contradicted by external evidence, or the result of coercive interrogation (Leo & Ofshe, 1998). For once they elicit a confession, it serves to confirm their presumption of guilt. Even if other case evidence emerges suggesting or even demonstrating that the confession is false, police almost always continue to believe in the suspect's guilt and the accuracy of the confession (Drizin & Leo, 2004; Leo & Ofshe, 1998).

Another reason police typically close their investigation after obtaining a confession is their poor training about the risks of psychological interrogation and police-induced false confessions (Davis & O'Donohue, 2004; Leo & Ofshe, 1998). From their inception in the early 1940s, interrogation training manuals and programs have virtually neglected the subject of police-induced false confessions, despite considerable published research documenting their existence and effects. The widely cited Inbau and Reid manual, for example, did not discuss the problem of false confessions until its fourth edition in 2001. And despite adding a chapter on the subject then, it (2001)—like every other American interrogation manual and training program—continues to insist that the methods it advocates are not "apt to lead an innocent person to confess," an erroneous assertion that is contradicted an sizeable body of empirical research (p. 212; for critiques, see Davis & O'Donohue, 2004; Drizin & Leo, 2004; Gudjonsson, 2003; Kassin et al., 2010; Leo & Ofshe, 1998; Ofshe & Leo, 1997a, 1997b). And although Inbau and colleagues (2013) have since come out with a 5th edition of their interrogation manual, as Alan Hirsch (2014) has noted, "in crucial respects it has ignored or distorted what has been learned about false confessions, thereby assuring that this disturbing phenomenon will remain pervasive" (p. 805; see also Moore & Fitzsimmons, 2011). As a result, American police remain poorly trained about the psychology of false confessions, why their methods can cause the innocent to confess, the types of cases in which false confessions are most likely to occur, and how to recognize and prevent them.

The Role of Legal Actors. The presumption of guilt and the tendency to treat more harshly those who confess extend to prosecutors. Like police, prosecutors rarely consider the possibility that an innocent suspect has falsely confessed. Some are so skeptical of the idea of police-induced false confessions that they stubbornly refuse to admit that one occurred even after DNA evidence has unequivocally established the defendant's innocence

(Kassin & Gudjonsson, 2004). Once a suspect has confessed, prosecutors tend to charge him or her with the highest number and types of offenses (Ofshe & Leo, 1997a); set his or her bail higher, especially in serious or high-profile cases (Leo & Ofshe, 1998); and are far less likely to initiate or accept a plea bargain to a reduced charge (Leo & Ofshe, 1998). The confession becomes the centerpiece of the prosecution's case.

Even defense attorneys tend to presume confessors are guilty and treat them more harshly. They often pressure confessors to accept a guilty plea to a lesser charge in order to avoid the higher sentence that will inevitably follow from a jury conviction (Nardulli, Eisenstein, & Fleming, 1988). As the California Supreme Court noted, "the confession operates as a kind of evidentiary bombshell which shatters the defense" (People v. Cahill, 1993, p. 497). American judges also tend to presume that confessors are guilty and treat them more punitively (Leo & Ofshe, 1998; Wallace & Kassin, 2012). Conditioned to disbelieve defendants' claims of innocence or police misconduct, judges rarely suppress confessions, even highly questionable ones (Givelber, 2001).

If the defendant's case goes to trial, the jury will treat the confession as more probative of his guilt than any other type of evidence (short of a videotape of him committing the crime), especially if, as in virtually all high-profile cases, the confession receives pretrial publicity (Kassin & Sukel, 1997; Leo & Ofshe, 1998; Miller & Boster, 1977). False confessions are thus highly likely to lead to wrongful convictions. In their study of 60 false confessions, Leo and Ofshe (1998, 2001) found that 73% of the false confessors whose cases went to trial were erroneously convicted, 81% were in Drizin and Leo's (2004) study of 125 false confessions, and 88% were in Gould et al.'s (2014) study of wrongful 460 convictions and "near misses" (110 of which involved false confessions).

These figures are remarkable. If representative, they indicate that a false confessor whose case goes to trial stands a 73% to 88% chance of being convicted, even though there is no reliable evidence corroborating his confession. Taken together, these studies demonstrate that a false confession is a dangerous piece of evidence to put before a judge or jury because it profoundly biases their evaluations of the case in favor of conviction—so much that they will allow it to outweigh even strong evidence of a suspect's innocence (Kassin, 2012; Leo & Ofshe, 1998). Jurors simply do not appropriately discount false confession evidence, even when the defendant's confession was elicited by coercive methods and the other case evidence strongly supports his or her innocence. False confession evidence is thus highly, if not inherently, prejudicial to the fate of any innocent defendant in the American criminal justice system. As Welsh White (2001) has noted, "the system does not have safeguards that will prevent the jury from giving disproportionate weight to such confessions" (p. 155).

The high rates of conviction of false confessors are even greater when we consider the number of false confessors who plead guilty rather than take their cases to trial: 12% did in Leo and Ofshe's (1998, 2001) sample of 60 cases, and 11% did in Drizin and Leo's (2004) sample of 125 cases. Counting the false confessors in both samples whose cases were not dismissed prior to trial, more than 78% in the first study and more than 85% in the second were wrongfully convicted, either by plea bargain or trial.

The findings from these studies of aggregated false confessions cases are consistent with those from experiments and public opinion surveys. They all point to the same conclusion that a confession is "uniquely potent" (Kassin & Neumann, 1997, p. 469) in its ability to bias the trier of fact in favor of the prosecution and lead to a wrongful conviction (see also Leo & Ofshe, 1998). Experimenters have demonstrated that mock jurors also find confession evidence more incriminating than any other type of evidence (Kassin & Neumann, 1997; Miller & Boster, 1977). Kassin and Sukel (1997) found that confessions greatly increased the conviction rate even when mock jurors viewed them as coerced, were instructed to disregard them as inadmissible, and reported afterward that they had no influence on their verdicts. Wallace and Kassin (2012) demonstrated that judges similar biases. Most Americans simply accept confession evidence at face value. When false confessors subsequently retract their confessions, they are often not believed, or their retractions are perceived as further evidence of their deceptiveness and thus guilt (Ofshe & Leo, 1997a).

If a false confessor is convicted, he will almost certainly be sentenced more harshly, and the likelihood of discovering his innocence will drop precipitously (Leo, 2008). At sentencing, trial judges are conditioned to punish defendants for claiming innocence (since it costs the state the expense of a jury trial) and for failing to express remorse or apologize. And once a defendant is convicted and imprisoned, it is exceedingly rare that criminal justice officials will take seriously his claim that he confessed falsely and was wrongfully convicted. As Gudjonsson (2003) points out, the criminal justice system is poor at discovering, admitting, or remedying its errors, especially after an innocent suspect has been convicted. Indeed, the system officially presumes his guilt after he is convicted, treats the jury's verdict with deference, and interprets any new evidence in the light most favorable to the prosecution.

Until recently, with the advent of DNA testing, virtually no one in the criminal justice system took seriously any innocent prisoner's claim that he was wrongly convicted, especially if the conviction was based on a confession to police (Ayling, 1984). And most people still tend to presume the validity of convictions. One reason is that the system does not provide any regular mechanisms for reviewing the substantive basis of convictions. It is simply the prisoner's officially discredited word against that of an entire system. Absent a remarkable stroke of luck or social intervention, the wrongfully convicted false confessor will never be able to officially prove his innocence. Thus, police-induced false confessions are among the most consequential of all official errors (Kassin, 2012; Leo & Ofshe, 1998).

Policy Reforms

In my scholarship, I have been interested not only in empirically analyzing the psychology and sociology of American interrogation practices and the causes and consequences of police-induced false confessions, but also in advocating for policy reforms that are designed to 1) improve the quality of American police interrogation practices; 2) minimize the number of false confessions investigators elicit; and 3) prevent false and unreliable confession evidence from being introduced at trial, thereby minimizing the risk that it will lead to the wrongful conviction of the innocent. This has been one of the ways I have sought in my own work to help close the justice gap. I have done this primarily by advocating for two policy reforms: the electronic recording of police interrogations and the use of pre-trial reliability hearings for confession evidence. I was one of the first social scientists in the United States to argue for full electronic recording of police interrogation (Leo, 1996b, 2008; Leo & Richman, 2007), and I was the first social scientist to argue for subjecting disputed confession evidence to the scrutiny of a pre-trial reliability hearing before it can be admitted into evidence at trial (Leo, 1998; Leo et al., 2006; Leo et al., 2013).

Electronic Recording of Police Interrogation

When I first began researching and writing about police interrogation and confessions in the early 1990s, only one state (Alaska) required electronic recording by law. Now in late 2014, more than 20 years later, 19 states and the District of Columbia require electronic recording of police interrogations by law[4] for some or all crimes, and two additional states (Hawaii and Rhode Island) require it by policy (Sullivan, 2014). In addition, hundreds of police departments across the Country now voluntarily record interrogations, even though it is not required by law in their jurisdiction (Sullivan, 2010). A sea change has taken place that was almost unthinkable two decades ago when I first began researching about police interrogation and confessions.

These reforms in law and practice did not occur by accident. In the last 20 years, there has been a movement to mandate and implement full electronic recording of police interrogation, which was made possible by advances in video technology in the 1980s. This issue was increasingly litigated in the appellate courts in the 1990s, and mandatory recording bills were repeatedly brought up and passed in many state legislatures in the 2000s. Perhaps the most important impetus for the movement to record interrogations among scholars, activists, criminal justice professionals, and policy-makers has been the media coverage of false confessions and wrongful convictions since the rise of innocence projects and DNA exonerations in the mid-1990s. The renewed focus on actual innocence has led to greater scrutiny of police interrogation practices and confessions. It has also prompted increasing calls for mandatory electronic recording of interrogations so that criminal justice officials and triers of fact will be better able to evaluate the reliability of police-induced confessions.

I have been part of this movement for electronic recording of interrogation since the early 1990s, not only by documenting and analyzing false confessions and their consequences in my scholarship, but also through public and professional engagement on these issues with public and policy audiences. I have given numerous talks about police interrogation, false confessions, and the need for electronic recording of interrogations to professional groups such as judges, criminal defense attorneys, police, forensic psychologists and psychiatrists, investigators, and paralegals. Over the years, I have repeatedly given testimony to state legislative and judicial subcommittees. I have also worked extensively with the print and electronic media—writing op-eds, appearing on television shows and in print, and working behind the scenes with investigative journalists and reporters on hundreds of stories in which I did not appear or was not quoted. In a sense, my professional life's mission to date has been closing this justice gap by providing the public and policy-makers—in multiple ways—with data-driven knowledge and expertise about how police-induced false confessions occur, why they sometimes lead to the erroneous conviction of the innocent, and what can be done to prevent them.

The full electronic recording of police interrogation is the most important policy reform to this end. At the heart of virtually all police-induced false confessions is a factual dispute about what occurred during the (often lengthy) interrogation—

typically whether police used psychological coercive techniques (such as threats and promises) and whether police contaminated the suspect's post-admission narrative by feeding him unique and/or non-public crime facts that were incorporated into his confession statement. Invariably, courts credit the police version of events denying that any coercion or contamination occurred (Kamisar, 1980), and thus almost always admit disputed (including false) confessions into evidence. As a result, police have largely been able to determine the factual record that judges and juries rely on to determine whether a defendant's confession was reliable. And, as we have seen in hundreds of documented cases, this has led to innocent false confessors like Bradley Page being wrongfully convicted and incarcerated, some for decades.

Electronic recording creates an objective, comprehensive, and reviewable record of an interrogation, making it unnecessary to rely on the incomplete, selective, and potentially biased accounts of the disputants over what occurred. Electronic recording removes secrecy from the interrogation process, making it both transparent and capable of independent review. As Tom Sullivan (2004) pointed out, the indisputable record is "law enforcement's version of instant replay" (p. 6). Electronic recording thus prevents untruthful allegations and faulty recollections from being treated as fact. It also encourages best police practices by deterring police interrogators from using impermissible techniques such as threats, promises, and contamination (Kassin, Kukucka, Lawson, & DeCarlo, 2014). As electronic recording becomes increasingly accepted and institutionalized, it may even change the culture of interrogation such that police learn to rely less on the kinds of methods that lead to false confessions.

Even if police continue to elicit some false confessions – as seems inevitable – electronic recording will help prevent them from being introduced into the stream of evidence that can lead to wrongful convictions. For recording also creates a permanent and objective record for judges and juries to review. It thus provides a means by which third parties such as courts can monitor police practices and enforce other safeguards (White, 1997). If there is a question about the propriety of police techniques or the reliability of the suspect's statements, police managers can review the taped interrogation and transcript to decide whether to present the case to the prosecutor. Even if detectives and police managers fail to recognize a confession as false, the prosecutor is in a better position to assess its reliability when there is an electronic recording of the entire interrogation. A recording allows the prosecution to evaluate the police methods, how the suspect responds to questions, and whether the suspect independently provides nonpublic details about the offense.

Still, false confessions sometimes slip through police and prosecutorial filters; even the most well-meaning police and prosecutors make erroneous judgments. In many false confession cases, trial judges have ruled that the confession was voluntary, and in all of the cases in which false confessions have led to wrongful convictions, judges and juries—when asked to evaluate the interrogation—have found the confessions to be reliable evidence of guilt (Drizin & Leo, 2004). A recording of the entire interrogation helps prevent these types of errors and contributes to reliable fact-finding by allowing judges and jurors to make more factually informed decisions about whether to admit confessions into evidence and what weight to put on them when determining guilt or innocence.

By preserving a complete record for all to review, electronic recording makes the multiple safeguards in the criminal justice system that are designed to filter out erroneous and unreliable evidence more meaningful, improving the reliability of evidence used in criminal trials. To the extent that electronic recording of interrogations prevents criminal justice officials from wrongfully pursuing the innocent, it will also help them rightfully pursue the guilty.

Pre-Trial Reliability Hearings for Confession Evidence

In 2006, Steve Drizin, Peter Neufeld, and I published the first article that, to my knowledge, argued that trial judges should hold pre-trial reliability hearings on confession evidence (Leo, Drizin, Neufeld, Hall, & Vattner, 2006). Based on more than two decades of empirical social science research in general (Kassin & Gudjonsson, 2004) and what has come to be known as the Ofshe-Leo fit standard in particular (Ofshe & Leo, 1997a, 1997b), we proposed a new test for judges to apply when assessing the reliability of confession evidence. As Richard Ofshe and I argued many years ago, absent pre-existing knowledge or contamination, in many cases, the reliability of a suspect's confession can be evaluated by analyzing the fit (or lack thereof) between the descriptions in his post-admission narrative and the crime facts in order to determine whether the suspect's post-admission narrative reveals the presence (or absence) of guilty knowledge and whether it is corroborated (or disconfirmed) by objective evidence (Ofshe & Leo, 1997a, 1997b; Leo & Ofshe, 1998, 2001). We specifically pointed out that there are at least three indicia of reliability or reliability factors that can be evaluated to reach a conclusion about the trustworthiness of a confession: Does the statement (1) lead to the discovery of evidence unknown to the

police, (2) include identification of highly unusual elements of the crime that have not been made public, or (3) include an accurate description of the mundane details of the crime which are not easily guessed and have not been reported publicly? We noted that there is little dispute that the Ofshe-Leo factors should contribute to an assessment of a confession's reliability, and that these factors are routinely relied on by all parties—including law enforcement—in the criminal justice system to assess reliability.

We also emphasized the importance of electronically recording interrogations in their entirety. We argued that judges evaluating the reliability of confessions that are the product of a recorded interrogation should weigh three factors in deciding whether to admit or exclude the confession: 1) whether the confession contains non-public information that can be independently verified, would only be known by the true perpetrator or an accomplice, and cannot likely be guessed by chance; 2) whether the suspect's confession led the police to new evidence about the crime; and 3) whether the suspect's post-admission narrative fits (or fails to fit) with crime facts and existing objective evidence. We argued that if the state seeks to admit a confession that is not the product of a fully recorded interrogation, prosecutors must first demonstrate by clear and convincing evidence that it was not feasible for reasons that were not the fault of law enforcement and that the confession must strongly link the suspect to the crime by leading law enforcement to evidence that was previously unknown to them. If the prosecutor can meet this burden, the judge must still balance the remaining reliability factors outlined above in deciding whether to admit or exclude the confession.

The substantive legal underpinning for our proposed reliability test is Federal Rule of Evidence 403 (or its equivalent state analogue), which allows trial courts to exclude evidence whose probative value is substantially outweighed by its prejudicial effect because of the risk of misleading the jury and leading to an erroneous verdict[5]. By definition, a false confession—like any piece of completely false evidence—has no probative value. Confessions that contain indicia of unreliability, but cannot be proven false, are likely to have very little probative value. At the same time, as we have seen above, a false confession—especially a contaminated/formatted false confession—is a dangerous piece of evidence to place before a jury because of the high risk that it will lead to wrongful conviction, as we have seen. Confessions that contain indicia of unreliability, but cannot be proven false, create a risk of wrongful conviction. As a logical matter then, a false or unreliable confession—especially if has been contaminated—contains little or no probative value but instead creates a substantial danger or risk of unfair prejudice to an innocent defendant. The Ofshe-Leo factors mentioned above, we argued, could be used by judges to assess whether a confession contains sufficient indicia of reliability to be admitted into evidence. If the disputed confession evidence did not meet a minimal threshold of reliability, the trial judge could suppress it from evidence at trial, even if the confession was otherwise considered legally voluntary and complied with the Miranda requirements (Leo & Koenig, 2010). In many genuine false confession cases—in which there exists little or no corroborating evidence, as in Bradley Page's case—this would likely lead prosecutors to dismiss charges against innocent defendants. In others, it would prevent a dangerous—perhaps the most dangerous—a type of evidence from being placed before a jury, thereby substantially reducing the risk of wrongful conviction at trial.

Upon a motion by the defense, courts in criminal cases should evaluate the reliability of confession evidence, which could be undertaken at the same pre-trial hearing in which they assess voluntariness. Confessions that do not possess sufficient indicia of reliability should be excluded from evidence at trial. There are several possible bases for such assessments of the reliability of confession evidence. We argued that trial courts can draw on existing principles and rules of evidence—as the U.S. Supreme Court instructed in the 1986 case Colorado v. Connelly (1986)—for such hearings. Alternatively, federal and state rules of evidence could be amended to create a specific rule for addressing the reliability of confession evidence in pre-trial hearings. Another possibility would be for legislators to draft a statute for assessing the reliability of confession evidence at pre-trial suppression hearings, ideally also providing guidance to judges—either in the legislative history or the text of the statute itself—on the criteria or factors they should look to when making these screening determinations.

My co-authors and I have argued that Federal Rule of Evidence 403 and its state analogues provide trial courts with the authority to exclude confession evidence whose probative value is substantially outweighed by the danger of unfair prejudice to the defendant, confusion of the issues, or misleading the jury (Leo et al., 2006; Leo et al., 2013). Under Rule 403, at any point during a criminal case, the trial judge enjoys the broad discretion to assess the probative nature of any proposed evidence (including confession evidence), weigh its prejudicial effect, and exclude it from evidence. We and others believe Rule 403 to be an adequate and proper judicial mechanism for considering unreliable confession evidence (Du Clos, 2014; Leo et al., 2006, 2013; Thompson, 2012a). Rule 403 grants trial courts broad discretion to exclude

unreliable evidence that would mislead juries into rendering inaccurate verdicts. Operating more like a general principle than a specific rule, the underlying purpose of Rule 403 is to protect the accuracy and fairness of the fact-finding process at trial by shielding jurors from relevant evidence that they will overvalue or from which they will draw erroneous or improper inferences (Imwinkelreid, 1988). Trial courts have routinely relied on Federal Rule of Evidence 403 (or its state equivalent) in multiple other contexts—such as child witness testimony, hearsay evidence, and hypnotically refreshed testimony—to exclude unreliable evidence in pre-trial hearings and thereby prevent it from reaching the jury at trial (Thompson, 2012b). Indeed, the U.S. Supreme Court in Daubert v. Merrill Pharmaceuticals invoked Rule 403 in directing trial courts as part of their gatekeeping role to assess the reliability of scientific expert testimony based on Federal Rule of Evidence 702.

We believe that in using a Rule 403 balancing test to assess whether the probative value of the proposed confession evidence outweighs the risk of prejudice (and other dangers), trial courts should consider relevant factors that enhance or undermine a confession's reliability. These factors, or indicia of reliability/unreliability, include but are not limited to

1. Whether the statement led to the discovery of new evidence previously unknown to the police (e.g., the murder weapon, property stolen from a victim, etc.);

2. Whether the statement includes an accurate description of the held-back and/or mundane details of the crime that are not easily guessed, have not been reported publicly, and can be independently corroborated;

3. Whether the suspect's post-admission narrative "fits" with the crime facts and existing objective evidence; and

4. In the case of multiple defendants, whether the co-defendants' statements are consistent with one another.

Also, trial courts should consider the extent to which the statement contains non-public details that originated with the suspect that were not likely to have been guessed; errors, inconsistencies, or contradictions with case evidence; or admission of facts that the police believed to be true at the time of the interrogation but later learned were false. At the same time, trial judges could consider evidence of police contamination to determine whether the confession evidence is so tainted that it simply has no probative value at all. Had a complete factual record of the interrogation been available, this would have been the correct ruling in 59 of the 63 DNA exoneration false confessions studied by Brandon Garrett (in press). Under the law as envisioned, at the pre-trial suppression hearing, in addition to raising questions about the voluntariness of confessions and any Miranda-related issues, defense counsel could also raise concerns about the reliability of the proposed confession evidence. It is important to note that this change in law can only work in jurisdictions where police are required to electronically record the entire interrogation preceding the confession because without an electronic recording, judges, prosecutors, and defenders cannot assess whether the details in the confession originated with the suspect or were suggested to the suspect by police.

Other Possible Policy Reforms

The mandatory full electronic recording of police interrogations and pre-trial reliability hearings for confession evidence have been the two policy reforms that I have invested the most time analyzing and advocating in my research and scholarship, professional talks and presentations, and other outside professional activities. There is no single policy reform that will solve all the problems associated with police interrogation and confession evidence in America. Elsewhere, I have evaluated and/or argued for other reforms to prevent and minimize police-induced false confessions (Leo, 2008). The earlier these reforms occur in the criminal process, the more effective they are likely to be.

One relatively straightforward policy reform would be to improve police training with respect to interrogation and confessions, so that investigators are more aware of the reality of police-induced false confessions, how and why they occur, the social scientific research on risk factors for false confessions, indicia of reliable and unreliable confessions, and best practices to avoid eliciting false confessions. More specifically, police interrogation training needs to be significantly improved in at least three ways. First, interrogators need to be taught that they cannot reliably intuit whether a suspect is innocent or guilty based on their perceptions of his demeanor, body language, and nonverbal behavior. Second, detectives need to receive better training about the variety and causes of police-induced false confessions. Interrogators need to be taught that their techniques can cause normal people to falsely confess, and, more importantly, why. Third, interrogators must receive better training about the indicia of reliable and unreliable statements, as well as how to properly distinguish between them. A suspect's "I did it" statement is never self-corroborating; it should be

treated as neutral initially and then tested against the case facts. Ironically, an Oakland Police Department interrogation training manual has stated that an uncorroborated confession is "not worth the paper it is written on" (Oakland Police Department, 1998, p. 72), yet that did not prevent Sergeant Harris and Lacer failing to see that Bradley Page's confession lacked any meaningful corroboration and bore numerous indicia of being false and unreliable. Detectives need to be taught that the proper way to assess the reliability of a suspect's confession is by analyzing the fit between his post-admission narrative and the crime facts to determine whether it reveals guilty knowledge (absent contamination) and is corroborated by existing evidence (Ofshe & Leo, 1997b).

Another policy reform that deserves consideration is requiring probable cause prior to subjecting a suspect to guilt-presumptive accusatory police interrogation (Covey, 2005; Leo, 2008). As we have seen, police sometimes misclassify an innocent person as guilty based on flimsy evidence: in Bradley Page's case, it was for the mere reason that he was the victim's boyfriend, as Sergeant Lacer later bragged about on national television. Once American police classify a person as guilty, their goal is no longer to investigate his or her possible involvement in the crime but to get him or her to make incriminating statements. By subjecting the basis for the decision to interrogate to an independent review by a third party, a probable cause requirement could prevent fishing expeditions and ill-conceived interrogations, thus screening out the kinds of cases that tend to lead to false confessions.

Another way to prevent false confessions is to more effectively regulate the interrogation techniques that produce them. In the modern era, promises of leniency and threats of punishment, whether implicit or explicit, are the primary cause of police-induced false confessions (Ofshe & Leo, 1997b). Trial courts vary across states, however, regarding what constitutes an impermissible promise that will overbear the will of a suspect (White, 2003). Appellate courts should create an unambiguous, bright line rule prohibiting, under all circumstances, any implicit or explicit promises, offers, or suggestions of leniency in exchange for an admission. This might include any inducement that reasonably communicates a promise, suggestion, or offer of reduced charging, sentencing, or punishment; freedom; immunity; or police, prosecutorial, judicial, or juror leniency in exchange for an admission or confession. Appellate courts could also create an unambiguous rule prohibiting, under all circumstances, any implicit or explicit threat or suggestion of harm in the absence of an admission. This would include any inducement that reasonably communicates higher charging, a longer prison sentence, or other harsher punishment in the absence of an admission or confession.

Appellate courts and legislatures may also wish to revisit the issue of whether (or to what extent) deceptive interrogation techniques should be legally impermissible. Experimental and field research has established that false evidence ploys increase the risk of eliciting false and unreliable confessions (see Kassin et al., 2010). Police lying about evidence almost always occurs in interrogations that lead to false confessions. As an empirical matter, police lying about evidence is almost always necessary for eliciting false confessions: Except in rare circumstances, false confessions do not occur without police deception. One reason is that false evidence ploys, if believed, promote the perception of suspects that the evidence will establish their guilt in the eyes of third parties and thus that they are powerless to change their fate unless they confess. Another reason is that false evidence ploys cause suspects to doubt their memory or their ability to resist repeated accusations of guilt as if they are established facts. Yet, such ploys usually will not result in false confessions unless they are accompanied by other coercive interrogation techniques, such as (implicit or explicit) promises or threats.

Courts and legislatures may also wish to specify time limits for interrogations. Lengthy incommunicado interrogation is not only inherently unfair, but, as recent research has documented, far more common in false confession cases than other ones. Routine interrogations last less than two hours on average (Leo, 1996a; Feld, 2013), but interrogations leading to false confessions often last longer than six hours (Drizin & Leo, 2004). Longer interrogations appear to increase the risk of false confessions by fatiguing suspects and thus impairing their ability and motivation to resist police pressures. Specifying a time limit on interrogations of no more than four hours should diminish the risk of eliciting false confessions while maintaining the ability of police to elicit true confessions from the guilty (Costanzo & Leo, 2007). For, as the leading police interrogation manual in America declares, "rarely will a competent interrogator require more than approximately four hours to obtain a confession from an offender, even in cases of a very serious nature…. Most cases require considerably fewer than four hours" (Inbau, Reid, Buckley, & Jayne, 2001, p. 597).

Another ripe area for policy reforms, of course, is to provide additional protections for those groups of individuals who are most vulnerable to the psychological pressures of accusatorial interrogation and thus at the highest risk of being made or led to falsely confess to police. This includes the mentally handicapped and cognitively impaired (especially people with intellectual disabilities), juveniles

(especially under the age of 15), and people with mental illness. Additional protections could range from specialized police training about individual vulnerabilities to greater scrutiny of the reliability of confession statements from these individuals to having guardians or appropriate adults present during their interrogation (Drizin & Leo, 2004).

Some scholars have argued that the use of social science expert testimony in cases involving a disputed interrogation or confession also provides protection against the wrongful conviction of the innocent (Costanzo & Leo, 2007; Cutler, Findley & Loney, 2014; Fulero, 2004). There is now a substantial and widely accepted body of scientific research on this topic, and the vast majority of American case law supports the admissibility of such expert testimony (Costanzo & Leo, 2007). If a disputed confession is introduced at trial, the jury will want to know how an innocent person could have been made to confess falsely, especially to a heinous crime (Leo, 2004). The purpose of social science expert witness testimony at trial is to provide a general overview of the research on interrogation and confession to assist the jury in making a fully informed decision about what weight to place on the defendant's confession. More specifically, social science expert witnesses can aid the jury by 1) discussing the scientific literature documenting police-induced false confessions, 2) explaining how and why particular interrogation methods and strategies can cause the innocent to confess, 3) identifying the conditions that increase the risk of false confession, and 4) explaining the principles of post-admission narrative analysis. By educating the jury about the psychology, causes, and indicia of false confessions, expert witness testimony at trial should reduce the number of confession-based wrongful convictions.

A final potential reform is the use of cautionary instructions to juries. In theory, such instructions should increase jury sensitivity about the confession evidence they are being asked to evaluate and thus lead to more accurate verdicts and fewer wrongful convictions based on unreliable confessions. Jury instructions are traditionally a reform of last resort because they only affect the small percentage of cases that actually go to trial. Because they occur at the end of a case, they are also the least forward-looking or systemic of all proposed policy reforms. Although they are rarely given in confession cases, jury instructions educate a jury about the risks of particular interrogation techniques, the principles of post-admission narrative analysis, or the importance of external corroboration. Jury instructions are thus one way for courts to reform the investigation process and enhance jury sensitivity so as to guarantee the admissibility of more reliable confession evidence and more accurate verdicts.

The Criminology of Wrongful Convictions

In my scholarship and work outside the academy, I have been interested not only in better understanding and preventing interrogation-induced false confessions, but also in better understanding and preventing erroneous convictions of the innocent. This is one of the biggest justice gaps of our era. As I have argued above, there is no worse error in the American criminal justice system—that the criminal justice system itself causes—than the wrongful conviction of a factually innocent person, and certainly there is no worse error imaginable than the wrongful execution of an innocent individual, which appears to have happened many times over in the last century (Grann, 2009; Liebman, 2014; Lofquist & Harmon, 2008; Prejean, 2005; Radelet & Bedau, 1998). Wrongful convictions cry out for better understanding and prevention. False confessions are merely one cause or source of the wrongful convictions of the innocent. As is now well-known, there are many others, including eyewitness misidentification, perjured informant testimony, erroneous witness testimony, forensic error and fraud, police and prosecutorial misconduct, and ineffective assistance of counsel. Criminologists need more and better empirical research on wrongful convictions, both to develop the systematic study of errors in criminal justice and to aid those who seek to improve the quality of American justice (Leo & Gould, 2009).

The History of Wrongful Conviction Scholarship

The study of wrongful conviction in America began with then Yale Law Professor Edwin Borchard's (1932) book, *Convicting the Innocent*. Arguing against the then prevailing idea that innocent people are never wrongfully convicted, Borchard demonstrated in 65 cases that, for a variety of reasons, innocent people did get wrongfully convicted and that the criminal justice system was therefore fallible. Borchard's pioneering research shifted the question away from whether factually innocent individuals were wrongfully convicted in the American criminal justice system to the question of why there were wrongfully convicted and what could be done to remedy this problem. In the roughly half-century following Borchard's book, several similar books—typically by lawyers or journalists—were published sporadically, often following the same format and repeating many of the same ideas but with newer (and sometimes more) cases. These books included Erle Stanley Gardner's *The Court of Last Resort* (1952), Jerome Frank and Barbara Frank's *Not Guilty* (1957),

and Edward Radin's *The Innocents* (1964). Like Borchard's *Convicting the Innocent*, these works also discussed a number of "wrong man" cases, the presumed causes of wrongful conviction, and recommended policy reforms to reduce wrongful convictions in American society. Though they followed a similar structure, these reform minded books were motivated by moral outrage about one of the most fundamentally important, yet one of the most neglected, problems in American criminal justice.

The empirical study of wrongful conviction of the innocent continued to be ignored by criminologists and most other social scientists through the most of 1980s. At the time, virtually all observers assumed that the innocent were rarely, if ever, convicted and that wrongful convictions were thus anomalous, if not freakish (Garrett, 2008; Zalman, 2010-2011). This view began to change with Hugo Bedau and Michael Radelet's 1987 landmark study, "Miscarriages of Justice in Potentially Capital Cases," published in the *Stanford Law Review*. Bedau and Radelet identified 350 cases of wrongful conviction in potentially capital cases in America from 1900 1985 and systematically analyzed the causes of these errors, the sources of discovery of these errors, and the number of innocents (23) in this sample who were executed. Bedau and Radelet's pioneering article marks the beginning of the modern era of the study of wrongful conviction (especially in capital cases) in America and has been significant and influential (Leo, 2005; Lofquist, 2014). But Bedau and Radelet's landmark study (which was followed with a book five years later [Radelet, Bedau & Putnam, 1992] cataloguing 416 innocents convicted in potentially capital cases and 24 who had been erroneously executed since 1900) would be soon eclipsed, yet also affirmed, by the most significant development in the history of wrongful convictions: DNA and its application to the criminal justice system, particularly in post-conviction cases in which biological evidence existed to conclusively test convicted prisoners' claim that they were factually innocent and had been wrongfully convicted.

Since 1989, the year of the first DNA exonerations, DNA testing has established the fact of wrongful conviction in scores of cases, including numerous capital cases (see http://www.innocenceproject.org). The earliest published statement on DNA exonerations was a study of 28 wrongful convictions in which the testing of DNA evidence established factual innocence. The study was published by the Department of Justice in 1996 and entitled Convicted by Juries, Exonerated by Science: Case Studies in the Use of DNA Evidence to Establish Innocence after Trial (Connors, Lundregan, Miller, & McEwen, 1996). Since that time, DNA testing has become increasingly sophisticated, and more than 320 wrongly convicted individuals have been declared innocent and released from prison. Barry Scheck and Peter Neufeld, cofounders of the Innocence Project, and many others have continued to work on cases in which DNA testing has established factual innocence and led to the release of wrongfully convicted prisoners. The impressive work of Scheck and Neufeld, and their New York-based Innocence Project, also spawned the creation of numerous regional innocence projects or legal clinic at law schools around the country that also work to exonerate the innocent, but wrongly convicted, prisoners and to advocate for policy reforms to prevent and minimize erroneous convictions of the innocent. In 2000, when Scheck and Neufeld (along with journalist Jim Dwyer) published Actual Innocence: Five Days to Execution and Other Dispatches from the Wrongly Convicted, 62 factually innocent individuals in America had been exonerated through DNA testing. Fourteen years later, there are now 321 wrongly convicted prisoners who have been exonerated and released as a result of DNA testing (see http://www.innocenceproject.org), and there is every indication that this figure will continue to grow. An increasing number of wrongly convicted prisoners also have established their innocence through non-DNA means of exoneration in the last 25 years. Indeed, in 2011, Sam Gross of the University of Michigan Law School and Rob Warden of the Center on Wrongful Convictions at Northwestern University started the National Registry of Exonerations, which so far has logged close to 1,500 exonerations since 1989, the vast majority of which do not involve DNA (https://www.law.umich.edu/special/exoneration/Pages/about.aspx).

The exoneration of hundreds of wrongfully convicted but factually innocent prisoners has challenged some of our most fundamental assumptions about American criminal justice and procedure. Although the precise rate of wrongful convictions remains unknown and unknowable, there has been a growing awareness in the last two decades – in the media and among the public, criminal justice professionals, and even many courts – that wrongful convictions of the innocent occur with troubling regularity and frequency in the American criminal justice system. Speaking only of wrongful conviction in capital cases, U.S. Supreme Court Justice David Souter wrote in Kansas v. Marsh (2006) that they occur "in numbers never imagined before the development of DNA tests" (p. 203, Souter, J., concurring). Indeed, the results of post-conviction DNA testing in the 1990s and 2000s not only opened a window into the nature and frequency of error in the American legal system, but it also put the problem of the wrongful conviction of the innocent on the national

agenda, leading to a drop in public confidence about the criminal justice system and even a decline in support for the death penalty (Baumgartner, De Boef, & Bodstun, 2008). A 2001 Harris Poll found that 94% of Americans believed that innocent defendants are sometimes executed (Radelet, 2002).

Advancing the Criminology of Wrongful Convictions

In the last two decades there has been a corresponding explosion of research and writing on wrongful convictions, particularly by legal scholars, lawyers, and journalists. Yet, with a handful of notable exceptions such as Michael Radelet (Bedau & Radelet, 1987), William Lofquist (2001), Talia Harmon (2001), Brian Forst (2004), and a few others (Acker et al., 2001; Huff, Rattner, & Sagarin, 1996; Poveda, 2001; Westervelt & Humphrey, 2001), relatively little of this research had been conducted by criminologists prior to 2004. In 2005, I wrote an article that sought to develop what a criminology of wrongful conviction, as a field of study, does and should look like. I drew on three distinct types of literatures to illustrate exiting variation and shortcomings in the empirical study of wrongful convictions. These were what I called (1) the Big Picture Studies, studies like Borchard's (1932) or, more recently, Brandon Garrett's (2011) book of the same title, that usually overview the problems and solutions by discussing a large subset of wrongful conviction cases, the various legal causes of wrongful convictions, and then propose a series of reforms to minimize them; (2) the Specialized Literature, the largely psychological literatures on the causes of wrongful conviction, such as eyewitness misidentification, false confession, and child suggestibility; and (3) the True-Crime Genre, book-length case studies of wrongful conviction (Leo, 2005).

I argued that each of these three distinct genres of scholarship made important contributions to our understanding of, and knowledge about, wrongful convictions but that they also had many shortcomings. The big-picture studies overview our accumulated knowledge of the causes and consequences of, as well as the solutions for, the wrongful conviction of the innocent. Yet, these books were, for the most part, written by journalists and lawyers, not criminologists and social scientists, and tended to vary so little that they contained what I called "a familiar plot" that no longer offered much new insight into the problem of wrongful convictions and had largely become an intellectual dead-end. Although the specialized literatures were, I argued, largely a success story on their own terms, they had been relatively ignored by criminologists, and there had been little attempt to connect these specialized psychological literatures to the broader criminological study of wrongful conviction. As I wrote at the time (Leo, 2005), "one must go beyond the study of individual sources of error to understand how social forces, institutional logics, and erroneous human judgments and decisions come together to produce wrongful convictions" (p. 211). Finally, I argued that while the true crime books are important because they humanize the problem of wrongful conviction by documenting the history of many individual case tragedies and are designed to reach a broader audience, they tend to be more descriptive than systematic or analytic, they do not employ social science methods and frames of analysis, and they typically do not build on (and sometimes do not even reference) the academic literature on wrongful convictions (Leo, 2005).

I argued that criminologists needed to systematically develop the study of wrongful conviction into a more sophisticated and generalizable body of social scientific knowledge. I argued that in order to do so, criminologists needed to move beyond the sometimes simplistic and misleading assumptions in some of these literatures and develop a deeper understanding of the psychological, sociological and institutional causes of wrongful conviction. I further argued that criminologists needed to build theory—frameworks or paradigms for better understanding the general patterns, logics and characteristics of wrongful conviction cases—to advance the social scientific study of wrongful convictions: "Criminologists need to ask more big-picture questions and try to provide more big-picture answers about how and why the various actors, separately and in coordination, in the criminal justice system produce accurate and inaccurate decisions and results at various stages of the criminal process" (Leo, 2005, p. 215). I also argued that, methodologically, the field needed to move beyond descriptive case data and exoneration narratives to develop more systematic data about wrongful convictions, while calling for more aggregated case studies, matched comparison studies, and path analysis (Leo, 2005; see also Gould et al., 2014; Leo & Gould, 2009).

My goals have essentially been two-fold. I want social scientists to develop the empirical study of the wrongful conviction of the innocent into a more theoretically informed and methodologically sophisticated field of study within the discipline of criminology. I want our collective body of knowledge about the causes, characteristics, and consequences of wrongful conviction to be more valid and reliable. But I am not interested in building this field of study for purely academic purposes. Like many other social scientists, I am also motivated to develop a more sophisticated and generalizable body of knowledge

about the wrongful conviction of the innocent that will contribute to advancing public policies designed to reducing unnecessary human suffering and injustice. In other words, I want to assist scholars and policy-makers to better understand some of the justice gaps in the American criminal justice system so that we can do a better job of trying to close them.

Conclusion: Closing the Justice Gap

In the last 25 years, social science scholarship on the problem of wrongful conviction in America has contributed to what some observers have called "the innocence revolution" (Godsey & Pulley, 2003-2004; Marshall, 2004; Medwed, 2010) or "the new civil rights movement" (Medwed, 2008; Schehr, 2005). This movement was born out of the early pioneering work of Barry Scheck and Peter Neufeld, who co-founded the Innocence Project at Cardozo Law School in 1992, with the goal of "providing pro bono investigative and legal assistance to the wrongly convicted and working to prevent the conditions that created such wrongful convictions (Findley, 2014, p. 5), and it has taken shape with the emergence of the National Innocence Network, which currently consists of more than 60 innocence projects. The innocence movement—which has been fueled not only by academic scholarship, media reports, and sustained litigation and policy advocacy and activism—has exerted a substantial impact on the American criminal justice system as a whole. Keith Findley (2014) wrote that "the [i]nnocence [m]ovement that began to emerge in the 1990s…has been the most dramatic development in the criminal justice world since the Warren Court's Due Process Revolution of the 1960s" (p. 3). Although this may be an overstatement, the innocence movement certainly offers lessons about how criminologists and other criminal justice scholars can contribute to closing the justice gap in America.

By documenting and analyzing hundreds of cases of the erroneous conviction and incarceration of the innocent, empirical researchers in the last two decades have, once again, debunked the myth of infallibility that permeated the criminal justice system until the early 1990s. Although the work of Borchard in the 1930s (as well as that of other innocence pioneers in subsequent decades) should have shattered the myth that the criminal justice system always gets it right, it was largely ignored for more than half of a century. Instead, as we have seen, Americans simply assumed that the wrongful conviction of the innocent was so aberrational as to be freakish, especially in serious cases, and thus did not merit any meaningful legal, policy, or reform efforts. As Findley (2010-2011) noted, "until the DNA revolution that emerged at the close of the 1980s, most participants in and observers of the American criminal justice system rather smugly believed that the system was as foolproof as one could hope, and that wrongful convictions, while theoretically possible, were so unlikely as to be unworthy of concern" (p. 1163). By shattering the myth of infallibility, the research and writing of empirical criminal justice scholars has demonstrated that the wrongful prosecution and conviction of the innocent is a regular, widespread and systemic feature of the American criminal justice system, not just an infrequent or episodic aberration.

By exposing and documenting hundreds of indisputable wrongful convictions, innocence scholarship and the innocence movement have also led to what criminologist Marvin Zalman (2010-2011) has called "innocence consciousness" (p. 1468). Zalman has defined innocence consciousness as "the idea that innocent people are convicted in sufficiently large numbers as a result of systemic justice system problems to require efforts to exonerate them, and to advance structural reforms to reduce such errors in the first place" (p. 1468). This innocence consciousness—"innocentrism" (Medwed, 2008)—has been reflected in the growing awareness of the reality of wrongful conviction by the public, the media, policy-makers, and the legal system itself. Notably, this newfound innocence consciousness has exerted a profound effect in reshaping public opinion and debate about the death penalty. As we have seen, the innocence movement has led to a decline in public support of the death penalty. In January, 2000, then Illinois Governor George Ryan declared a moratorium on the death penalty in Illinois because more convicted prisoners had been released from death row as a result of factual innocence (n=13) than had been executed (n=12) since Illinois reinstated the death penalty in 1973. Illinois ended the moratorium altogether in 2011 when it abolished the death penalty (Warden, 2012). A number of other states have also recently abolished the death penalty: New Jersey and New York in 2007, New Mexico in 2009, Connecticut in 2012, and Maryland in 2013. In the states that have retained the death penalty, capital trials and executions have dramatically declined in the past two decades. So has public support for capital punishment (Unnever & Cullen, 2005). The most influential factor in these developments appears to be innocence consciousness (Baumgartner et al., 2008, Baumgartner, Westervelt, & Cook, 2014; Findley, 2014).

The innocence movement, aided and abetted by empirical social science scholarship on the sources of wrongful conviction, has not only dramatically affected criminal justice policy debates but has also contributed to the adoption of a number of important policy reforms. These policy reforms are designed to reduce erroneous convictions of the innocent by

improving the reliability of the police investigative process and the quality of evidence on which prosecutions are based. As we have seen, criminological research has contributed to the widespread adoption of mandatory electronic recording requirements—the most widely recommended reform for preventing false confessions and confession-based wrongful convictions (Leo, 2008; Kassin et al., 2010)—in many states and the voluntary adoption of recording by hundreds of police departments in other states. So too has extensive empirical research on eyewitness misidentification—which has almost universally been regarded as the leading cause of wrongful conviction from Borchard's (1932) to Garrett's (2011) books of the same title—been instrumental in leading to many reforms designed to prevent eyewitness errors by improving eyewitness accuracy, such as the use of double-blind line-up and photo array procedures, matching line-up fillers to the victim's description rather than to the suspect's appearance, telling the witness that the suspect may or may not be present in the line-up, documenting initial witness confidence judgments, and electronically recording the witness identification process (Wells, Small, Penrod, Malpass, Fulero, & Brimacombe, 1998; Cutler, 2013; National Research Council, 2014; but see Clark, 2013). Social scientists have also been made numerous policy-based recommendations to minimize the number of wrongful convictions caused by forensic errors, including removing crime laboratories from law enforcement control, accrediting crime laboratories and developing certification for forensic scientists, establishing independent oversight and auditing of crime laboratories, and promotion of better research and training in forensic science (Cole, 2014; Mnookin et al., 2011; National Research Council, 2009). Perjured jailhouse informant testimony, another leading evidentiary source of wrongful conviction (Garrett, 2011), is similar to confession evidence, and thus empirically-based suggested reforms include electronic recording of all jailhouse informant interviews, corroboration requirements, pre-trial reliability hearings and cautionary jury instructions (Natapoff, 2009; Neuschatz, Jones, Wetmore, & McClung, 2011; Neuschatz, Wilkinson, Goodsell, Wetmore, Qunlivan, & Jones, 2012; Wetmore, Neuschatz, & Gronlund, 2014).

Underlying virtually all proposed policy reforms across these four leading evidentiary sources of error leading to wrongful conviction—false confessions, eyewitness misidentification, forensic error, and perjured jailhouse informant testimony—has been a call for greater transparency in the evidence-gathering process and the development and implementation of best practices based on social science research (Simon, 2012). Put differently, empirical research by criminologists and others in the past two decades has been instrumental in developing best practices to prevent wrongful convictions by improving the reliability of the criminal justice system (Gould & Leo, 2010).

More broadly, in the last decade, criminologists and empirically-oriented innocence movement scholars have attempted to create new frameworks, paradigms, and theories for better understanding how and why wrongful convictions occur, how they can more effectively be prevented, and how criminal justice policies can and should be reconciled with the values underlying our system of criminal justice (Findley, 2008; Norris & Bonaventre, 2013; Zalman, 2010-2011, 2014). Developing conceptual knowledge is important not only for creating a more systematic, generalizable and respectable criminology of wrongful conviction (Leo, 2005), but also to better inform policy-makers' understandings of what may be at stake, as well as trade-offs, in criminal justice policy reform debates. To this end, criminologists are uniquely situated to create evidence-based knowledge to assist policy-makers to prevent future wrongful convictions—and help close the justice gap.

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About the Author

Richard A. Leo is the Hamill Family Professor of Law and Social Psychology at the University of San Francisco and formerly a Professor of Psychology and Criminology at the University of California, Irvine. He is the 2014 recipient of the Western Society of Criminology's Paul Tappan Award for outstanding contributions to the field of criminology in four distinct areas.

First, Dr. Leo has substantially contributed to the empirical study of routine police interrogation practices. His 2008 book, *Police Interrogation and American Justice* (Harvard University Press) has now become the definitive criminological work on the subject. The book won four book awards, including the prestigious Herbert Jacob Prize from the Law and Society Association, as well as the Outstanding Book Award from the Academy of Criminal Justice Sciences.

His second area of contribution to the field concerns the empirical study of the impact and effects of *Miranda v Arizona* on police, suspects, and the criminal justice system. Professor Leo's articles and books on the topic have been cited hundreds of times by criminologists, legal scholars, courts, and other social scientists. He is widely regarded as one of the leading experts on *Miranda* in the world.

The third area in which Dr. Leo has made significant contributions to our field concerns his study of false confessions. His research not only shifted the paradigm for understanding the counter-intuitive phenomenon of false confession, but so also created a research agenda for the next generation of criminologists and social psychologists who study the problem.

Finally, Dr. Leo has made outstanding contributions to the discipline through his advancement of our knowledge concerning of wrongful conviction, including his landmark 2005 article in the *Journal of Contemporary Criminal Justice*.

Dr. Leo's numerous articles and books in each of these areas have been widely cited and influential not only in criminology but in a number of related disciplines—as evident on his SSRN webpage, which counts over 21,000 downloads of his posted articles. His research has also been influential outside of academia and in the courts, where various appellate courts and the United States Supreme Court have cited his research on multiple occasions, and he has appeared as an expert witness hundreds of times. In addition his work has received substantial media coverage, including a story on the work he did to help free four innocent prisoners in Virginia (the Norfolk Four) which appeared in *The New Yorker* and in a PBS *Frontline* documentary. As a result of his outstanding record, Dr. Leo has won awards from many organizations, including the American Society of Criminology, the Academy of Criminal Justice Sciences, the American Sociological Association, American Psychology-Law Society, and the Society for the Study of Social Problems. He has also been the recipient of numerous grants and fellowships, most notably a Soros Fellowship and a Guggenheim fellowship.

Endnotes

[1] I thank Hank Fradella, Val Jenness, David Johnson, and Kim Richman for helpful suggestions.

[2] In their published opinion, the California Appellate court reviewing Page's conviction stated that there was substantial incriminating evidence against Page in addition to his confession statement (*People v. Page*, 1991, p. 161). Their assertion is false and misleading, and undoubtedly reflects the biasing influence that the fact of Page's confession statement exerted on their professional judgment. The fact of Bradley Page's confession trumped his innocence (see Kassin, 2012).

[3] As Deborah Davis (2010) pointed out, Harris and Lacer "lied to [Page] throughout the interrogation—about their own motivations, about the evidence against him, and about the choices available to him and the implications of those choices" (p. 220).

[4] These states are: Alaska, Minnesota, Illinois, New Jersey, Wisconsin, New Mexico, Maine, North Carolina, Maryland, Nebraska, Indiana, Missouri, Montana, Oregon, Connecticut, Arkansas, Michigan California, Vermont and the District of Columbia (Sullivan, 2014).

[5] Federal Rule of Evidence 403 (2014) states that: "The court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence" (p. 18).