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Police-Induced Confessions, 2.0: Risk Factors and Recommendations

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Abstract

Wrongful conviction databases have shed light on the fact that innocent people can be induced to confess crimes they did not commit. Drawing on police practices, core principles of psychology, and forensic studies involving multiple methodologies, this article updates the original Scientific Review Paper (Kassin et al., 2010) on the causes, consequences, and remedies for police-induced false confessions. First, we describe the situational and personal risk factors that lead innocent people to confess and the collateral consequences that follow—including the corruptive effects of confession on other evidence, the increased likelihood of conviction at trial, the increased tendency to plead guilty despite innocence, the stigma that shadows false confessors, even after exoneration, and the failure of Miranda to serve as a safeguard. Next, we propose the following recommendations: (1) Mandate the video recording of all suspect interviews and interrogations in their entirety and from a neutral camera angle; (2) require that police have an evidence-based suspicion as a predicate for commencing interrogation; (3) impose limits on confrontational approaches to interrogation, namely with regard to detention time, presentations of false evidence, and minimization themes that imply leniency; (4) adopt a science-based model of investigative interviewing based on numerous recent studies; (5) protect youthful and other vulnerable suspect populations by affording them the opportunity consult with defense attorneys and other mandatory support persons; (6) shield lay witnesses and forensic examiners from confessions to ensure the independence of their judgments; and (7) abolish contributory clauses from compensation statutes that penalize innocent persons who were induced to confess and/or plead guilty.

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Throughout the world, confessions serve an important function in the administration of criminal justice. Historically, confession evidence has proved to be common, potent, and persuasive both in court and in public opinion. In his classic treatise on evidence, John Henry Wigmore (1904/1985) described confession, even when recanted, as the most potent evidence presentable in court. To quote one legal scholar, "the introduction of a confession makes the other aspects of a trial in court superfluous" (McCormick, 1972, p. 316). Alongside this long-standing assessment of the potency of confession evidence, however, is the realization that confessions are fallible—sometimes reported secondhand by police or informants, raising questions as to authenticity; and at other times induced through a highly pressured or deceptive process of interrogation, raising questions about voluntariness and reliability.

Until the eighteenth century, confessions at common law were admissible at trial regardless of how they were obtained. Then the courts began to exclude confessions deemed involuntary on the grounds that they are potentially untrustworthy, because they violate a defendant's due process rights, and/or to deter offensive interrogation practices that overbear a suspect's free will (for descriptions of case law pertaining to confessions, see Grano, 1994; Leo, 2008; Marcus, 2006; Penney, 1998). In *Brown v. Mississippi* (1936), for example, the Court unanimously reversed the convictions of three Black defendants who were beaten into confessions, convicted, and sentenced to death based solely on these indisputably coerced statements. As a result of this decision, U.S. police departments shifted toward using primarily psychological methods of interrogation. In light of that shift, trial judges assess voluntariness by considering the totality of circumstances. In making this determination, they consider both the interrogation methods used (e.g., physical force, threats of harm or punishment, direct

promises of leniency, lengthy or incommunicado interrogation, and denial of food or sleep) and the personal characteristics of the suspect (e.g., age, intelligence, education, emotional stability, prior contact with law enforcement).

With this in mind, it is important to note that the courts seldom find confessions involuntary if they were elicited through *psychological* techniques, even if deceptive. In *Frazier v. Cupp* (1969), for example, the U.S. Supreme Court found that lying about the evidence (in that case, telling Frazier that an alleged accomplice had implicated him) did not render the defendant's subsequent confession involuntary. It is also important to note that even when a trial judge erroneously admits an involuntary confession into evidence, appellate courts may later uphold that conviction by ruling that the erroneously admitted confession was a mere "harmless error" (*Arizona v. Fulminante*, 1991). As we will see, research has addressed both of these issues.

Overview, Background and Objectives

The pages of American legal history are rich with stories about false confessions. These stories date back to the infamous Salem witch trials of 1692. Following three hundred years during which a "witchcraft craze" rippled through Europe, yielding thousands of executions, some 200 colonial men, women, and children were accused of witchcraft. Interrogated, sometimes blindfolded, shackled, stripped, beaten, and sleep deprived, 55 individuals confessed. Nineteen out of 20 who did not confess were executed (Rosenthal, 2009; Schiff, 2015). Fast-forward to 1819 and the first known wrongful convictions in the United States: Brothers Stephen and Jesse Boorn were convicted and sentenced to death in Manchester, Vermont, for killing their sister's husband, Russell Colvin. Both brothers had confessed under the pressure of interrogation and convicted. Stephen was set to be hanged when Colvin was found alive (Warden, 2005).

Thereafter, history uncovered numerous additional instances. In 1932, Edwin Borchard published *Convicting the innocent: Sixty-five actual errors of criminal justice*,

in which several false confession cases were included. Over the years, others too have documented the problem (e.g., Frank & Frank, 1957; see Leo, 2005 for a review). Yet until recently, criminal justice officials, commentators, and the public have reacted with skepticism, especially in death penalty cases (Bedau & Radelet, 1987).

In 1989, Gary Dotson became the first individual to be proven innocent through the then-new science of DNA testing. Since that time, a disturbing number of high-profile cases have surfaced involving innocent people who were induced to confess and then convicted by guilty plea or at trial, only later to be exonerated. Although the precise incidence rate of false confessions is not knowable for various reasons, two national databases provide informative data. In 1992, the Innocence Project (IP) was founded to use DNA technology to examine postconviction claims of innocence. Since then, the IP found that false confessions (by the exoneree or a codefendant who implicated the exoneree) had contributed to nearly 30% of DNA exonerations in the United States (Garrett, 2011; www.innocenceproject.org/).

Founded in 2012, the National Registry of Exonerations (NRE)—a more diverse U.S. database that has archived over 3,300 exonerations and counting, from 1989 to 2023, by all means, not just DNA—reports that approximately 12% of those wrongfully convicted had themselves confessed to crimes they did not commit (https://www.law.umich.edu/special/exoneration/Pages/False-Confessions.aspx). In both datasets, the percentage of false confessions is doubled (to 61% and 23%, respectively) within the subsample of homicide cases.

Self-incrimination in these cases has taken the form of a partial or full *admission* of guilt. Sometimes this admission is accompanied by a narrative *confession* containing a chronology of details. After analyzing 125 proven false confessions in the United States from 1971 to 2002, Drizin and Leo (2004) noted four ways to prove that a confession is false: (1) when it turns out that no crime was committed (e.g., the presumed murder

victim is found alive, the autopsy on a "shaken baby" reveals a natural cause of death); (2) when additional evidence shows it was physically impossible for the confessor to have committed the crime (e.g., the individual was demonstrably elsewhere or too young to have produced semen); (3) when the real perpetrator, having no connection to the defendant, is apprehended and linked to the crime (e.g., by knowledge of non-public crime details and/or corroborating physical evidence); and (4) when forensic tests affirmatively establish the confessor's innocence (e.g., as excluded by DNA testing of semen, blood, hair, or saliva).

Whatever the basis of exoneration, it is important to note the official databases do not include the countless false confessors whose innocence was established before or at trial, prompting their release and dismissal of charges; those who pled guilty to lesser offenses for a reduced sentence, thereby preempting critical scrutiny of their cases (sometimes having waived their right to appeal); those whose confessions were taken in venues outside the criminal justice system (e.g., military and loss-prevention settings); and those whose convictions were overturned after years of incarceration, after which they were pressured to plead guilty in exchange for time served or face a retrial (e.g., the West Memphis Three; see Robertson, 2011). Also unknown are the "off the books" cases involving convicted inmates whose confessions are highly concerning but who remain incarcerated, having exhausted all appeals (e.g., Brendan Dassey; see American Psychological Association, 2018) or those who served their time and moved on (e.g., Alvin Mitchell; see Kassin, 2017). In short, the number of false confession cases that are discovered represent some unknown fraction of the total, the proverbial tip of an iceberg.

It is also important to note that although many case studies have been based in the United States, false confessions have been documented in countries all over the world. The problem is by no means limited to totalitarian regimes in which confessions are often coerced for political and propaganda purposes (e.g., see Amnesty International,

2015; Myers, 2018). Through less purposeful mechanisms, false confessions have also been found in other countries—such as Australia (Adam, & van Golde, 2020), Belgium (Otgaar et al, 2022), Canada (Brignall, 2015; Campbell, 2018), Finland (Santtila et al., 1999), Germany (Schneider & May, 2022), Iceland (Cox, 2018; Latham & Gudjonsson, 2016), India (Kaur, 2022), Ireland (Inglis, 2004), Israel (Sangero, 2014), Italy (Lupária & Greco, 2020), Japan (Johnson, 2021; Onishi, 2007), the Netherlands (Brants, 2013; Wagenaar, 2002), New Zealand (Sherrer, 2005), Norway (Gudjonsson, 2003; Sherrer, 2008), Sweden (Jossefsson, 2015; Stridbeck 2020), and Taiwan (Lin, 2021)—to name just a few (for more on the cross-national scope of false confessions, see Gudjonsson, 2018; Lupária, 2015).

In light of historical precedent, the discovery of new wrongful convictions, and a wave of new empirical research, social scientists and policy makers came to realize the enormous role that psychological science can play in the prevention of wrongful convictions. Hence, the American Psychology-Law Society (AP-LS) published a Scientific Review Paper (SRP) on confessions (Kassin, Drizin, Grisso, Gudjonsson, Leo, & Redlich, 2010; for an introduction to this paper and description of the vetting process, see Thompson, 2010). This SRP was the second in AP-LS history, the addressing the topic of eyewitness identifications (Wells et al., 1998; for an update, see Wells et al., 2020).

The Kassin et al. (2010) SRP brought together a diverse group of experts, each focused on an aspect of false confessions. Reviewing the relevant literatures, they identified suspect vulnerabilities, interrogation tactics, and the phenomenology of innocence, which influence confessions as well as their effects on judges and juries. They concluded with a strong recommendation for the mandatory electronic recording of interrogations from a “neutral” camera angle and noted other needs for the reform of interrogation practices and the protection of vulnerable suspect populations.

In the years since this SRP was published, a lot has happened. In 2012, the National Registry of Exonerations was founded, exposing a new generation of false confessions. In sharp contrast to the 2010 landscape, some thirty states now require the video recording of custodial interrogations for some or all crimes. Beginning in 2021, several state legislatures passed bills that would limit police deception of youthful and/or adult suspects (e.g., Illinois, Oregon, California, Utah, Delaware, Indiana, Colorado, Connecticut). Other states are now considering the same. The 2010 SRP has served as a template for ten amicus briefs on false confessions by the American Psychological Association (APA). Importantly, APA also adopted two resolutions, in 2014 and 2022, on the interrogation of criminal suspects (https://www.apa.org/about/policy/interrogations).

Also since the SRP was published, additional studies have expanded our knowledge base concerning personal and situational risk factors. In addition, important new research has examined a range of related topics—including but not limited to the demeanor-based judgments that lead police to see a suspect as deceptive; guilty plea decisions, including false guilty pleas and their link to prior confessions; the processes of contamination that produce richly detailed false confession narratives; the effects on juries of "secondary confessions" reported by jailhouse informants; the ways in which confessions taint lay witnesses and forensic examiners through the operation of forensic confirmation biases; stigma that follows confessors through the system—even after exoneration; the methods used to interrogate minors and what protective role, if any, parents play; the question of what constitutes "custody"— the state that triggers Miranda requirements and the video recording of interrogations where mandated; the failure of Miranda to safeguard the accused—not only among minors but also competent adults; and the effects of video recording interrogations on police, suspects, and jurors.

Of particular importance, recent research has also identified alternative approaches to suspect interviewing that stand to benefit law enforcement and the

criminal justice system as a whole. Aimed at developing science-based methods in the laboratory that are now finding their way into practice, psychologists have introduced, tested, and meta-analyzed cognitively oriented alternatives to traditional accusatorial approaches. These alternative approaches aim to reduce the risk of false confessions and increase the diagnosticity of the information obtained. In light of these developments, the time was ripe for an update.

This Paper is motivated by four objectives. The first is to review the state of the relevant science by bringing together a multidisciplinary group of scholars from three perspectives: clinical psychology (focused on personality and psychopathology), experimental psychology (focused on social, cognitive, and developmental processes), and criminology (focused on the empirical study of criminal justice, law, and procedure). Our second objective is to identify the personal and situational factors that influence the diagnosticity of confessions. Third, we sought to extend our analysis from the *causes* and *correlates* of false confessions to their *consequences*—namely, the effects of confession on forensics and other evidence; guilty pleas; judges, juries, and stigmatizing public perceptions. Finally, we summarize recent research on science-based alternatives to suspect interviewing that are designed to prevent police-induced false confessions.

The Psychology of Confessions

Psychology's interest in confessions can be traced to its early days as a science. In *On the Witness Stand,* Hugo Munsterberg (1908) devoted an entire chapter to the topic of "Untrue Confessions" in which he discussed the Salem witch trials, reported on a then-contemporary Chicago confession that he believed to be false, and sought to explain the causes of this nonintuitive phenomenon (e.g., he used such words as "hope," "fear," "suggestion," "calculations," "passive yielding," "shock," "fatigue," "emotional excitement," "melancholia," "auto-hypnosis," and "dissociation"). Münsterberg's insights lay dormant for more than half a century. Inspired perhaps by *Miranda v. Arizona* (1966),

a smattering of psychologically oriented papers then appeared. Zimbardo (1967) analyzed the social influence tactics of police interrogations in the inaugural issue of *Psychology Today;* Driver (1968) published "Confessions and the Social Psychology of Coercion;" and Wald et al. (1967) reported on an observational study of 127 interrogations in New Haven, Connecticut, the first such study of its kind.

Types of False Confessions

Although it is not possible to calculate a precise incidence rate, it is clear that false confessions occur in different ways and for different reasons. Drawing from the pages of legal history, and borrowing from the classic literature on normative and informational social influences, Kassin and Wrightsman (1985) introduced a taxonomy that distinguished three types of false confessions: voluntary, compliant, and internalized. To be described below, this classification scheme has provided a framework for the study of false confessions and has since been used, critiqued, extended, and refined by others (Gudjonsson, 1992, 2003, 2021; McCann, 1998; Ofshe & Leo, 1997; Stridbeck, 2020).

Voluntary False Confessions

Sometimes innocent people have claimed responsibility for crimes they did not commit without prompting or pressure from police. This has occurred in several high-profile cases. After Charles Lindbergh's infant son was kidnapped in 1932, 200 people volunteered confessions. In 2006, John Mark Karr volunteered a false confession, replete with details, to the unsolved murder of young JonBenet Ramsey. In the 1980s, Henry Lee Lucas in Texas falsely confessed to hundreds of unsolved murders, making him the most prolific if not pathological serial false confessor in history (Gudjonsson, 2003). Between 1993 and 2000, Sture Ragnar Bergwall, a psychiatric patient from Sweden, also known as Thomas Quick, confessed without police inducement to more than thirty murders in Sweden, Norway, Denmark, and Finland. He was convicted of eight murders before being

fully exonerated and released (for descriptions of the outside influences that facilitated Quick's confessions, see Josefsson, 2015; Råstam, 2013; Stridbeck, 2020).

There are a host of reasons why people have volunteered false confessions—such as a pathological desire for notoriety, especially in high-profile cases; a conscious or unconscious need for self-punishment to expiate feelings of guilt over prior transgressions; and an inability to distinguish fact from fantasy due to a breakdown in reality monitoring, as seen in certain psychological disorders. As for more idiosyncratic motives, Radelet et al. (1992) described one case in which an innocent man confessed to a murder to impress his girlfriend; Gudjonsson (2003) described another in which a man confessed because he was angry at police for a prior arrest and wanted to mislead them in an act of revenge. Perhaps the most prevalent motive is the desire to protect the actual perpetrator, often a loved one. Within vulnerable samples who said they had falsely confessed, 17% of youthful detainees (Malloy et al., 2014) and 53% of individuals with mental illness (Redlich et al., 2010) reported doing so to protect the true perpetrator. In recent field studies, several participants voluntarily accepted blame for the misconduct of someone else in their group (Schell-Leugers et al., 2021).

Compliant False Confessions

In contrast to voluntary false confessions are those in which innocent suspects are induced through the process of interrogation. In these cases, the suspect acquiesces to the demand for a confession, despite self-perceived and actual innocence, in order to escape a stressful situation, avoid harsh punishment, or gain a promised or implied reward. Demonstrating the kinds of effects observed in classic studies of social influence on people's attitudes and behavior as well as expected utility models of decision making, this type of confession is an act of mere compliance by suspects who know that they are innocent but bow to the pressure, often coming to believe that the short-term benefits of confession relative to denial outweigh the long-term costs.

Reviewing actual cases, Gudjonsson (2003) identified some specific incentives for this type of compliance—such as being allowed to sleep, make a phone call, go home, or, in the case of substance abusers, feed a drug habit. The desire to bring the interview to an end and avoid additional confinement may be particularly pressing for people who are young, alone, desperate, socially dependent, or fearful of detention. History is filled with stories of compliant false confessions. In the infamous Central Park jogger case of 1989, five teenagers confessed, four on videotape, after lengthy interrogations. They immediately retracted their confessions but were convicted at trial, only to be exonerated thirteen years later (see Burns, 2011). Similarly, history is filled with cases in which false confessions were extracted through beatings, a threat of execution, enhanced interrogation tactics, and other forms of torture aimed at breaking the suspect's will (Vrij et al., 2017).

Internalized False Confessions

In the third type of false confession, innocent but malleable suspects, told that there is incontrovertible evidence of their involvement, not only capitulate in their behavior, but also come to believe that they may have committed the crime in question, sometimes confabulating false memories in the process. Gudjonsson and MacKeith (1982) noted that this kind of false confession occurs when people develop such a profound distrust of their own memory that they become vulnerable to influence from external sources. Similarly, Kassin and Wrightsman (1985) used the term "internalization" to describe the 1973 case of 18-year-old Peter Reilly who found his mother slashed and beaten to death. After hours of interrogation, and told that he failed an infallible polygraph, Reilly became confused. "This test is giving me doubts right now," he conceded. Hours later, using the language of inference, he said, "Well, it really looks like I did it." Still later he confabulated a false memory: "I remember slashing once at my mother's throat with a straight razor I used for model airplanes." Reilly was convicted but exonerated shortly thereafter (see Barthel, 1976; Connery, 1977).

Noting that the innocent confessor's belief is often transient and not fully internalized, Ofshe and Leo (1997) suggested the term "persuaded false confession" for this phenomenon. The case of 14-year-old Michael Crowe, whose sister Stephanie was stabbed to death in her bed, illustrates this type of persuasion. After a series of interrogations, during which time police confronted Crowe with false evidence of his guilt, he concluded that he was a killer: "I'm not sure how I did it. All I know is I did it." Eventually, he was led to believe that he had a split personality—that "bad Michael" acted out of a jealous rage while "good Michael" blocked the incident from memory. Crowe went on to confess and implicate two friends, one of whom also then confessed. All charges were later dropped when a drifter in the neighborhood was found with Stephanie's blood on his clothing (Drizin & Colgan, 2004).

At other times, the process of internalization has appeared more enduring. In the 1970s in Iceland, six suspects made false confessions to two assumed murders after lengthy interrogations while in solitary confinement. All were subsequently convicted; five developed profound distrust of their memory and made internalized false confessions that lasted from a few months to several years (Gudjonsson, 2017). In the wrongful convictions of the Beatrice Six, in Nebraska, five of the defendants confessed to murder after they were led to believe that they were implicated by evidence and a police psychologist suggested that they had repressed their memories of the crime. They were exonerated 20 years later when DNA identified the actual perpetrator. Yet their internalized beliefs had endured. Indeed, "two had internalized their guilt so deeply that, even after being freed, they still had vivid memories of committing the crime" (Aviv, 2017, p. 36; for a documentary account, see *Mind Over Murder*, 2022).

Relevant Core Principles of Psychology

Long before the first empirical studies of confessions were conducted, the core processes of relevance were familiar to generations of behavioral scientists. Dating back

to Thorndike's (1911) law of effect, psychologists have known that people are highly responsive to reinforcement and subject to the laws of conditioning, and that behavior is influenced more by short-term than long-term consequences. Of distal relevance to a psychological analysis of interrogation are the thousands of operant animal studies of appetitive, avoidance, and escape learning, as well as behavioral modification applications in clinics, schools, and workplaces. Looking through this behaviorist lens, it seems that interrogators often shape suspects to produce specific narrative accounts like they were rats in a Skinner box (see Herrnstein, 1970; Skinner, 1938).

More proximally relevant to behavior in the interrogation room are studies of human decision-making in a behavioral economics paradigm. A voluminous body of research has shown that people make choices they think will maximize their well-being given the constraints they face (Herrnstein et al., 1997). With respect to a suspect's response to interrogation, studies on temporal discounting show that people tend to be impulsive in their orientation, preferring outcomes that are immediate, with delayed outcomes depreciating over time in their subjective value (Rachlin, 2000). These impulsive tendencies are especially evident in children and adolescents (Owen-Kostelnik et al., 2006; Steinberg, 2014). Research shows that these same principles are at work in the interrogation room (Yang et al., 2017; see also Madon et al., 2012, 2013).

Rooted in the observation that people are inherently social beings, a second set of core principles is that individuals are highly vulnerable to influence from change agents who seek their compliance. Of relevance to an analysis of interrogation are the extensive literatures on attitudes and persuasion (Petty & Cacioppo, 1986), conformity (e.g., Asch, 1956; Sherif, 1936), the use of sequential request strategies, as in the foot-in-the-door effect (Cialdini, 2009), and the gradual escalation of commands issued by figures of authority, to obtain self- and other-defeating acts of obedience (Milgram, 1974). Conceptually, Latané's (1981) social impact theory provides a predictive model for the

influence of police interrogator who bring *power, proximity*, and *number* to bear on their exchange with suspects.

A third set of core principles consists of the "seven sins of memory" that Schacter (2001; also see Schacter, 2022) identified from cognitive and neuroscience research—a list that includes memory transience, misattribution effects, suggestibility, and bias. When Kassin and Wrightsman (1985) first identified internalized false confessions, existing models of memory could not account for the phenomenon. These cases occur when a suspect is dispositionally or situationally rendered vulnerable to manipulation and the interrogator then misrepresents the evidence, a common ploy. In light of the now-extensive literature on misinformation effects on the creation of false beliefs and memories (Loftus, 2005, 2017; Scoboria et al., 2017), experts can now better grasp the process by which people come to accept guilt for a crime they did not commit and the conditions under which this may occur (see Gudjonsson et al., 2014; Kassin, 2007).

Scientific Methodologies and Consensus

The scientific study of confessions is grounded in basic principles of psychology, empirical research focused on confessions, and actual cases. As such, the current research literature is vast, multidisciplinary, and global in reach. The study of confessions also brings together a convergence of methodologies. Individual and aggregated case studies, involving singular instances of proven false confessions, reveal that they occur with some frequency; share certain common features; and occur in some types of people and situations more than others. Other empirical methods include naturalistic observations of live and videotaped police interrogations; archival records that enable comparisons of confessions and other evidence; self-report methods used to estimate the incidence of various interrogation tactics and false confessions; and laboratory and field experiments. The bulk of this work is published in peer-reviewed journals, books, and edited book chapters.

Importantly, the research reported in this SRP 2.0 is generally accepted within the relevant scientific community. In recent years, for example, the American Psychological Association (APA) has submitted ten amicus briefs in which it affirmed this literature. Starting with *Wright v. Commonwealth of Pennsylvania* (2008), APA stated that: "Drawing on extensive scientific research, the APA submits that a voluntary confession does not conclusively establish guilt. On the contrary, numerous psychological factors may cause innocent suspects to tender false confessions." Most recently, in April 2022, APA submitted a brief to the Court of Criminal Appeals of Texas on behalf of Melissa Lucio, who was convicted and scheduled to be executed based on a highly troubling confession.

General acceptance metrics of consensus are also found in a recent survey of experts. In that study, 87 Ph.D. confession experts from several countries—many of whom were highly published, many with courtroom experience—were surveyed about their opinions on 30 specific propositions of relevance to deception detection, police interrogations, confessions, and relevant general principles of psychology. As indicated by an agreement rate of at least 80%, there was a strong consensus that the findings presented in this paper are reliable, indeed, sufficiently so to present in court (Kassin et al., 2018).

Comment on Racial Bias

Black Americans comprise 13.6% of the U.S. population, and yet, according to a recent Report from the National Registry of Exonerations, 53% of the first 3,200 individuals wrongfully convicted in their database were Black—33% were White, 12% were Hispanic (Gross et al., 2022). Although evidence indicates that Blacks are similarly overrepresented in samples of false confessors, there is, inexplicably, little or no research indicating that Black suspects are more vulnerable once they appear in the interrogation room. Studies that address this question are sorely needed.

Importantly, Najdowski (2011) has proposed a stereotype threat perspective and the hypothesis that Black people are more likely to become targets of suspicion in the first place and therefore more likely to get caught in the crosshairs of an aggressive police investigation (also see Najdowski et al., 2015). Over the years, tracing back to Allport and Postman's (1947) demonstration of how racial stereotypes bias rumor transmission, social psychology experiments using the "dot-probe" method of planting subliminal images into a visual array (e.g., Eberhardt et al., 2004), shooting experiments (Correll et al., 2014), and other paradigms have demonstrated the often-implicit nature of racial prejudice. Similarly, analyses of criminal justice statistics and naturalistic field studies have shown that Black Americans are subjected to traffic stops and searches by police at rates disproportionate to their number in the population and their rate of offending (for overviews of such bias, even if implicit, see Banaji & Greenwald, 2013; Eberhardt, 2019).

In studies of direct relevance to this hypothesis, Camp et al. (2021) and Voigt et al. (2017) analyzed body-worn camera recordings of police traffic stops and found that 60% involved Black motorists, even though they constituted only 28% of the city's population. They were also more likely to be searched and handcuffed. Moreover, the tone of these stops as rated by condition-blind observers differed as a function of race, indicating that police use less respectful language and a more hostile tone in their interactions with black motorists. Importantly, these sorts of biases are not limited to perception of adults. Goff et al. (2014) compared adult perceptions of boys and found that they judged Black boys to be older, less childlike, and less innocent than their same-aged White peers—a potentially consequential form of "dehumanization."

Taken together, basic and applied research on stereotyping, prejudice, and discrimination may help to explain racial disparities in wrongful convictions. With regard to the specific effects of race on the causes and consequences of false confessions, more research is sorely needed (Najdowski & Stevenson, 2022).

Police Interrogations in Context

The practices of interrogation are subject to historical, cultural, political, legal, and other contextual influences. Indeed, although this article is focused on confessions in a criminal justice framework, similar processes occur, involving varying degrees of pressure, within the disparate frameworks of military intelligence gathering, corporate loss-prevention investigations, and school settings. Focused on criminal justice, we examine case law on the admissibility of confession evidence; "third degree" practices; and current interrogation practices in the U.S. as well as England and other countries.

"Third Degree" Practices

From the nineteenth century through the 1930s, American police routinely employed "third degree" methods of interrogation – inflicting physical or mental pain and suffering to extract confessions and other types of information from crime suspects. Among the most commonly used third degree techniques were physical violence, often hitting suspects with a rubber hose and other instruments that seldom left visible marks; prolonged isolation and incommunicado confinement; deprivations of sleep, food and other needs; extreme sensory discomfort; and explicit threats of physical harm and punishment (Leo, 2008). These methods were varied and commonplace (Hopkins, 1931), resulting in large numbers of coerced false confessions (Wickersham Commission Report, 1931).

Third degree methods declined precipitously from the 1930s through the 1960s, having been replaced by approaches that are more psychologically oriented. Indeed, the twin pillars of modern-day interrogation are behavioral lie-detection methods and the use of psychological tactics aimed at confession. Both were developed and memorialized in interrogation manuals and training programs. In 1967, the President's Commission on Criminal Justice and the Administration of Justice thus declared: "Today the third degree is virtually non-existent" (Zimring & Frase, 1979, p. 132).

Declaration notwithstanding, physically and psychologically coercive interrogations remain common across the world (Amnesty International Report, 2021/22)—even in some democracies (Rejali, 2009). Although infrequent, this has also been documented in the United States, such as occurred in New Orleans and New York City in the 1980s (Conroy, 2000) and in Chicago from 1972 to 1991 (Bauer, 2018). In addition, "enhanced interrogation" tactics (e.g., stress positions, prolonged sleep deprivation, waterboarding) were used by American CIA investigators in the aftermath of 9/11 (Senate Committee Report, 2015). Although physical coercion in the U.S. is seemingly rare, the Supreme Court noted in *Miranda v. Arizona* (1966) that psychological approaches may be "inherently compelling" when citizens are isolated and subject to forms of trickery and deceit that communicate threats of adverse consequences and/or promises of leniency in exchange for confession.

Current Law Enforcement Practices in the U.S.

American police typically receive brief instruction to interrogation in the Academy and then more specialized training when promoted from patrol to detective (see Trainum, 2016). Although formal training varies across the nearly 18,000 local, state and federal agencies in the United States, the most common and influential approach is the Reid Technique—named after John E. Reid, who developed this approach in the 1940s in collaboration with Fred Inbau. In 1962, Inbau and Reid published the first edition of *Criminal Interrogations and Confessions*, now in its Fifth edition (Inbau et al., 2013). Over the years, hundreds of thousands of investigators have been trained in the Reid technique, as have an estimated two-thirds of police executives in the United States (Zalman & Smith, 2007).

The Reid technique occurs in two stages. Prior to commencing interrogation, they recommend a pre-interrogation interview aimed at using demeanor and other behavioral cues to detect whether prospective suspects are lying or telling the truth. This process is

referred to as the Behavior Analysis Interview, or BAI (an idea that Reid introduced to supplement the physiological records in polygraph charts; see Reid & Arther, 1953). The BAI consists of 15 to 20 "behavior provoking questions" designed to evoke verbal responses assumed to be meaningful (e.g., an unwillingness to speculate as to the actual culprit) and nonverbal cues (e.g., gaze aversion, long pauses, frozen posture, fidgety movements) assumed to betray concealment and deception. To be noted shortly, empirical research does not support the efficacy of this approach.

Once a Reid-trained investigator decides that a suspect is deceptive, the process shifts into a nine-step accusatorial interrogation aimed to overcome the suspect's resistance by increasing the stress associated with denial and decreasing the stress associated with confession (Inbau et al., 2013). Conducted behind the closed door of a private room, the process opens with a "positive confrontation," an unequivocal assertion of guilt, during which time the suspect's denials are rebuffed and incriminating evidence is presented, even if false. At the same time, Reid-trained investigators feign sympathy and develop "themes" that excuse or morally minimize the crime (e.g., that the actions were spontaneous, accidental, provoked, peer-pressured, alcohol-induced, or otherwise justifiable; for a description of minimization themes customized for different crimes, see Senese, 2016). This latter process culminates in "the alternative question," which offers the suspect a choice between a morally reprehensible versus sympathetic admission—innocence is not an option (e.g., "Are you a cold-blooded killer or was this just an accident?"). The objective is to elicit an initial admission that can then be converted into a full narrative confession.

Over the years, the use of these interrogation techniques has been well documented in naturalistic observational studies (Feld, 2013; King & Snook, 2009; Leo, 1996a; Wald et al., 1967) and in surveys of North American investigators (Kassin et al., 2007; Kostelnik & Reppucci, 2009; Meyer & Reppucci, 2007). Yet new approaches have

begun to emerge. In 2017, Wicklander-Zulawski and Associates, another large interrogation training firm in the U.S., discontinued its training in the Reid technique, citing the risk of false confessions as well as advances in evidence-based interviewing. To be discussed shortly, alternative approaches to suspect interviewing, focused on the use of rapport and open-ended questions for information gathering purposes, have since been developed. In short, training is now available in multiple methods that investigators can choose from.

Practices in England and Elsewhere

In April 1972, in London, three boys, ages 14 to 18, were manipulated by police into confessing to arson. Two of the boys also confessed to the murder of Maxell Confait who lived at the premises; the third boy confessed merely to being present. Based on their confessions, all were convicted of arson; two were also convicted of murder and manslaughter. Three years later, amidst considerable public pressure, the case was reconsidered by the Court of Appeal and the convictions were quashed (Fisher Inquiry 1977). The acquittal in this case had a great impact in Britain, as it highlighted the potential problems with confessions taken from youthful suspects and those with psychological vulnerabilities. This prompted a Public Inquiry headed by Sir Fisher (1977), followed by the Royal Commission on Criminal Procedure (1977-1981), and the creation of the Police and Criminal Evidence Act (PACE, 1984), its Codes of Practice, and the electronic recording of suspect interviews.

In England and Wales, PACE (Home Office, 1985) became effective in January 1986. The Act was supplemented by five Codes of Practice—including Code C, pertaining to the detention and questioning of suspects, and Code E, which required the tape recording of interviews. These Codes provided guidance to police officers concerning the appropriate treatment of suspects (Home Office, 2003). The most important interview procedures set out in PACE are that suspects detained at a police station must be

informed of their legal rights; in any 24-hour block of time, they must be allowed a continuous period of rest of least eight hours; detainees who are vulnerable in terms of their age or mental functioning should have access to a responsible or "appropriate" adult, whose function is to give advice, facilitate communication, and ensure that the interview is conducted properly; and all interviews shall be electronically recorded.

Despite these changes, law enforcement practice was still aimed at obtaining confessions—sometimes using tactics akin to those used in the United States (Pearse & Gudjonsson, 1999). The latter position was further enabled by the publication of a then-new interrogation manual that presented a mere adaptation of the Reid Technique (Walkley, 1987). British interview practice thus remained precarious for several years until the introduction of a standardized police interview model and training, developed by a national committee on investigative interviewing. This began in the early 1990s following landmark wrongful convictions involving the terrorist cases of the "Guildford Four" and "Birmingham Six" (Gudjonsson, 2003). The British authorities therein initiated the Royal Commission on Criminal Procedure (1993), which resulted in several research papers and recommendations.

The approach that emerged was founded upon seven principles. As described by Williamson (2006, p. 154): (1) "The role of investigative interviewing is on obtaining accurate and reliable information from suspects, witnesses or victims in order to discover the truth about matters under investigation;" (2) "The investigative interviewing should be approached with an open mind. Information obtained from the person who is being interviewed should always be tested against what the interviewing officer already knows or what can reasonably be established;" (3) "When questioning anyone a police officer must act fairly in the circumstances of each individual case;" (4) "The police interviewer is not bound to accept the first answer given. Questioning is not unfair merely because it is persistent;" (5) "Even when the right of silence is exercised by a

suspect, the police still have a right to put questions;" (6) "When conducting an interview, police officers are free to ask questions in order to establish the truth, except for interviews with child victims of sexual or violent abuse which are to be used in criminal proceedings;" and (7) "Vulnerable people, whether victims, witnesses or suspects, must be treated with particular consideration at all times."

The above principles provided the framework from which the current PEACE Model would be applied to suspect interviews. Following such high-profile miscarriages of justice as the Guildford Four and Birmingham Six, the Association of Chief Police Officers for England and Wales published the first national training program for interviewing suspects and witnesses. This new approach was developed through a collaboration of law enforcement officers, psychologists and lawyers. The mnemonic PEACE describes the five distinct parts of this new approach ("Preparation and Planning," "Engage and Explain," "Account," "Closure," and "Evaluate"). The theory underlying this paradigm can be traced to Fisher and Geiselman's (1992) work on the "Cognitive Interview" (Milne & Bull, 1999; for research evidence, see Clarke & Milne, 2001; Williamson, 2006). Post-PEACE analyses of recorded police-suspect interviews in England have revealed that the confrontation-based tactics of the Reid technique, relative to information-seeking, were less often used (e.g., Soukara et al., 2009).

Vaughan et al. (2022) recently recommended additional specialized training for police managers and practitioners responsible for high stake crimes investigation, such as murder and rape. The aim of this additional training would be to ensure that all interviewees are treated ethically and legally using research-based methods that are effective, while minimizing the risk of false confession (see Thielgen et al., 2022; for comparisons of PEACE and the Reid technique; see Meissner et al., 2014; Gudjonsson & Pearse, 2011; Shepherd & Griffiths, 2013; Snook et al., 2021; Walsh et al., 2016). Importantly, variants of PEACE have been adopted in several countries—including

Norway, New Zealand, and Ireland (Walsh et al., 2016; for an overview of interrogation practices since World War II, see Oxburgh et al., 2022).

What Causes False Confessions?

As described earlier, the process of interrogation is designed to overcome the anticipated resistance of individuals identified for suspicion and to obtain legally admissible confessions. The single-minded objective is to increase the anxiety associated with denial and reduce the anxiety associated with confession. To achieve these goals, Reid-trained officers isolate the suspect and then offer or imply both negative and positive incentives. On the negative side, investigators confront the suspect with accusations of guilt, assertions made with certainty and often bolstered by evidence, real or manufactured, and a rejection of alibis and denials. On the positive side, they offer sympathy and moral justification, introducing "themes" that normalize and minimize the crime and lead suspects to see confession as an expedient means of escape. In this section, we describe the problem and the situational and personal factors that put innocent people at risk.

Situational Risk Factors

There are two structural aspects of a typical police interrogation that serve as a backdrop for understanding the process. The first concerns the fact that interrogation is, by definition, *a guilt-presumptive process*—a theory-driven social interaction led by an authority figure who has formed a strong belief about the suspect and who single-mindedly measures success by whether they are able to extract a confession. The guilt-presumption that accompanies the start of interrogation thus provides fertile ground for the operation of cognitive and behavioral confirmation biases.

In the Reid technique, investigators are trained to conduct the BAI, a pre-interrogation interview aimed at determining from a suspect's demeanor whether that suspect is telling the truth or lying, and hence worthy of interrogation. In laboratories all

over the world, extensive research has shown that many of the cues investigators are trained to use (e.g., eye contact, changes in posture, emotionality) are not empirically diagnostic of deception; that laypeople on average are only 54% accurate; and that training and experience are not associated with reliable improvements (Bond & DePaulo, 2006; Denault et al., 2022; DePaulo et al., 2003; Hartwig & Bond, 2011; Luke, 2019; Vrij et al., 2019).

Studies specifically focused on the BAI have also shown that verbal responses to the prescribed "behavior provoking questions" are not predictive of guilt or innocence (Vrij et al., 2006), that the "behavioral symptoms" purportedly indicative of deception merely codify common sense (Masip et al., 2012), and that training in use of these cues yields only a modest if any increase in judgment accuracy (Hauch et al., 2016; Honts et al., 2019; Kassin & Fong, 1999; Mann et al., 2004; Masip et al., 2005; Meissner & Kassin, 2002). In short, this approach often leads police to misclassify innocent people for investigation. In contrast to forming a true evidentiary basis for suspicion, this approach is thus likely to increase the risk of false confessions (Moody et al., 2023).

Whatever the basis of suspicion, a guilt-presumptive mindset leads detectives, tunnel-visioned by a strongly held belief, to ask leading and provocative questions, reject denials, and ratchet up the pressure, in turn making the suspect more anxious and the detective more determined to get a confession. In a study that demonstrated the process, Kassin et al. (2003) had some participants but not others commit a mock crime, after which all were questioned by participant interrogators who were led to presume guilt or innocence. Consistent with classic confirmatory hypothesis-testing studies (e.g., Snyder & Swann, 1978), participants who presumed guilt asked more incriminating questions, conducted more coercive interrogations, and tried harder to get the suspect to confess. In turn, this more aggressive style made the suspects sound defensive, leading observers who later listened to the tapes to judge them as guilty—even when they were innocent.

Follow-up research has confirmed this chain of events in suspect interviews (Hill et al., 2008; Lidén et al., 2019; Narchet et al., 2011).

The second structural aspect of interrogation worthy of note is its resemblance to Milgram's studies of obedience. Sixty years ago, Milgram (1963) published his classic, the first of 18, obedience experiment in which 65% of participants obeyed an experimenter's commands to deliver increasingly painful electric shocks to a confederate—in their view, up to 450 volts. Milgram (1974) described his methods, findings, and implications in his book *Obedience to Authority* (for retrospective accounts, see Blass, 2004; Miller, 1986; Perry, 2013). The parallels between police interrogations and the Milgram protocol are striking. In both venues, the subject is isolated in a specially designed space; confronted by a figure of authority; engaged by a contractual agreement to proceed; deceived as to the purposes and consequences of the subject's actions; and subjected to a stepwise series of unwavering demands. Notably, in both settings, full obedience is achieved through gradually escalating acts of compliance, up to 450 volts in Milgram—and, of course, a full narrative confession in the interrogation room (for a fuller discussion of these parallels, see Kassin, 2015).

Against the structural backdrop of a guilt-presumptive and Milgramesque process, research has singled out four situational risk factors commonly associated with false confessions: (1) physical custody and isolation, (2) the presentation of false evidence, and (3) minimization themes that imply leniency, and (4) the phenomenology of innocence. These factors are highlighted because of the frequency with which they appear in cases involving proven false confessions and their consistency with psychological research in which these factors have been independently varied.

Physical Custody and Isolation

To ensure privacy and control, investigators using the Reid technique are trained to remove suspects from friends, family, and familiar surroundings and question them

in the police station, alone—preferably in a small, bare, windowless, soundproofed interrogation room, seating in a hard-back chair. The objective is to "establish a sense of privacy" and "remove all distractions" (Inbau et al., 2013, pp. 46-47).

Most interrogations are brief. Observational studies in the United States and Britain, involving adult suspects and minors, have shown that the vast majority of sessions last from approximately 30 minutes up to two hours (e.g., Baldwin, 1993; Feld, 2013; Kelly et al., 2016; Leo, 1996a). In a self-report survey of police, 631 North American investigators estimated from experience that the mean length of a typical interrogation is 1.60 hours and that their longest interrogations on average lasted 4.21 hours (Kassin et al., 2007). In a recent self-report survey of suspects, respondents similarly estimated that their interrogations lasted an average of 1.49 hours (Cleary & Bull, 2021). One former Reid technique investigator defined interrogations that exceed six hours as "coercive" (Blair, 2005).

In contrast to these norms are interrogations that yield false confessions. In their analysis of 125 proven false confessions, Drizin and Leo (2004) found, in cases in which custodial interrogation times were recorded, that 34% lasted 6 to 12 hours, that 39% lasted 12 to 24 hours, and that the mean was 16.3 hours—far in excess of prevailing norms. It is not particularly surprising that false confessions tend to occur after long periods of time—which indicates a dogged persistence in the face of denial. The human need for belonging and social support, especially in times of stress, is a fundamental human motive (Baumeister & Leary, 1995). People under stress in particular seek desperately to affiliate for the psychological, physiological, and health benefits that social support provides (Rofe, 1984; Uchino et al., 1996). In one experiment, for example, subjects reacted to a physical stressor with greater increases in blood pressure and cortisol reactivity when they were alone than when accompanied by a supportive

confederate (Roberts et al., 2015). Prolonged isolation thus constitutes a form of deprivation that can heighten a suspect's distress and need to escape.

Sleep deprivation, which may accompany lengthy periods of detention, can also heighten susceptibility to influence and impair decision-making in complex tasks. For example, acute sleep deprivation markedly impairs one's ability to sustain attention or recall newly learned material (e.g., Newbury et al., 2021), reduces inhibitory control, thereby interfering with the ability to anticipate the consequences of our actions (Harrison & Horne, 2000), and increases suggestibility to leading questions (Blagrove, 1996) and the production of false memories (Frenda et al., 2014). This literature is vast (see Newbury et al., 2021; Pilcher & Huffcut, 1996). Importantly, these types of performance decrements have been observed across a range of populations—such as medical interns, truckers, and fighter pilots. Hence, 98% of confession experts surveyed endorsed the proposition that "sleep deprivation lowers people's resistance to influence and impairs complex decision-making" (Kassin et al., 2018).

The use of sleep deprivation as a stressor is hardly novel. In *Psychology and Torture,* Suedfeld (1990) noted that prolonged sleep deprivation is historically and universally one of the most potent methods used to soften up political dissidents and prisoners of war. Even on a more limited scale, the effects are measurable. Using the computer crash paradigm to be described shortly, Frenda et al. (2016) had participants engage in a keyboard typing task after which they were randomly assigned to sleep for eight hours or remain awake through the night. The next morning, all participants were pressed to sign a confession to hitting a key they were instructed to avoid, which allegedly resulted in a loss of data. In response to the experimenter's request, those who were sleep deprived were significantly more likely to sign the false confession than those who were rested. Across conditions, the odds of confessing were 4.5 times higher among those who self-reported high levels of sleepiness.

Presentations of False Evidence

Once suspects are isolated, investigators armed with a strong presumption of guilt make an accusation, stated with confidence, and seek to communicate that resistance is futile. This begins the confrontation process, during which interrogators exploit the psychology of inevitability to drive suspects into a state of despair. This process also involves interrupting the suspect's denials, overcoming objections, and refuting alibis. At times, American police will overcome a suspect's denials by presenting supposedly incontrovertible evidence of guilt (e.g., a fingerprint, hair sample, eyewitness identification, or failed polygraph)—even if that evidence does not exist.

In *Frazier v. Cupp* (1969), as noted earlier, the U.S. Supreme Court made it lawful for police to elicit confessions by outright lying to suspects about evidence. "The victim's blood was found on your pillow," "You failed the polygraph," "Cell phone records prove you were there," "Your hair was found in the victim's grasp," "Your friend said she wasn't with you at that time," and "We have surveillance footage that puts you at the scene" are some common examples. There appears to be no limit to the number, type, or magnitude of verbal deception that can be used. Numerous false confessions have demonstrated the power of this type of subterfuge.

In one case, 17-year-old Marty Tankleff, found his parents lying unconscious in pools of blood and called 911. After several hours of accusations and denials, the lead detective told the boy that his father had regained consciousness in the hospital and implicated him in the assault. Hearing this lie (his father remained comatose and died shortly thereafter), Tankleff lost his grip on reality, broke down, and confessed. He was exonerated 18 years later (Firstman & Salpeter, 2008). In a second case, 41 year-old Gary Gauger woke up on the family farm in Illinois and found his parents stabbed to death. Detectives said they found blood-soaked clothes in his bedroom and a bloody knife in his pocket—both lies. They also falsely claimed that he failed a polygraph.

Gauger was led to conclude that he must have killed his parents during an alcohol-induced blackout. After five years in prison, including time spent on death row, he was released; two motorcycle gang members were convicted of the murders (Gauger & von Bergen, 2008). Studies of actual cases also reveal that the false evidence ploy was used in numerous other proven false confessions (Drizin & Leo, 2004; Leo & Ofshe, 1998).

In much of the world, police are not permitted to deceive suspects in this way. Still, the United States is not alone. In one instance, depicted in the 2017 documentary, *Shadow of Truth*, Roman Zadorov, a Ukrainian immigrant and suspect for the murder of a girl in Israel, was interrogated on and off for several days. At one point, detectives told Zadorov that the victim's blood was found on his toolbox and clothing. "Impossible" was his response. Yet that night, he was video recorded in jail, confused, asking his cell mate if police can make up evidence. "No they wouldn't do that," he said. "This isn't Russia!" That cell mate was an undercover detective, in place to bolster the deception. Disoriented by his own lack of memory, Zadorov confessed (Timor et al., 2017). Ultimately, his conviction was overturned (Starr & Silkoff, 2023).

Consistent with real-world cases, empirical research warns of the risk of this manipulation. Across a range of subdisciplines, basic research has shown that misinformation renders people vulnerable to manipulation. To cite but a few classics, the presentation of false information—via confederates, witnesses, counterfeit test results, bogus norms, false physiological feedback, and leading questions—can substantially alter subjects' visual judgments, beliefs, emotional states, self-assessments, memories for observed and experienced events, and even certain medical outcomes, as seen in the classic placebo effect. Scientific evidence for human malleability in response to misinformation is broad and pervasive (for an overview of findings and citations, see Snook et al., 2020).

Concerns about the polygraph are illustrative in this regard. Although it is best known for its use as a lie-detector test, and has value as an investigative tool, posttest "failure" feedback—a ploy that John Reid used in 1955, which elicited a proven false confession (see Starr, 2013)—is often used to pressure suspects. In one particularly egregious instance, Christopher Tapp of Idaho spent 20 years in prison for a murder for which he was later exonerated after confessing in response to a sequence of seven polygraph exams, each followed by false feedback (National Registry of Exonerations, 2019). This problem is so common that Lykken (1998) coined the term “fourth degree” to describe the tactic (p. 235), and the National Research Council Committee to Review the Scientific Evidence on the Polygraph (2003) warned of polygraph-induced false confessions. Similarly, the so-called “voice stress analyzer test, which has never been validated for lie-detection purposes (Hollien et al., 2008), has also elicited false confessions—as in the case of Michael Crowe described earlier (Drizin & Leo, 2004).

The second source of evidence is found in laboratory experiments that have tested the causal hypothesis that false evidence leads innocent people to confess to prohibited acts they did not commit. In one study, Kassin and Kiechel (1996) accused participants of causing a computer to crash by pressing a key they were instructed to avoid. Despite their innocence and initial denials, subjects were requested to sign a confession. In some sessions but not others, a confederate said she witnessed the subject hit the forbidden key. This false evidence nearly doubled the number of students who signed a written confession, from 48 percent to 94 percent. A significant subsample of those who signed the confession also internalized the belief in their own culpability.

Using this paradigm, follow-up studies replicated the false evidence effect even when the confession was said to bear a financial consequence (Horselenberg et al., 2003), and especially among vulnerable populations such as children and adolescents (Candel et al., 2005; Redlich & Goodman, 2003) and sleep-deprived adults (Frenda et al., 2016). The

false evidence effect has also been produced using vastly different methods, leading innocent subjects to confess to cheating, in violation of a university honor code (Perillo & Kassin, 2011); and recalling past transgressions, including acts of violence (Shaw & Porter, 2015; also see Wade et al., 2018). In one novel paradigm, Nash and Wade (2009) used digital editing software to fabricate video evidence of participants in a computerized gambling experiment "stealing" money from the "bank" during a losing round. Presented with this false evidence, all participants confessed—and most internalized the belief in their own guilt (also see Wright et al., 2013). A recent meta-analysis shows that false evidence dramatically increases the risk of false confession when compared with direct questioning (OR = 2.88) and information-gathering approaches (OR = 4.34; Catlin et al., 2023; see also Stewart et al., 2018).

Finally, it is important to note that sometimes police use what seems like a relatively benign version of the false-evidence ploy. In what is called the *bluff technique*, the interrogator pretends to have evidence to be harvested but does not assert that this evidence implicates the suspect (e.g., a rape kit sent to the laboratory for testing). One might expect that a bluff would produce diagnostic outcomes by threatening the actual perpetrator with certain detection, increasing the incentive to cooperate, without similarly pressuring innocent suspects who have nothing to fear and hence no reason to confess. In light of research on the phenomenology of innocence, however, Perillo and Kassin (2011) found that to an innocent suspect under stress, the threat of proof implied by the bluff represents a promise of future exoneration, paradoxically making it easier to confess. In a series of experiments, they found that innocent participants were more likely to confess to crashing a computer when told that their keystrokes had been recorded for later review than when not presented with this bluff. They also were more likely to confess to willful cheating when told that a surveillance camera had taped their session for later review.

In light of the foregoing literatures, the scientific community is in agreement regarding the risk posed by false evidence. In the aftermath of the Kassin et al. (2010) Scientific Review Paper, the American Psychological Association (2014) passed a resolution "recommending that law enforcement agencies, prosecutors, and the courts recognize the risks of eliciting a false confession by interrogations that involve the presentation of false evidence." APA repeated this recommendation in 2022. In a survey of 87 Ph.D. confession experts, 94% endorsed as reliable enough to present in court the proposition that "presentations of false incriminating evidence during interrogation increase the risk that an innocent suspect would confess to a crime he or she did not commit." A full 100% endorsed the proposition that "misinformation about an event can alter a person's memory for that event" (Kassin et al., 2018).

Minimization Themes That Imply Leniency

Recognizing the obvious risk to innocent people, American courts over the years have ruled to exclude confessions extracted not only by threats of harm or punishment but also by promises of leniency or immunity from prosecution. However, purveyors of the Reid technique use minimization tactics, in a process known as "theme development," through which promises unspoken may well be implied. Typically accompanied by expressions of sympathy and understanding, a detective might provide face-saving excuses and/or downplay the moral seriousness of an offense by suggesting to suspects that their actions were spontaneous, accidental, provoked, peer-pressured, alcohol-induced, or otherwise justifiable by factors outside the suspect's control.

Within the Reid technique, the theme used depends on the crime committed. For a sex crime, "Joe, no woman should be on the street alone at night looking as sexy as she did. Even here today, she's got on a low-cut dress that makes visible damn near all of her breasts…it's too much of a temptation for any normal man." For a workplace theft, "Man, how in the world can anybody with a family get along with the kind of money they're

paying you?...Joe, your company is at fault." Different minimizing themes are scripted for auto theft, blackmail, arson, child sex abuse, piracy, fraud, and numerous other crimes (Inbau et al., 2013; Senese, 2016).

Consistent with the theory, research indicates that these tactics, variously defined, are commonly used. It is important to note that "minimization" is not a single homogeneous construct. Drawing from the Reid technique's theme development, Kassin and McNall (1991) focused on the sympathetic interrogator who suggests a face-saving attribution for the crime and underlying motive that provides moral justification by externalizing blame and/or minimizes the seriousness of the offense. Through observations of actual interrogations, Leo (1996a) and Kelly et al. (2019) later confirmed the common use of this tactic as well as others that may be related, such as appealing to the suspect's self-interest and conscience. In a self-report survey, 631 North American investigators rated "Offering the suspect sympathy, moral justifications and excuses" as a technique they often use (Kassin et al., 2007).

With specific regard to minimization themes that offer moral justification, basic cognitive research warns of the risks. Specifically, direct promises may not have been made in these cases, but leniency may be communicated nevertheless. When people read text or hear speech, they tend to process information between the lines and recall not what was stated in words but what was *pragmatically implied*. In various studies, for example, participants who read that "The burglar goes to the house" often mistakenly recalled that the burglar actually broke into the house; those who heard that "The flimsy shelf weakened under the weight of the books" often recalled that the shelf actually broke (Chan & McDermott, 2006; Harris & Monaco, 1978; Hilton, 1995). Pragmatic implications can thus change the meaning of a communication, leading us to infer something that is neither explicitly stated nor necessarily implied.

This research is directly applicable to the suspect lulled by minimizing themes. In three studies, Kassin and McNall (1991) tested the hypothesis that minimizing would lead people to infer leniency in punishment. Participants read the interrogation of an actual murder suspect. The transcript was edited to produce three versions: One in which the detective made a promise of leniency in exchange for confession, a second in which he made minimizing remarks by blaming the victim, and a third in which neither statement was made. Participants read one version and then estimated the sentence they thought would be imposed on that suspect. Compared to the no-techniques control group, subjects who read the minimization transcript had lower sentencing expectations – as if an explicit promise had been made.

This basic effect has been variously replicated. Horgan et al. (2012) found that minimization tactics led participants to view the potential consequences of confessing as less severe. Redlich et al. (2019) found that juvenile participants, not just adults, also exhibited this pragmatic implication effect. Luke and Alceste (2020) presented an interrogation transcript in which the suspect was promised leniency outright, presented with a minimization theme, or merely questioned about the evidence. Across several experiments, moral minimization led participants to view the crime as less severe, which in turn reduced sentencing expectations–without leading them to believe that the interrogator had made a direct promise. Extending these effects, Fallon and Snook (2021) found that although participants inferred leniency from minimization, they perceived the tactic to be respectful, ethical, and harmless. This combination of results led Fallon and Snook to suggest that minimization may bear similarity to the Trojan horse of Greek mythology— "benign at first glance, yet hidden beneath the harmless exterior is a veritable army of coercion, manipulation, and persuasion" (pp. 16-17; also see Cleary & Bull, 2017).

Moving from inference to behavior, minimization tactics can lead innocent people to confess. Using the computer crash paradigm, Klaver et al. (2008) found that when the accusation concerning the forbidden key press was plausible, minimization remarks significantly increased the false confession rate. Russano et al. (2005) devised the now-classic cheating paradigm to assess the behavioral effects of minimization on the diagnosticity of confessions (a technique has greater "diagnosticity" to the extent that it increases the ratio of true to false confessions). In their study, some participants but not others were prompted into assisting a confederate in a problem-solving study, which violated the terms of the experiment. The experimenter then accused participants of cheating and tried to get them to sign a confession through an overt promise of leniency, minimizing remarks, both tactics, or neither tactic. Overall, the confession rate was higher among guilty participants than innocent, when leniency was promised than when it was not, and when minimization was used than when it was not. Minimization—even without an explicit offer of leniency—lowered diagnosticity by increasing not only the rate of true confessions but even more so the rate of false confessions. A recent meta-analysis of the experimental literature has shown that minimization tactics increase the risk of false confession when compared with direct questioning (OR = 2.61) and information gathering approaches (OR = 4.00; Catlin et al., 2023). Importantly, Vallano et al. (2022) found that minimization was particularly effective at eliciting confessions when interviewers had first built a rapport with participants.

The minimization effect is not a mere laboratory phenomenon. Cases in which these tactics induced confessions are found throughout the archives of controversial convictions (Ofshe & Leo, 1997). In New York's Central Park jogger case, every boy gave a false confession that placed his cohorts on center stage and minimized their own involvement; each expected to be released upon confession (Burns, 2011). In another New York case, three boys confessed to the 1995 killing of a subway token booth clerk in

which each minimized his own role. One said he was just a "watch out," a second referred to himself a "lookout," and the third called himself a "backup." As in the jogger case, no one confessed to taking the lead. After 27 years in prison, these men were exonerated (Kassin, 2022). In Wisconsin, Brendan Dassey's *Making a Murderer* detectives let him off the moral hook in no uncertain terms. After befriending Dassey and feigning sympathy, one detective said, "It's not your fault, remember that. You've done nothing wrong." Shortly after Dassey agreed to confess to murder, he asked if he would get back to school in time for a project (Demos & Ricciardi, 2015).

Inbau et al. (2013) have argued that minimization does not inherently communicate leniency but rather that suspects are afflicted with "wishful thinking" (p. 213). In light of all the research, this defense does not account for the fact that the aforementioned results are derived from the basic nonforensic literature on pragmatic implications. Nor does it account for the fact that minimization themes yield the inference of leniency even among neutral observers who are unmotivated to form the inference and have nothing to gain by doing so. In short, as U.S. courts do not typically accept confessions extracted by explicit promises of leniency noting the risk to innocents, promises unspoken via minimization essentially circumvent the law's intent.

The Phenomenology of Innocence

Over the years, naturalistic studies have shown that an estimated 80% or more of all suspects waive their Miranda rights to silence and counsel (e.g., Feld, 2013; Kassin et al., 2019; Leo, 1996b; Thomas & Leo, 2002; Wald et al., 1967). Several reasons for this high waiver rate will be described shortly. One reason, counterintuitively, stems from the state of mind that accompanies actual innocence. Although not intuitive, a wealth of archival and anecdotal evidence suggested that innocent suspects fail to appreciate the significance of their Miranda rights precisely because they harbor a *phenomenology of innocence*—a naive faith in the exculpatory power of their own innocence (Kassin, 2005).

This mental state may be rooted in a generalized belief in a just world (Lerner, 1980) or in an illusion of transparency by which people overestimate the extent to which their true inner states can be seen by others (Gilovich et al., 1998). Research supports the idea that innocents maintain a naive belief in the exonerating power of their actual innocence. In the first empirical test of this hypothesis, innocent participants in a mock crime experiment were substantially more likely to sign a Miranda waiver than those who were guilty (81% to 36%). This pattern was obtained even when the interrogator appeared hostile and closed-minded. When asked to explain this decision, most innocent participants reasoned that they signed the waiver because "I did nothing wrong" and "I had nothing to hide" (Kassin & Norwick, 2004).

Converging evidence from independent studies has confirmed and extended this innocence effect on Miranda waivers—in a study conducted in Canada (Moore & Gagnier, 2008), especially among participants who strongly believe in a fair and just world (Scherr et al., 2016), and even among those who fully understood the administration of rights (Scherr et al., 2018). In other studies, innocent participants were more likely to disclose information to interrogators without apprehension of the consequences (Hartwig et al., 2005, 2006) and offer alibi stories without regard for the inconsequential errors that police might view with suspicion (Olson & Charman, 2012).

Further demonstrating this subjective state is research showing that innocent participants "embody" their naiveté. In general, one would expect people to exhibit physiological stress reactions when accused of a crime. In a series of experiments, however, innocent participants exhibited less of a physiologic reaction to an initial accusation of cheating than did others who were guilty (Guyll et al., 2013, 2019; Madon et al., 2017; Normile & Scherr, 2018). They also self-reported experiencing less stress (Scherr & Franks, 2015). In short, innocent people, lacking a consciousness of guilt, do not feel sufficiently threatened by accusation and exhibit the belief that they have nothing to fear by waiving

their rights, talking to police, and under dire circumstances confessing with the expectation that further investigation will later reveal their innocence.

The phenomenology of innocence may even "enable" innocent people under pressure to confess. After spending 16 years in prison for a rape and murder he did not commit, Jeffrey Deskovic was DNA exonerated and released. Asked about his confession, Deskovic explained, "Believing in the criminal justice system and being fearful for myself, I told them what they wanted to hear…"I thought it was all going to be O.K. in the end" (Santos, 2006). Using both the computer crash and cheating paradigms, Perillo and Kassin (2011) went on to demonstrate this effect. They found that to innocent participants under stress, the suggestion that hard evidence would be available for later review represented a promise of future exculpation, which paradoxically made it easier to confess.

Personal Risk Factors – Dispositional and Transient

Once in custody and under pressure, some suspects are more compliant than others, more suggestible, and otherwise more vulnerable to manipulation. Individually and cumulatively, personal risk factors increase the liklihood of a false confession during interrogation. The term *vulnerability* is best construed as any factor that impairs the functional capacity of suspects to understand their legal rights, the questions asked, and the implications of their answers; to communicate effectively; to cope with the custodial environment and interrogation; and to make rational and informed decisions. Youth, neurodevelopmental and mental health conditions, and personality traits are often relevant when evaluating the risk of false confession. The impact of both *dispositional* and *transient* risk factors should be considered within the totality of the case, particularly background (e.g., history of trauma), context (e.g., relationship between the victim and accused), situational (e.g., the nature of the interrogation and detention), and protective (e.g., access to legal advice) factors (see Gudjonsson, 2018, 2021).

Neurodevelopmental Disorders

As indicated in the first SRP, diminished intellectual capacity, as measured by substantially below average IQ scores, poses a significant risk factor. This is still the case. However, it is now possible to be more precise about the nature of this impairment. Neurodevelopmental disorders are conditions with an early onset that range from specific impairments (e.g., in learning and control of executive functions) to global impairments of intelligence or social functioning. The major neurodevelopmental disorders are *intellectual disability* (ID), *autism spectrum disorder* (ASD), and *attention deficit hyperactivity disorder* (ADHD) (American Psychological Association, 2013). A related condition, *fetal alcohol spectrum disorder* (FASD), afflicts people who had been exposed to alcohol during their mother's pregnancy, also causing functional deficits that can heighten vulnerability in a criminal justice setting (Brown et al., 2022).

All four conditions increase the risk of a false confession, but for different reasons. Research shows that suspects with ID often have difficulty understanding and implementing their legal rights, coping with the intellectual demands and pressures of police interrogation, and making informed decisions (Clare & Gudjonsson, 1995; Perske, 2008). Individuals with ADHD may impulsively and inadvertently make incriminating statements, while giving vague (e.g., 'don't know') answers to questions, leading them to become misclassified for suspicion (Gudjonsson et al., 2019). Those with ASD have impaired social, cognitive, and communication skills, which can adversely impact their comprehension of legal rights (Salseda et al., 2011). Finally, individuals with FASD are *inter alia* vulnerable to suggestions and interrogative pressures (Brown et al., 2022).

Importantly, various neurodevelopmental conditions commonly co-occur, and the presence of more than one condition typically exacerbates functional problems above those experienced by one condition alone (Young et al., 2020). These conditions are

often missed in children and adults, particularly when they present with high rates of comorbidity, such as anxiety and depression.

Suggestibility and Compliance

In the context of interrogation, individual differences in certain nonpathological characteristics—most notably, suggestibility and compliance—may also increase the risk of a false confession. In 1986, Gudjonsson and Clarke defined interrogative suggestibility by "the extent to which, within a closed social interaction, people come to accept messages communicated during formal questioning, as the result of which their behavioural response is affected" (p. 84).

To measure this trait in a manner that was objective and reliable, Gudjonsson (1984, 1987) constructed two parallel forms of the Gudjonsson Suggestibility Scale (GSS 1 & GSS 2; for the administration manual, see Gudjonsson, 1997). These scales were designed to measure two types of suggestibility: (1) the extent to which a person *yields* in response to leading and misleading questions (as in research on misinformation effects on memory), and (2) the extent to which a person *shifts* their answers following negative feedback (mimicking a form of interrogative pressure). Research has shown that yield scores are largely related to cognitive factors, whereas shift is a more social construct related to anxiety and self-esteem (Gudjonsson, 2003). Research has also indicated an overlap between the tendency to shift in response to negative feedback and measures of compliance (Gudjonsson, 2003; Mastroberardino & Marucci, 2013).

Whereas GSS 1 and GSS 2 use subtle procedures to assess the subject's tendency to yield and shift in response to external information, compliance—as measured by the Gudjonsson Compliance Scale (GCS)—is a self-report measure of an individual's "tendency to go along with propositions, requests or instructions, for some instrumental gain" (Gudjonsson, 2003, p. 370). Out of 34 British cases of wrongful convictions between 1952 and 2003, based principally on confession evidence, 10 (29.4%) primarily

involved police impropriety; an additional 24 (70.6%) primarily involved suspects' mental vulnerabilities. Out of the 24 vulnerability cases, 19 (82.6%) involved high suggestibility and/or compliance as the most salient risk factors as determined by the appeal court, often accompanied by borderline IQ, anxiety, and low self-esteem (Gudjonsson, 2010).

Based on a review of the literature, Ridley and Gudjonsson (2014) drew an additional distinction between immediate and delayed suggestibility. Immediate suggestibility refers to the immediate effects of leading questions and negative feedback as measured by the GSS. In contrast, delayed suggestibility refers to instances in which people incorporate misleading post-event information into their subsequent recollections, as in experiments on the misinformation effect on memory (e.g., Loftus et al., 1978; for an overview, see Loftus, 2005). In a study of reported child victims of sex abuse, Vagni et al. (2015) successfully incorporated delayed suggestibility into the GSS 2 procedure at a one-week followup as an additional measure. This finding helps to explain the powerful effects of trauma symptoms on delayed suggestibility (Gudjonsson et al., 2020). Indeed, delayed suggestibility, and misinformation effects more generally, often lead to contamination in recall (LaPaglia et al., 2014).

In a recent meta-analysis, Otgaar et al. (2021) reviewed controlled experiments in which false confessions were evoked and suggestibility and compliance were measured as well as field data linking potential false confessions to assessments of suggestibility and compliance. This meta-analysis revealed a significant association between suggestibility and compliance, as personality traits, and vulnerability to false confession. The mean effect sizes using Cohen's *d* were large for field studies (1.09 for suggestibility; 1.28 for compliance), but lower for experimental studies, where only suggestibility was significant (effect size of 0.33). While noting the methodological weaknesses in each type of data set (i.e., establishing the ground truth of a confession

in field studies, and the restricted range of pressures that can be applied in experiments), the authors concluded that "These diverse databases converge to the same conclusion… that high levels of suggestibility (and to a lesser extent compliance) were associated with an increased vulnerability to falsely confess" (p. 445).

Psychopathology

We use the term "psychopathology" to describe vulnerabilities related to mental illness (e.g., schizophrenia, major depression, bipolar disorder), personality disorders (e.g., antisocial, dependent), and substance misuse. In the archives of wrongful convictions, individuals with a history of mental health conditions are overrepresented in cases involving false confessions (Mogavero, 2020; Redlich, 2007; Redlich et al., 2010). The figures obtained in studies conducted retrospectively must be treated with caution unless reliable pre-conviction diagnoses can be ascertained and their relevance to the false confession articulated (Gudjonsson, 2010). In one study, however, conducted in an Icelandic police station, Sigurdsson et al. (2006) found that suspects exhibited significantly more psychopathology than witnesses who were also interviewed by police. Moreover, their psychopathology, objectively assessed at the station, was associated with a reported history of false confession.

Internalized false confessions in particular have been linked to memory distrust syndrome (MDS), a condition in which suspects develop profound distrust beliefs in their own innocence and become more accepting of police suggestions. As noted earlier, the vulnerabilities associated with MDS may lead to a confabulation of false memories, which in extreme cases may last several months or years (e.g., Aviv, 2017; Gudjonsson, 2017). To be sure, underlying psychopathologies can exacerbate a person's vulnerability to MDS during interrogation (see Gudjonsson, 2018).

This link was evident in the case of David MacKenzie, who confessed to murdering two elderly women, and then to other sexual murders he could not have

committed—including an experimentally generated false confession to a fictitious murder. His convictions for killing the two women were quashed, *inter alia* on the basis that his confessions to the other murders undermined his credibility (Gudjonsson et al., 2021). Pathological attention seeking and need for notoriety is well documented in the case of Henry Lee Lucas, a serial false confessor, noted earlier, who had confessed to hundreds of murders he had not committed. The nature of his psychopathology was multifaceted (for a full description, see Gudjonsson, 2003).

Life Adversity and Trauma

Life adversity—and post-traumatic stress symptoms in particular—may also exacerbate the risk of false confession (Cleary et al., 2021; Gudjonsson, 2018). Specifically, research has shown that a history of negative life events is associated with increased suggestibility, compliance, and false confession. This evidence consists of correlations between a history of negative life events and suggestibility (e.g., Childs et al., 2021; Drake, 2010, 2014; Gudjonsson et al., 2021; Gudjonsson et al., 2020); sexual, physical, and emotional abuse and compliance (Gudjonsson et al., 2011); and negative life events and false confessions (Drake et al., 2016; Gudjonsson et al., 2009; Gudjonsson et al., 2012). Essentially, this research shows that a history of trauma is indicative of a victim's reduced resilience and ability to cope with interrogative pressure, as measured by the Suggestibility and Compliance Scales.

Using Leo and Drizin's (2010) "three errors" framework of police-induced false confessions, Cleary et al. (2021) further suggested possible mechanisms through which adolescents with trauma histories may be vulnerable in an interrogation setting, leading to three types of errors. Specifically, they suggested that (1) an aberrant stress response may cause the traumatized adolescent to overreact or underreact to police questioning and create the appearance of deception; (2) this misperception may then trigger an accusatory guilt-presumptive interrogation that overcomes the youthful

suspect's resistance; and (3) once police have elicited an admission, they seek to construct a full confession, often contaminating that narrative by communicating crime details to the now-compliant suspect. With regard to this latter process, Cleary et al. postulated that trauma-induced failures in cognitive functions may increase suggestibility and impair the adolescent's ability to process crime scene details, whether observed or imagined.

Youth as a Vulnerability

Over the years, an astounding number of young people have been induced into confessing to crimes they did not commit. Anthony Harris was 12, Tyler Edmonds was 13, Lorenzo Montoya was 14, Prakash Churaman was 15, and Nga Truong was 16. In one particularly egregious instance, two Chicago boys, in 1998, were induced to confess to a murder they did not commit; the boys were seven and eight years old. Documented false confession cases are replete with older teens as well – for example, Nathaniel Hatchett and Michelle Murphy were 17 when they falsely confessed, and Peter Reilly was 18. People under age 21 are highly overrepresented relative to the general population in documented false confession cases (Drizin & Leo, 2004; Gross & Shaffer, 2012).

Both social scientists and the courts recognize the empirical reality that young people—as suspects, defendants, and witnesses—exhibit age-related impairments in legal decision making relative to adults (see Cleary, 2017; Owen-Kostelnik et al., 2006; Steinberg & Scott, 2003). Adolescents demonstrate impairments in adjudicative competence (Grisso et al., 2003; Redlich et al., 2003), understanding and appreciation of Miranda rights (Zelle et al., 2015) and legal knowledge (Woolard et al., 2008), as well as greater interrogative suggestibility (McLachlan et al., 2011). Many law enforcement groups also acknowledge youths' susceptibility to false confessions. For example, the International Association of Chiefs of Police (IACP, 2012) offers specialized training and resources for interviewing and interrogating youths. In doing so, they note that eliciting

false information not only harms young suspects but also carries reputational and financial costs to the individual officer and the city, and disserves public safety.

The U.S. Supreme Court has specifically recognized developmental immaturity as an impediment to legal decision-making. In *Roper v. Simmons* (2005), the Court cited psychological science showing adolescents' immature judgment, susceptibility to outside pressures, and ongoing character development as reasons to abolish the death penalty for individuals under age 18. A series of Supreme Court cases followed this watershed decision, relying on developmental psychology and neuroscience (e.g., see Steinberg, 2017). One such case was *J.D.B. v. North Carolina* (2011), in which the Supreme Court's ruling cemented the idea that a suspect's age is specifically relevant to police interrogation for the purposes of custody analysis. In the majority opinion, Justice Sotomayor relied on previous court rulings in noting that "the settled understanding that the differentiating characteristics of youth are universal" (p. 3). She wrote that "a reasonable child subjected to police questioning will sometimes feel pressured to submit when a reasonable adult would feel free to go" (p. 8). Thus, the *J.D.B.* decision not only reiterated the *Miranda* court's stance that "custodial police interrogation entails inherently compelling pressures" (p. 2) but also acknowledged that youth may perceive those pressures more intensely than adults; that interrogation pressures are linked to false confessions; and that juveniles are at a heightened risk.

Understanding why adolescence is a risk factor for false confessions requires understanding the ongoing developmental processes relevant to interrogation. In turn, this requires clarifying what precisely constitutes "adolescence." The last two decades have ushered in a wave of neuroscientific and behavioral research that has reconceptualized our understanding of adolescence as a unique and evolutionarily important life stage. Adolescence begins with the onset of puberty and its associated physical, social, cognitive, and emotional changes. The upper boundary of adolescence is

demarcated by diminished neuroplasticity as well as social transitions in which young people take on adult social roles (National Academies of Sciences, Engineering, and Medicine, 2019). There is also strong evidence of continued maturation and socioemotional development throughout the early 20s (Casey et al., 2022; Center for Law, Brain, and Behavior, 2022).

Developmental scientists thus agree that a broad conceptualization of adolescence that accounts for all legally relevant capacities generally comprises ages 10 to 25. Although demarcations vary across individual studies, this age range can be further divided into early adolescence (ages 10-13), middle adolescence (ages 14-17), late adolescence (ages 18-21), and emerging young adulthood (ages 22-25). According to the National Academies (2019), it would be "developmentally arbitrary…to draw a cut-off line at age 18" (p. 22). Accordingly, we use the term "adolescent" to refer to a young person's capacities or behavior and the term "juvenile" to refer to a young person's legal status as a minor.

A hallmark feature of adolescence involves changes to the brain's structure and function that shape decision making capacities and behavior. Human brain development is complex, dynamic, and asynchronous; different brain regions develop along different trajectories and timetables. Competing theoretical models have emerged to explain the neurodevelopmental mechanisms underlying how adolescents evaluate risk, attend to rewards, and control their impulses (for a review, see Casey, 2015). All the models agree that (a) differential development of neurocircuitry in the adolescent brain affects youths' decision making and behavior and (b) the imbalance is a transitory feature of adolescence that diminishes as young people mature.

Recent research affirms the importance of context in the adolescent's ability to exhibit self-control and engage in deliberative decision making. By age 15 or 16, adolescents on average have the cognitive resources to perform similarly to adults on

simple tasks in low-stakes, emotionally neutral settings (see Icenogle & Cauffman, 2021). However, they perform worse than adults under conditions of emotional arousal. In an fMRI study, for example, Cohen et al. (2016) found that 13- to 17-year-olds and 18- to 21-year-olds performed significantly worse on measures of cognitive control than people over 21 when exposed to both brief and prolonged threatening cues. Importantly, their imaging scans showed decreased activation of the brain regions that regulate cognitive control in negative emotional states.

External or social factors such as time pressure; the presence of peers, parents, or siblings; or interaction with persuasive adults can activate emotional arousal (Icenogle & Cauffman, 2021). In such contexts, adolescents exhibit impaired affective control (Schweizer et al., 2020) and diminished psychosocial maturity, as measured, for example, by impulse control, resistance to peer influence, future orientation, and self-restraint (Icenogle et al., 2019; Steinberg et al., 2009). Their heightened sensitivity to rewards, diminished ability to control impulses, and tendency to prioritize immediate over long-term outcomes may thus yield risky decisions (e.g., Cauffman et al., 2010). Overall, the ability to make strategic decisions in emotionally charged contexts continues to develop through one's early 20s (Casey et al., 2022).

Police interrogations are seldom low-stakes or emotionally neutral. Hence, research indicates adolescents exhibit impaired legal decision making in interrogation settings relative to adults. Grisso et al. (2003) found that teens younger than 16 were more likely to exhibit compliance with multiple authority figures (i.e., police, defense counsel, and prosecutors). When asked whether the "best choice" in a hypothetical interrogation scenario was to confess to the offense, deny involvement, or refuse to speak, the proportion of respondents choosing confession diminished with age. In a study of detained youth who were actual defendants, only 13% reported invoking their right to silence and only 10% requested an attorney (Viljoen et al., 2005).

Research using varied methods and samples shows that police do employ high-pressure interrogation tactics with juvenile suspects. In one study with incarcerated youth, nearly one third of the sample said they felt police pressure to confess (Malloy et al., 2014). A large study with Icelandic youth found that self-reported false confessors felt pressured (17%) or threatened (7%) or wanted to escape from police (17%; Gudjonsson et al., 2008). Police officers also report using psychologically manipulative techniques with juvenile suspects (Meyer & Reppucci, 2007). Cleary & Warner (2016) found that patterns of technique usage with minors mirrored that of adult suspects Feld's (2013) analysis of videorecorded interrogations from juvenile felony cases also revealed the use of these high-pressure tactics. Notably, many law enforcement officers have expressed desire for more developmentally-informed training (Meyer & Reppucci, 2007; Snow et al., 2021).

Self-report studies of false confessions are bolstered by laboratory experiments that can control ground truth and assess false confession rates. Using the computer crash paradigm, Redlich and Goodman (2003) found that younger adolescents (ages 12-13) and middle adolescents (ages 15-16) were more likely to sign a false confession statement than older adolescents and young adults (ages 18–26), especially when confronted with false evidence of their culpability. In an experiment using the cheating paradigm, innocent adolescents ages 14-17 were more likely than college students to falsely confess, primarily to protect the true "perpetrator" (Pimentel et al., 2015). This result aligns with self-report studies showing that youth report falsely confessing to protect a peer or family member (Gudjonsson et al., 2008; Malloy et al., 2014; Viljoen et al., 2005).

The proposition that youth is a risk factor is generally accepted within the scientific community. In a survey of 87 confession experts, 94% endorsed as reliable enough to present in court the proposition that "Compared to adults, adolescents who are interrogated are at greater risk to confess to a crime they did not commit" (Kassin et

al., 2018). Interestingly, while some potential jurors recognize that certain manipulative tactics might elicit false confessions, misunderstanding regarding adolescents persists. In one study, for example, respondents believed that around age 18, youthfulness no longer contributes to the risk of false confession—a stance that is inconsistent with the research (Mindthoff et al., 2018; also see Alceste et al., 2021; Kaplan et al., 2020).

New Science-Based Approaches to Interrogation

In the aftermath of the 9-11 terrorist attack, the CIA initiated an enhanced interrogation program in which suspects were subject to various forms of physical abuse. This program was hardly the first of its kind, as these methods are still prevalent in parts of the world (Amnesty International, 2021/2022; Rejali, 2009). Ethical concerns notwithstanding, these techniques do not yield reliable information (Vrij et al., 2017).

A pivotal report by the Intelligence Science Board (Fein et al., 2006) led the United States government to establish the High-Value Detainee Interrogation Group (HIG), a three-agency intelligence-gathering entity that brought together intelligence professionals from the Federal Bureau of Investigation, Central Intelligence Agency, and Department of Defense. Within the HIG, a research program was established to examine ethical, science-based practices—specifically, "to study the comparative effectiveness of interrogation techniques, with the goal of identifying those that are most effective and developing new lawful techniques to improve intelligence interrogations" (for an overview of this research program, see Meissner et al., 2017).

Together with the introduction of PEACE in the UK, the HIG program ushered in a general shift in research on interviewing and interrogation practices. In addition to evaluating the false confession risks associated with accusatorial practices, researchers and practitioners began to develop and evaluate alternative approaches. This work has given rise to a science-based method of questioning suspects, referred to variously as a rapport-based, information gathering approach. This approach has focused on (1) the

development of rapport and trust to facilitate cooperation; (2) the use of productive questioning and mnemonic questioning methods—such as the Cognitive Interview (Memon et al., 2010)—to facilitate recollection and increase the amount of information elicited; (3) and the assessment of deception via the strategic use of evidence and the evaluation of cognitive and verbal cues; and (4) the strategic and truthful presentation of evidence to facilitate diagnostic admissions. These approaches contrast with the accusatorial approaches that are based not on science but on decades of customary practice (see Meissner et al., 2014, 2015).

The techniques that underlie each element of this approach have received considerable research attention (Meissner, 2021). Two meta-analyses have thus evaluated efficacy with a focus on the extent to which these techniques elicit diagnostic confession evidence (Meissner et al., 2014; Catlin et al., 2023). The most recent of these demonstrated that accusatorial approaches, as exemplified by the Reid Technique, (vs. information gathering approaches) appear to *reduce* the likelihood of a true confession (*OR* = 0.56) and *increase* the likelihood of a false confession (*OR* = 3.83). In short, information gathering approaches elicit confessions that are significantly more diagnostic of guilt.

While confession has historically served as the primary objective of interrogation, the focus on information gathering exemplified by PEACE reoriented the goal. This shift should inhibit the kinds of guilt-presumptive tactics that promote confession, sometimes from innocent suspects. Instead, two key objectives have been identified: Facilitating a suspect's cooperation and eliciting investigation-relevant information. Recent studies have thus focused on such metrics as suspect cooperation or engagement, resistance or counter-interrogation behaviors, and the types of information elicited. In the information gathering context, the interviewer is encouraged to build rapport and trust, elicit a complete narrative by asking questions in an unbiased and productive manner,

use mnemonic approaches that facilitate memory retrieval, and engage in strategic questioning and evidence disclosure to improve assessments of credibility. Research on these elements of an information gathering approach are discussed below.

Developing Rapport and Trust

Investigators generally see rapport as foundational to an effective interview (Russano et al., 2014; Vallano et al., 2015). Consistent definitions of rapport are elusive in research and in practice (Vallano & Schreiber Compo, 2015). It can be defined as a relationship between an interviewer and subject that involves a generally positive exchange (Bernieri et al., 1996; Tickle-Degnen & Rosenthal, 1990) or as one that also includes attentiveness toward one another's concerns (Kleinman, 2006; Evans et al., 2010). A thematic analysis of research offers a similar set of constructs, including communication, mutuality, positivity, respect, successful outcomes, and trust (Neequaye & Mac Giolla, 2022). It is important to distinguish rapport and trust. Whereas rapport refers to the quality of the interaction between interviewer and subject, trust pertains to how the subject evaluates the interviewer's reliability, dependability, and goodwill, the primary function of which is to predict future behavior (Oleszkiewicz et al., 2023).

In studying rapport, researchers have used both direct-observational and suspect self-report measures. The most validated observational measure is the Rapport Scale for Investigative Interviews and Interrogation, which includes five subscales that assess attentiveness, trust/respect, expertise, cultural similarity, and connected flow (Duke et al., 2018). Self-report measures typically evaluate a subject's perceptions of how likable, interested, empathetic, patient, and respectful the interviewer was, and/or how smooth, engaging, cooperative, and well-coordinated the interaction was (Brimbal et al., 2019; Vallano & Schreiber Compo, 2011).

In a taxonomy of interrogation techniques, Kelly et al. (2013) identified a set of tactics associated with rapport and relationship building that include developing

common ground or shared experiences, demonstrating kindness, respect, and concern, and showing patience and a willingness to listen. Similarly, Gabbert et al. (2021) identified three functional aspects of rapport—personalizing the interview (e.g., by developing common ground, or self-disclosure); presenting an approachable demeanor (e.g., by tone of voice, smiling, or positive body language); and paying attention (e.g., through active listening and empathetic responses). A recent evaluation of rapport-based interview training indicates that investigators' use of rapport tactics significantly increased post-training—as did subjects' perceptions of investigators, thereby reducing resistance and increasing information yield (Brimbal et al., 2021).

Research confirms the benefits (Gabbert et al., 2021; Vallano & Schreiber Compo, 2015). Studies have shown that rapport tactics generally increase the number of correct details elicited, though findings for incorrect details are mixed (Collins et al, 2002; Vallano & Schreiber Compo, 2015). Analyses of real interrogations and in the laboratory also indicate that rapport increases information yield, reduces counter-interrogation behaviors, and increases likelihood of true confessions (Alison et al., 2013, 2014; Goodman-Delahunty et al., 2014; Huang & Teoh, 2019; Wachi et al., 2018). Importantly, it appears most likely to exert an indirect effect on the amount of information elicited by encouraging the subject to cooperate (Brimbal et al., 2019; Dianiska et al., 2021).

Eliciting Information

The frailty of human memory poses a significant challenge for investigative interviewers. Yet research has shown that interview subjects are often interrupted and asked direct, closed-ended questions (Fisher et al., 1987; Schreiber Compo et al., 2012)—and that suggestive questions can elicit inaccurate information, leading certain vulnerable individuals to give a false confession (Gudjonsson, 1997, 2010; Otgaar et al., 2021). In contrast, productive and mnemonic questions can significantly enhance the

quality of information obtained in investigative interviews (e.g., Colomb et al., 2013; Fisher et al., 1989; Rivard et al., 2014).

Productive questioning approaches involve asking questions that promote the elicitation of more information rather than a particular expected response. This involves asking questions that are open-ended (e.g., describe or explain to me), probing (who, what, when, where, or how), and closed-ended only when appropriate (e.g., to seek clarification of issues previously discussed). In contrast, unproductive questioning is suggestive, leading, overly complex, or repetitive (e.g., questions that force a yes/no response, have a presumptive premise, or are repetitive). Studies have shown that productive questioning approaches increase the elicitation of investigation-relevant information and decrease inaccurate information (Nunan et al., 2020; Oxburgh et al., 2012).

While productive questioning alone can improve information disclosure, the retrieval of additional details can be enhanced by *mnemonic questioning* approaches derived from basic cognitive principles (Fisher et al., 2014). Techniques such as asking participants to mentally reinstate the context of their experience (Dianiska et al., 2019; Smith & Vela, 2001) or closing their eyes as they attempt to recall the experience (Perfect et al., 2008; Vredeveldt et al., 2013) can help increase the amount of information retrieved. So can asking subjects to recall an experience multiple times from different sensory modalities or in reverse chronological order (Gilbert & Fisher, 2006; Geiselman & Callot, 1990; Vrij et al., 2008), asking them to sketch a visual representation of their experience (Dando et al., 2009, Dando & Bull, 2011; Eastwood et al., 2018), or using the Timeline Technique that helps subjects to organize events occurring over an extended period and place these events in the order or sequence in which they occurred (Hope et al., 2013, 2019; Kontogianni et al., 2021).

Based on core principles of memory, cognition, communication, and social dynamics, the Cognitive Interview (CI) is perhaps the most validated approach (Fisher & Geiselman, 1992; Fisher & Geiselman, 2018). Research shows that the CI yields substantially more investigation-relevant details from memory. In one study, Rivard et al. (2014) compared the CI to the Federal Law Enforcement Training Center's "five-step interview," which is used to train U.S. federal investigators. They found that the CI elicited 80% more episodic information about the target event. In a meta-analysis, Memon et al. (2010) confirmed that the CI generated substantially more correct details than did standard interview conditions (d = 1.20, k = 59), with an average increase of 14 details across studies. In contrast, only a small, but significant, difference was observed in *in*correct details (d = 0.24, k = 43), for an average increase of 1.5 incorrect details (no differences were found for the overall accuracy of reported details). While the CI is studied primarily in the context of cooperative interviews, researchers have also tested it in interrogative contexts and found significant benefits to information yield, admissions, and credibility assessment (e.g., Geiselman, 2012; Evans et al., 2013a).

Cognitive Credibility Assessment

Accusatorial approaches such as the Reid technique's often seek to assess deception through behavioral cues believed to indicate deception by indicating an increase in anxiety. As noted earlier, these cues are not diagnostic (e.g., Bond & DePaulo, 2006; Denault et al., 2022; DePaulo et al., 2003; Hartwig & Bond, 2011; Luke, 2019; Vrij et al., 2019). Yet most law enforcement training has followed this approach. Hence, research suggests that such training does not increase accuracy but rather leads to a bias toward seeing deception and guilt (Kassin et al., 2005; Masip et al., 2005; Meissner & Kassin, 2002). While a study affiliated with Reid and Associates suggested that the approach was valid (Horvath et al., 1994), subsequent research has shown that the BAI

does not improve performance and merely codifies the mistaken assumptions of common sense (Masip et al., 2011, 2012; Masip & Herrero, 2013; Vrij et al., 2006).

In an effort to improve deception detection performance, researchers have tested alternative approaches. Research shows that lying is more cognitively demanding than telling the truth, so it takes more time (e.g., Geven et al., 2020; for a meta-analysis, see Suchotzki et al., 2017). Research also shows that verbal or story-based cues are more diagnostic than nonverbal behavior, so training in the use of these cues increases deception detection accuracy (Hauch et al., 2016). In light of these differences, researchers have examined strategic interviewing methods that facilitate the elicitation of cognitive cues that aid deception detection. Referred to as Cognitive Credibility Assessment (CCA), the aim is to magnify differences between liars and truth tellers, enabling observers to distinguish between them. Three general approaches have been examined: (1) Asking unexpected questions, (2) increasing cognitive load, and (3) encouraging subjects to provide more information that can be verified. Meta-analyses have confirmed that these tactics increase differences in the amount of information provided by truthful and deceptive subjects (Palena et al., 2021; Verschuere et al., 2021; Vrij et al., 2017) and that observers trained in CCA exhibit increased accuracy (Mac Giolla & Luke, 2021). Law enforcement agents can thus be trained in these techniques to improve performance (Vrij et al., 2015, 2016).

To begin with, unexpected questioning approaches seek to leverage the different strategies that liars and truth tellers bring to an interview. Liars typically prepare to recite a simple and consistent story, so they have more difficulty with questions pertaining to unexpected or ancillary matters. Asking specific questions about spatial, temporal, or planning details, or drilling down on relevant aspects of an experience (e.g., you mentioned being at a conference… did you attend a conference dinner? Who was the

keynote speaker?) improve observers' ability to distinguish between liars and truth tellers (Lancaster et al., 2013; Ormerod & Dando, 2015; Vrij et al., 2009).

Based on the fact that it is more effortful to lie than to tell the truth, a second approach to CCA involves increasing cognitive load in a manner that disrupts the already overtaxed liar more than the truth teller. Studies have tested this hypothesis by having subjects engage in a concurrent secondary task during the interview or requesting that subjects recall their narrative in reverse chronological order. These tactics impede story telling for deceptive subjects to a greater extent that truthful subjects, making it easier for observers to distinguish the two groups (Evans et al., 2013b; Vrij et al., 2008).

A third approach is to ask subjects to provide more information that can be verified. Whereas truth tellers often can report about a specific event memory, deceptive subjects must either fabricate or draw upon similar experiences to generate a compelling narrative (Colwell et al., 2012). Narrative credibility assessments rest on the assumption that truthful statements will contain richer genuine narratives than most fabricated accounts. Indeed, meta-analysis suggest substantial validity for this means of distinguishing truthful and fabricated narratives (*d*s = 0.86 and 0.74, *k*s = 55 and 23, respectively; Oberlader et al., 2021). CCA approaches leverage this distinction by encouraging participants to provide more details (Harvey et al., 2017; Vrij et al., 2018), by enhancing recall through the use of mnemonic questioning tactics (Geiselman, 2012; Logue et al., 2015; Noc et al., 2022), and by asking subjects to provide verifiable details that can be independently evaluated afterward (Nahari et al., 2014a, 2014b).

Strategic Approaches to Presenting Evidence

The Reid technique accuses suspects at the outset of an interrogation. This "positive confrontation," expressed with certainty, is accompanied by a rejection of denials and objections and is often accompanied by the presentation of incriminating evidence, whether true or false, or bluffs about future evidence. To be described shortly,

these tactics increase the risk that innocent suspects would confess. In recent years, however, research has offered an alternative "strategic" approach to the presentation of evidence (Hartwig et al., 2014; Dando & Bull, 2011).

The Strategic Use of Evidence (SUE) technique aims to make veracity judgments more accurate by actively eliciting cues to truth and deception (Granhag & Hartwig, 2008, 2015). Guilty suspects tend to adopt both avoidance and denial strategies when being interviewed. Those who do not know what evidence against them exists are more likely to proffer statements that contradict that evidence. Withholding evidence until later in the interview, rather than disclosing it at the outset, can thus trap the unwary guilty suspect into a statement that is inconsistent and thereby improve investigators' ability to detect their deception (Hartwig et al., 2005, 2011; Luke et al., 2014). Meta-analysis of the literature confirms a robust effect of late disclosure in producing greater statement-evidence inconsistencies among suspects who are guilty (d = 0.70, k = 10) versus innocent (d = -0.03, k = 8; Oleszkiewicz & Watson, 2021).

In a variant of SUE, the Tactical Use of Evidence framework advocates for the "drip-feeding" in which facts are disclosed gradually and systematically throughout the interview (Dando & Bull, 2011; Dando et al., 2015; May et al., 2017; Tekin et al., 2015, 2016). In this approach, interviewers would question suspects in a sequential manner that allows them to test each piece of evidence, first by asking general and specific questions regarding the item of evidence, and then by disclosing it in a manner that allows the subject to address the inconsistency directly or confirms that their narrative aligns with the interviewer's knowledge. This approach can induce a "shift-of-strategy" in which the sequential presentation of evidence moves subjects from withholding to a more forthcoming posture (Luke & Granhag, 2022). Meta-analysis confirms that this approach induces greater statement-evidence inconsistencies when compared to an immediate disclosure condition (d = 0.81, k = 7; Oleszkiewicz & Watson, 2021). Several

studies suggest that such methods can also lead to the elicitation of new information and admissions by guilty subjects (Luke & Granhag, 2022; Tekin et al., 2015, 2016).

Consequences of Confessions

It is unfortunate but inevitable, at least for now, that some number of innocent people will be misclassified, targeted for suspicion, and subjected to highly confrontational interrogations, and that many of them will waive their rights and confess. One might argue that this chain of events is tolerable, not tragic, to the extent that the coercion and resulting false confessions are detected by authorities and corrected. Essential to this presumed safety net is the belief that police, prosecutors, judges, and juries are willing and able to discount questionable confessions

The problem begins with law enforcement. In their first edition of the Reid technique, Inbau and Reid (1962) cautioned that "Confession is not the end of the investigation" (p. 136). Today, however, numerous false confession cases reveal that once a suspect confesses, police often close the investigation and overlook compelling exculpatory evidence, such as alibis, or other possible leads–even if the confession is internally inconsistent, provides little-to-no proof of guilty knowledge, and is contradicted by other evidence.

There are three psychological reasons why police, like other humans, do not dutifully discount unreliable confessions. First, attribution research has shown that people tend to accept self-reports and other behaviors at face value. Illustrating the "fundamental attribution error," we are quick to make dispositional attributions for other people's actions while underestimating the role of situational forces (Gilbert & Malone, 1995; Ross, 1977). When it comes to confessions, a second problem is that people have a reasonable intuitive tendency to trust statements against self-interest as a matter of common sense (Jones and Davis, 1965). Hence, observers are far more likely to believe a suspect's admissions of guilt than denials (Levine et al., 2010). Third, as noted

earlier, people cannot distinguish truths from lies at high levels of accuracy (Hartwig & Bond, 2011; Luke, 2019; Vrij et al., 2019).

Consistent with this latter body of research, Kassin et al. (2005) videotaped male prison inmates as they gave true confessions for their crimes and concocted false confessions to crimes they did not commit. Neither college students nor police investigators were adept at distinguishing true from false confessions—though police participants were more confident in their judgments. This finding was later replicated in studies in which police and polygraph examiners were asked to judge the veracity of juvenile suspects' confessions (Honts et al., 2014; Honts et al., 2019).

Anecdotes from wrongful convictions suggest that this trust in confessions extends to prosecutors, some of whom persist even in the face of irrefutable exculpatory evidence (Findley & Scott, 2006). For example, Bruce Godschalk was exonerated of two rape convictions after 15 years in prison when DNA tests conclusively indicated that he was not the rapist. Yet the district attorney refused at first to accept the results. When challenged afterward, he said, "I have no scientific basis. I know because I trust my detective and my tape-recorded confession. Therefore the results must be flawed until someone proves to me otherwise" (Rimer, 2002, p. A14). This is not an isolated incident. Some instances are so flagrant that the *New York Times Magazine* published an article titled "The Prosecution's Case Against DNA" about prosecutors who generate implausible theories to reconcile the DNA exclusion of suspects who have given prior confessions (Martin, 2011).

As a result of this tendency for the gatekeepers to move forward on the basis of disputed confessions, it is important to know what effect, if any, confessions have on other evidence during the course of an investigation; how juries then perceive confession evidence and whether the trial offers the kind of objective context that serves as a safety net; and what role, if any, confessions play in the resolution of cases via guilty pleas.

How Confessions Corrupt Other Evidence

The already potent impact of confessions in court and beyond is often buttressed by the fact that confessions can taint witnesses, alibis, informants, and forensic science examiners and pathologists, creating the illusion that they are independently corroborated. The case of Anthony Wright, for which the APA submitted its first amicus brief on false confessions, is a case in point. In 1991, Wright was induced into signing a confession to breaking into an elderly woman's home, where he said he raped and murdered her. Wright's statement was later buttressed by two eyewitness accounts as well as forensic evidence in the form of bloodstained clothing allegedly found in his home. Wright's conviction was vacated in 2013 when DNA testing of the rape kit, which the district attorney's office had opposed, excluded Wright and identified a deceased serial offender who lived in the neighborhood at the time.

Over the years, psychologists have identified a number of confirmation biases by which people tend to seek, perceive, interpret, and create new evidence in ways that verify their preexisting beliefs. The problem is pervasive. Classic studies have shown that prior exposure to images of a face or a body, an animal or a human, or letters or numbers, can bias what people see in an ambiguous stimulus. More recent research shows that our impressions of other people can similarly be tainted (Nickerson, 1998; for an overview in forensic domains, see Kassin et al., 2013; Saks et al., 2003). For example, participants who were led to believe that a suspect is guilty perceived more resemblance between that suspect and a facial composite (Charman et al., 2009) and heard more incrimination in degraded speech recordings (Lange et al., 2011).

In light of the potent effects of confession on perceptions of guilt, researchers have examined whether confessions in particular taint other subsequently collected evidence. Kassin et al. (2012) analyzed DNA exonerations from the Innocence Project case files. Consistent with the corruption hypothesis, multiple evidence errors were

found in 78% of false confession cases, significantly more than in non-confession cases. In order of frequency, false confessions were accompanied by invalid or improper forensic science, eyewitness identification errors, and informants who lied. In the cases containing multiple errors, confessions were most likely to have been obtained first.

Controlled experiments are consistent with this result. In one study, participants observed a staged theft that they believed to be real, after which they made identification decisions from a blank photo lineup. One week later, individual witnesses were told that the person they had identified denied guilt, or confessed, or that another lineup member confessed. At that point, many witnesses changed their decisions, selecting the confessor with confidence (Hasel & Kassin, 2009). In a second study, prior knowledge of a confession biased lay judgments of handwriting evidence. Participants compared handwriting samples taken from a bank robbery note and from a particular suspect. When told that the suspect had confessed and retracted that confession, they were more likely to conclude, erroneously, that the two samples were derived from the same individual (Kukucka & Kassin, 2014; for a replication via secondary confessions, see Jenkins et al., 2021).

In 2009, the National Academy of Sciences published a scathing assessment of the forensic sciences, concluding that there are problems with standardization, reliability, accuracy and error, and the potential for contextual bias. It is not surprising, therefore, that even professional examiners can be tainted by confessions. In one study, Israeli Police Force polygraph examiners perceived more deception in polygraph charts when they believed the suspect confessed than in a no-confession control condition (Elaad et al., 1994). In another study, Dror and Charlton (2006) presented five latent fingerprint experts with pairs of prints from a crime scene and suspect in an actual case in which they had previously made a match or exclusion judgment. The prints were accompanied by no extraneous information, an instruction that the suspect had

confessed, or an instruction that the suspect was in custody at the time. The misinformation produced a change in 17% of the original, previously correct judgments. Across a range of forensic domains, contextual information in general can influence examiners' interpretations of complex DNA mixtures (Dror & Hampikian, 2011), skeletal remains (Nakhaeizadeh et al., 2014), crime scene analyses (van den Eeden et al., 2016), and pathologists' determinations as to the manner of death (Dror et al., 2021).

Anecdotes from wrongful homicide convictions suggest that confessions can not only spawn false incriminating evidence but can also suppress exculpatory information. In a case described earlier, Pennsylvania exoneree Barry Laughman was induced to confess, after which two witnesses told police that they had seen the victim alive after the alleged time of the murder. Yet police sent these witnesses home. Then when serology evidence failed to match Laughman's blood type, the state forensic chemist explained away the critical mismatch. In a second case, New York exoneree John Kogut named several alibi witnesses he was with on the night of the confessed murder. Initially, his alibis confirmed his whereabouts. However, they later withdrew their support once informed that Kogut had confessed. In a third case, Illinois exoneree Juan Rivera was wearing an electronic ankle bracelet, which placed him two-plus miles from the crime scene. Yet the prosecutor argued, without proof, that the bracelet had malfunctioned or was otherwise disabled (for fuller descriptions, see Kassin, 2022).

With regard to this effect of confession on exculpatory information, experiments confirm that alibi witnesses are similarly malleable. After a confederate in one study was accused of stealing money from an adjacent office, only 45% of participants who were in the physical presence of that confederate at that time continued to vouch for her after being told that she had orally admitted the theft but then refused to sign a confession (vs. 95% who were told that she had denied involvement; Marion et al., 2016; also see Kienzle & Levett, 2018).

Confession Effects on Juries

When a suspect in the United States retracts a confession, pleads not guilty and proceeds to trial, a sequence of two decisions may be set into motion. First, a judge determines at a pretrial suppression hearing whether the confession was voluntary and hence admissible. Then a jury, hearing the admissible confession, determines whether the defendant is guilty beyond a reasonable doubt. The question is, what is the effect?

Over the years, mock jury experiments have shown that confession evidence has a substantial impact on verdicts. In one study, Kassin and Sukel (1997) presented mock jurors with one of three versions of a murder trial. In a low-pressure version, the defendant was said to have confessed to police immediately upon questioning. In a high-pressure version, participants read that the suspect was interrogated aggressively by a detective who exhibited his gun. A control version contained no confession in evidence. Presented with the high-pressure confession, participants appeared to respond in the legally prescribed manner. They judged the statement to be involuntary and said it did not influence their decisions. Yet when it came to the all-important verdict measure, this confession significantly increased the conviction rate. This increase occurred even when subjects were specifically admonished to disregard confessions they found to be coerced.

Additional studies have shown that people do not adequately discount confession evidence even when the confession was elicited by explicit promises of leniency (Kassin & Wrightsman, 1980); even after learning that police lied about evidence, a tactic they saw as coercive (Woody et al., 2018); even when told that the defendant suffered from a mental illness or was under duress (Henkel, 2008); even when the defendant was a minor (Redlich et al., 2008); even when the suspect was sleep deprived (Shifton, 2019); even at times when the confession was contradicted by exculpatory DNA (Appleby & Kassin, 2016); and even when the defendant's confession was reported only secondhand

by an informant who was motivated to lie (Neuschatz et al., 2008; Wetmore et al., 2014; for an overview, see Neuschatz & Golding, 2022).

Perhaps it is not surprising that confessions bias lay triers of fact. But judges are similarly affected. Wallace and Kassin (2012) presented 132 experienced judges with a case summary with strong or weak evidence and a confession elicited by either high- or low-pressure interrogation tactics, plus a no confession control group. As per the law, most judges saw the confession extracted through high-pressure tactics as coerced, not voluntary, and hence not properly admitted into evidence. Yet this confession, which even they saw as coerced, substantially increased their guilty verdicts. The foregoing research on the power of confession evidence is bolstered by archival analyses of actual cases, leading Drizin and Leo (2004) to describe confessions as "inherently prejudicial and highly damaging to a defendant, even if it is the product of coercive interrogation, even if it is supported by no other evidence, and even if it is ultimately proven false beyond any reasonable doubt" (p. 959).

As to why judges and juries are so enamored of confession evidence, it is important to realize that in addition to the commonsense myth that innocent people do not confess, police-induced confessions typically contain not only an admission of guilt but a compelling detail-filled narrative that appears to offer “proof” of guilty knowledge. In *Miranda v. Arizona* (1966), the U.S. Supreme Court warned that even without using third-degree tactics, the psychologically oriented Reid technique “trades on the weakness of individuals” (p. 1618). This comment was accompanied by footnote to a then-recent New York case involving a 19-year-old Black man named George Whitmore. On August 28, 1963, two young professional women were killed. Several months later, with this high-profile “career-girl murders” still unsolved, homicide detectives picked up Whitmore. After 26 hours of unrecorded interrogation, they emerged with an exquisitely detailed sixty-one-page confession to both murders, a third murder, and a rape.

After spending nearly three years in jail and a decade on bond, however, Whitmore was exonerated and released. It turned out that he had a solid alibi: On the day of the murders, he was in southern New Jersey, watching Reverend Martin Luther King's historic "I have a dream" speech from the Lincoln Memorial on TV. Yet shockingly, Whitmore's false confession contained specific, accurate, rich details about the career girl murders and crime scene that were not known to the public—the kinds of facts, we were told, that "only the perpetrator could have known" (for descriptions of this case, see English, 2011; Shapiro, 1969).

The Whitmore case is not an isolated incident. Garrett (2010) examined the first 38 false confessions from the Innocence Project's DNA exoneration case files and found that 36 of these confessions contained facts about the crime that were both accurate and not in the public domain. In a followup analysis, Garrett (2015) expanded the database to 66 cases and found that 62 of these statements, or 94%, contained accurate facts not in the public domain: details that only the perpetrator (and police) could have known. In these cases, detectives purposefully or inadvertently communicated these facts to the innocent confessor through a process of "contamination."

Investigators are trained to withhold nonpublic crime facts from suspects so they can determine whether confessors can corroborate their admissions with proof of guilty knowledge (Inbau et al., 2013). Yet this wholesale contamination makes it difficult for juries and other factfinders to evaluate false confessions when they lack access to recordings of the entire interrogation—especially when the confession was rehearsed (Alceste et al., 2023). As to how contamination comes about, there are two possible mechanisms: Sometimes nonpublic crime details find their way into confessions through purposeful acts of police misconduct (National Registry of Exonerations, 2020). At other times, however, the process may be inadvertent, as when police show suspects crime scene photos, take them to the crime scene, or overshare nonpublic facts on the basis of

their guilt-presumptive belief that the suspect already possesses that common-ground knowledge (for a first-hand law enforcement account of how this can occur, see Trainum, 2007; for an experimental demonstration, see Alceste et al., 2020).

To further complicate factfinding, false confession narratives often contain other credibility cues as well. Appleby et al. (2013) analyzed the contents of 20 known false confessions and found that they all contained visual and auditory details about the crime and crime scene. Overall, 95% of the statements referenced alleged accomplices, witnesses, and other actors; 80% recounted what the victim allegedly said; 55% described the victim's mental or emotional state; and 40% expressed sorrow, remorse, and/or heartfelt apologies. "This was my first rape," said sixteen-year-old Korey Wise, an innocent Central Park Five exoneree, "and it's going to be my last." Consistent with research showing that vividness is a cue that increases perceptions of credibility (Bell & Loftus, 1989; Johnson, 2006), Appleby et al. (2013) found in a followup mock jury study that compared to a simple admission of guilt, detailed confessions increased the conviction rate and confidence.

In light of the reasons for why confessions are so potent, it is important to know whether expert testimony in court serves to increase judges' and juries' sensitivity to risk factors and ability to discriminate between true and false confessions. Although early indications are favorable (e.g., Costanzo et al., 2016; Henderson & Levett, 2016), more research is needed to address this important question.

Confession Effects on Guilty Pleas

Just as confessions exert a potent effect on judges and juries at trial, and can corrupt lay witnesses and forensic examiners, an important ultimate question concerns what effect, if any, confessions have on guilty pleas, a form of confession—and the means by which most cases in the United States are resolved.

Plea Bargaining: Historical Overview

The right to forego one's day in court and plead guilty was introduced in the 18th century in the United States. Since then, the prevalence of, and reliance on, guilty pleas has climbed. Today, of those arrested or indicted, on average about 65-75% will resolve their case via a guilty plea; in some counties, 100% of charged defendants will do so—that is, not a single defendant has their case dismissed, diverted, or are found guilty or acquitted at trial. Among those convicted, approximately 97% occur via guilty pleas, indicating that only 3% of convictions result from verdicts rendered at adversarial trials (Redlich et al., 2022). Thus, whether plea rates are calculated prospectively from arrest or retrospectively from conviction, most defendants do not get their day in court, accompanied by a presumption of innocence, evidence argued by opposing counsel, and a standard of proof beyond a reasonable doubt. This trend had prompted the U.S. Supreme Court to acknowledge that "criminal justice today is for the most part a system of pleas, not a system of trials" (*Lafler v. Cooper*, 2012, p. 3).

Guilty pleas (or close equivalents) also account for numerous case resolutions elsewhere in the world. In Europe, pleas or trial waivers predominate in England, Wales, Georgia, Scotland, Estonia, the Russian Federation, and Hungary (Fair Trials, 2021). In fact, more than 65 countries have adopted the practice, most within the past 25 years. A notable trend in these countries is that once they adopt plea bargaining, upwards of 80% of their criminal cases are resolved in that way (Fair Trials, 2021; Redlich et al., 2017).

Given the heavy reliance of the system on pleas, one might expect that the process metes out fair and just outcomes. By most accounts, however, there is cause for concern. In the first report of the President's Commission on Law and the Administration of Justice (1967), then-Attorney-General Nicolas Katzenbach stated the following: "Prosecutors negotiate charges with defense counsel in order to secure guilty pleas and thus avoid costly, time-consuming trials; in many courts 90 percent of all

convictions result from the guilty pleas of defendants rather than from trial. Much negotiation occurs without any judicial consideration of the facts concerning an offender or his offense. These circumstances create important problems that the courts generally have not recognized or dealt with effectively" (pp. 127-28).

The problems alluded to included attorneys working on a mass production basis; courts relying on pleas to resolve most cases; the hidden and often disingenuous nature of negotiated pleas; and the related lack of systematic policies and procedures without sufficient oversight, making it "surely safe to assume that many mistakes are made" (p. 130); wide variations in pleas by jurisdiction and by judge; distortions of prosecutorial charging decisions; the dangers of excessive rewards and prosecutorial retaliation in harsh sentencing if plea offers are rejected; and the sharing of discovery by prosecutors and defense attorneys. Although Katzenbach's report was written 55 years ago, it describes many of the same limitations that plague the system of pleas today (Alschuler, 2016; Edkins & Redlich, 2019; Johnson et al., 2016).

Because the guilty plea is the *modus vivendi* for convicting defendants in the U.S., and increasingly elsewhere, prosecutors, defense attorneys, and defendants make the decision to offer, advise, and accept plea offers, respectively, on a daily basis. The dominant theory underlying this decision-making involves "bargaining in the shadow of trial" (Bibas, 2004; Bushway & Redlich, 2012)—the notion that legal actors forecast the probability of conviction at trial and seek to maximize their outcomes accordingly. Although some support for this theory has been found (Bushway et al., 2014; Hellgren & Kassin, 2022), critics note that it fails to account for other key factors (see Bibas, 2004; Wilford et al., 2021). Recent research has begun to assess the basic tenets of the shadow theory—such as when the probability of a trial conviction is high vs. low, or dependent on a defendant's mathematical ability (Bartlett & Zottoli, 2021; Petersen et al., 2022).

Another decision point concerns the type of guilty plea. There are three main types*: traditional*, *nolo contendere* (no contest), and *Alford* pleas. Although they all result in the defendant's conviction, accompanied by direct (e.g., prison sentence, fines) and collateral (e.g., forfeiture of licenses, limited or barred access to governmental subsidies) consequences, and all typically result in lenient sentencing relative to trial convictions (Redlich & Ozdogru, 2009), only the traditional guilty plea is intended to represent an admission of guilt. In no-contest pleas, the defendant neither admits nor denies guilt. In Alford pleas, the defendant overtly proclaims innocence, while simultaneously recognizing their risk of losing at trial (*North Carolina v. Alford*, 1970).

Whereas the mere willingness to accept a traditional plea offer is often sufficient to meet the factual basis element (Rakoff, 2014), in no contest and Alford pleas, this element should be established via means other than the defendant's say-so in judicial plea hearing colloquies—e.g., a "yes" response to the question, Are you pleading guilty because you are in fact guilty? (see Dezember et al., 2022). When judges use their discretion to accept an Alford plea, they should do so only when the "record strongly evidences guilt" (*North Carolina v. Alford*, 1970, pp. 38-39). Yet in-depth interviews with judges, prosecutors, and defense attorneys in Virginia reveal that Alford pleas are negotiated in cases for reasons that have little to do with the evidence, or in cases in which the evidence is weak (Dezember & Redlich, 2023).

As with false confessions induced by police, it is beyond dispute that innocent defendants sometimes plead guilty to crimes they did not commit. To date, the NRE has catalogued more than 800 false guilty pleas in the United States, a figure that represents approximately 24% of the wrongful convictions in its database. As with false confessions, both situational and dispositional factors can place innocent defendants. For many of the same developmental reasons cited earlier, juvenile defendants are also at increased likelihood of pleading guilty to crimes they did not commit (see Zottoli et al., 2016).

The Innocence Problem

The courts have recognized that innocent defendants sometimes plead guilty to crimes they did not commit. As described in *State v. Kaufman* (1879), an Iowa Supreme Court case, "It matters not whether the defendant is, in fact, guilty; the plea of guilty is just as effectual as if such was the case. Reasons other than the fact that he is guilty may induce a defendant to so plead, and thereby the State may be deprived of the services of the citizen, and yet the State never actually interferes in such case, and the right of the defendant to so plead has never been doubted" (p. 580). Arguably, since this opinion, the incentives for innocent defendants to plead guilty have become even more enticing.

According to Alschuler (2016), "convicting defendants who would be acquitted at trial is one of the principal goals of plea bargaining." Hence, he contends, we have a "nearly perfect system for convicting the innocent" (p. 919). For the prosecutor, a conviction is a conviction, regardless of whether it was hard won at trial or induced through a plea offer. For the defendant, a bargain is a bargain, at least in the short term. Indeed, the on-sale sentence and charge discounts that accompany most plea offers are difficult to ignore (Redlich et al., 2017b; but see Helm, 2022). For the defense attorney, the bargain often represents a zealous defense of their clients, which may mean advising them to accept plea offers to avoid the risk of harsher sentences upon trial convictions. Helm et al. (2018) surveyed defense attorneys and found that 89% had represented clients who pleaded guilty while proclaiming their innocence; 45% had clients who pleaded guilty whom they, as defense counsel, believed to be innocent. The combination of conviction-seeking prosecutors, risk-averse defendants, and overworked and underresourced defense attorneys creates the perfect storm.

One problem in particular concerns the excessive rewards and prosecutorial retaliation in sentencing when plea offers are rejected (President's Commission Report, 1967). Alternatively called the "plea discount" or "trial penalty" (Yan & Bushway, 2018),

the issue lies in the disparity between the would-be punishment received upon trial conviction and the punishment received via the guilty plea. Plea sentencing discounts average as high as 96-98% (Zottoli et al., 2016). For example, a defendant convicted at trial receives a 10-year prison sentence (i.e., 3,650 days), but if this same defendant accepts a plea offer, it could result in a 73-day jail sentence, a 98% reduction. Discounts this large are often too good to pass up, even for innocent defendants. Helm (2022) recently demonstrated that categorical sentence differentials (e.g., probation versus custodial time) may be even more enticing to innocent defendants than quantitative sentence differentials (discounts of reduced custodial time). Indeed, research using hypothetical scenarios suggests that avoiding incarceration either at the front end (e.g., via release from pre-trial detention; see Edkins & Dervan, 2018) or at the back end (e.g., via a sentence of probation; see Yan et al., 2022) increase innocent defendants" willingness to accept a plea offer.

Another problem is the ill-defined rules pertaining to discovery. In *United States v. Ruiz* (2002), the U.S. Supreme Court held that the prosecutor need not disclose exculpatory impeachment evidence when negotiating pleas—a ruling that stands in contrast to *Brady v. Maryland* (1963), which held that exculpatory evidence must be turned over for trial. Yet for guilty and innocent defendants alike, it is not possible to make a knowing and intelligent decision if denied this information.

One notable example is the case of then 19-year-old Joseph Buffey. In 2001, Buffey was induced to confess to police and then plead guilty to sexual assault and robbery, despite actual innocence. In this case, the prosecutor offered a harsh, time-limited plea deal and failed to disclose exculpatory DNA tests when Buffey accepted the plea. Uninformed that the DNA results had conclusively excluded his client, Buffey's attorney advised him to plead guilty. In 2015, the West Virginia Supreme Court allowed Buffey to withdraw his guilty plea after concluding that the State had violated his due

process rights by failing to disclose the DNA evidence. West Virginia thus became one of the few states to require the disclosure of exculpatory evidence at the plea stage (*Buffey v. Ballard*, 2015;see Zottoli et al., 2019). There is a postscript to this story: Rather than dismiss the charges in response to the state supreme court's ruling, Buffy's prosecutor vowed to retry him and then offered him an Alford plea by which he could proclaim his innocence in exchange for a sentence of time served. Reluctant to risk conviction and reincarceration, Buffey accepted the offer in exchange for his freedom (Valente, 2016). Thus, he was never officially exonerated and is not eligible for statutory compensation.

Effects of Confession on Plea Decisions

Similar to their effect on trial verdicts, it appears that confessions also increase the rate of convictions by guilty plea. The mechanism is largely the same: Confessions "have always ranked high in the scale of incriminating evidence" (p. 605, *Brown v. Walker*, 1896). If defendants are rational actors in the shadow of trial, they and their attorneys would forecast an increased likelihood of conviction at trial when a confession is present, thereby leading them to plead guilty.

Research supports this proposed confession effect. In the context of a hypothetical case vignette, Bushway et al. (2014; see also Redlich et al., 2016) found that practicing defense attorneys were the most likely to bargain in the shadow of trial compared to prosecutors and judges. In that same study, defense attorneys were significantly more likely to recommend that their client accept plea offers when a confession was present (86.9%) versus absent (77.3%). Although lawyers may not be highly accurate in their trial verdict predictions (see Goodman-Delahunty et al., 2010), empirical evidence suggests that they do advise plea offers in the shadow of trial (Kramer et al., 2007; Pezdek & O'Brien, 2014). In one study, for example, Hellgren and Kassin (2022) found that when the evidence was weak and the defendant did not confess, only 3% of defense attorneys recommended accepting a plea offer. When their client had

confessed but the judge ruled this evidence inadmissible, that rate remained low at 10%. When the same confession deemed admissible, however, 39% of defense attorneys recommended plea acceptance.

The confession effect on guilty pleas has been amply demonstrated. In one study, Redlich et al. (2016) presented a hypothetical criminal case to over 1,500 prosecutors, defense attorneys, and judges, which contained a set of labeled folders. Participants were asked to click as many folders as they needed to make an informed decision. Results showed that confession evidence was the most sought out item (94% of participants chose to view that folder) and the presence of a confession increased everyone's tendency to recommend the plea option—especially defense lawyers. Also in the lab, DiFava et al. (2023) used a virtual avatar simulation to manipulate whether an avatar-defendant was implicated by a confession or an eyewitness identification when deciding to accept or reject a plea offer. Regardless of guilt or innocence, participants in the confession condition were significantly more likely to accept plea offers than those in the eyewitness condition (odds ratio = 2.12). In open-ended responses afterward, among those who accepted plea offers, 51% in the confession condition cited strength of the evidence as a rationale for their decision, compared to 27% in the eyewitness condition.

The "confession-to-plea pipeline" can also be seen in actual cases. Redlich et al. (2018) examined the links between the type of police statement given (denials, partial or full confessions) and plea outcomes from presumably guilty defendants. Approximately 70% of suspects who denied involvement to police later pled guilty. In contrast, partial and full confessions were associated with near-ceiling rates of guilty pleas (i.e., 97-100%). The same pattern can be seen in proven false guilty plea cases. In 2015, the NRE reported that false guilty pleas were three times more likely in non-drug cases when a false confession was present than when absent.

More recently, Redlich et al. (in press) compared wrongful convictions by trial versus guilty plea using data from the NRE. In a multiple regression analysis involving more than 10 factors predicting trial/plea status, the presence of a false confession substantially increased the likelihood of a false guilty plea, with an odds ratio of 4.28. When isolating homicide cases, this effect held (odds ratio = 4.31). In contrast to the other known canonical risk factors of wrongful conviction (e.g., eyewitness identification, ineffective counsel, forensic science errors), false confession was the only factor to predict false guilty pleas. In an analysis of Innocence Project DNA exonerations, Cooper et al. (2019) noted a similar pattern. Among false guilty plea cases, 60% also had a false confession (by the defendant, a co-defendant, or both) compared to 24% in cases resolved by trial (this pattern was especially evident in homicide cases, where 21 of 24 false guilty pleas contained a false confession vs. 0 of 16 trial homicide cases).

The Chinese saying, "convictions begin with confessions" (Belkin, 2011, p. 279), has received strong empirical support in research using diverse methodologies—regardless of the conviction mechanism, and regardless of actual guilt or innocence. Simply put, police-induced confessions increase the likelihood of conviction, whether by trial verdict or by plea. Undoing a wrongful conviction by guilty plea is notoriously difficult, in part because the primary route to exoneration is through the appeals process, a right often waived when pleading guilty (Redlich & Bonventre, 2015). Thus, the pernicious effects of false confession extend beyond increased convictability, with effects that include a range of post-conviction obstacles.

The Stigma of Confession

Over the years, research has demonstrated the adverse effects of social stigma on individuals who are shunned by others (Goffman, 1963; Link & Phelan, 2001; Major & O'Brien, 2005). Consistent with this work, people who confess to crimes are subject to

the same effects, immediately and thereafter—and these effects often persist through the appeals process and even after exoneration (Scherr et al., 2020).

Within the Courts

Once convicted, individuals in the U.S. legal system have four general routes for seeking postconviction relief: (1) a motion for a new trial, (2) a series of direct appeals to intermediate state courts that might be considered by state supreme courts and the U.S. Supreme Court, (3) postconviction review, sometimes called a collateral review, by which defendants can challenge a conviction on grounds that could not have been raised on direct appeal, and (4) a habeas corpus petition filed in federal court, in which defendants must demonstrate that a constitutional violation occurred in their case.

The U.S. Supreme Court has often prioritized finality of conviction over truth and justice (*Herrera v Collins*, 1993; *Shinn v. Ramirez*, 2022), so it is not surprising that postconviction relief attempts are seldom successful (Findley, 2009; Garrett, 2011). Cases involving confessions, especially in the absence of exculpatory DNA, are particularly difficult (Garrett, 2015). Indeed, based on data collected from DNA exonerations, Innocence Project analysts candidly noted that "…false confession cases typically require more than exculpatory DNA in order to secure an exoneration. Often that has to come in the form of a "hit" to the real perpetrator…" (West & Meterko, 2015, p. 765; see also Gross & Shaffer, 2012).

The stigma attached to confession can even prevent individuals from accessing DNA evidence to test in the first place. In the earlier discussed Bruce Godschalk in Pennsylvania, Godschalk requested that DNA samples collected from rape kits be tested. Yet the appellate court denied his request, explicitly noting that "…appellant's conviction rests largely on his own confession which contains details of the rapes which were not available to the public." (*Commonwealth v. Godschalk*, 1996). Godschalk's DNA was eventually tested, and he was exonerated in 2002, which spurred Pennsylvania

legislators to pass a statute facilitating access to DNA testing. Then in 2006, however, also in Pennsylvania, Anthony Wright was denied his request for DNA retesting on the ground that he had confessed to rape and murder. In response, the APA (2008) submitted an amicus brief on behalf of Wright to the state supreme court, which overruled the lower court. The DNA was tested and it both excluded Wright and identified the actual perpetrator. This case illustrates yet another way in which the stigma of confession can stymie an innocent defendant's pursuit of freedom: After the DNA results were in, the District Attorney chose to retry Wright on the basis of his confession, at which point he was acquitted (for a description, see Kassin, 2022).

Anthony Wright's experience is not isolated. Release from incarceration and official exoneration are unique legal events. Judges can authorize the release of an individual (e.g., because of an appeal or motion from a prosecutor). At that point, prosecutors can dismiss the charges, and in so doing officially exonerate the individual (Webster, 2020). Although many official exonerations result from acquittals or the dismissals of charges, individuals can also be officially exonerated, declared factually innocent, or relieved of the consequences of a conviction by government officials or other authorized bodies (National Registry of Exonerations, 2020).

The effects of confession in this process are measurable. Examining the archives of the NRE for murder and related cases, Scherr and Normile (2022) found that in approximately half the cases catalogued, release and official exoneration are nearly simultaneous events. In the others, however, there is a delay between release and exoneration. Further breakdowns revealed that compared to wrongful convictions involving other contributing factors, those involving a false confession were associated with significantly longer delays between release and official exoneration—specifically, a mean delay of 772 days. During these two-plus year delays, of course, innocent individuals face the possibility of retrial. They also struggle to secure housing,

employment, and other means of reintegration because they still have the felony conviction on their record (Levy, 2015).

After Exoneration

Exoneration is a monumental but rare milestone for wrongfully convicted innocents to achieve, particularly those who have confessed (Gross & Possley, 2016). Then once exonerated, the promise of a new beginning often comes with a different reality, as the stigma often persists. A growing body of research using both qualitative and quantitative methods, has shown that individuals exonerated after a wrongful conviction are branded compared to those with no history of legal system involvement.

Stemming from foundational work indicating that exonerees suffer the effects of social stigma (e.g., Huff et al., 1996; Radelet et al., 1992), studies have further demonstrated the effects on social perceptions. In one study, for example, Clow and Leach (2015a) had participants rate individuals who were convicted of a crime they had committed, exonerated for a crime they did not commit, or had no legal system involvement. Relative to no-involvement group, the exonerees were seen as less friendly, likeable, warm, and respectable, but more aggressive—much like the guilty offenders. Additional research has shown that conviction, even when wrongful, has consequences for the exoneree's future employment (Kukucka et al., 2020), housing (Kukucka et al., 2021), intimate relationships (Westervelt & Cook, 2012), as well as physical health and life expectancy (Catlin & Redlich, 2023).

Among those wrongfully convicted, individuals who had confessed are uniquely disadvantaged. In an article subtitled "All exonerees are not perceived equal," Clow and Leach (2015b) had participants read fictional a news article about an individual who was DNA exonerated, having been wrongfully convicted because of a false confession, mistaken eyewitness identification, or jailhouse snitch. They found that participants were most negative in their judgments of the individual wrongfully convicted by

confession. Across a range of subsequent studies as well, false confessors—relative to other DNA exonerees—were viewed as less intelligent, more likely to suffer from mental health issues, not clearly innocent, more responsible for their convictions, and less deserving of reintegration aids (Kieckhaefer & Luna, 2022; Kukucka & Evelo, 2019; Savage et al., 2018; Scherr et al., 2018). These adverse effects may be particularly acute when the exoneree who had confessed was Black (Howard, 2019). In what may be the ultimate adverse effect, statistics indicate that false confessors die six years earlier than other wrongly-convicted persons who had not confessed (Catlin & Redlich, 2023).

Collectively, the foregoing research highlights the cumulative disadvantage that exonerated false confessors must endure (Scherr et al., 2020). Viewed in that light, a disturbing reality exists in the legal provisions that accompany many state compensation statutes, provisions that mirror laypeople's negative stereotypes. Often referred to as "contributory clauses," such provisions sometimes preclude wrongfully convicted individuals who confessed or pled guilty from accessing reintegration aids. The rationale is that by implicating themselves, these individuals were responsible for their own conviction. That some policymakers continue to fall prey to the fundamental attribution error, even today—presuming free choice despite the prolonged and often intense pressures of interrogation and plea bargains—indicates a type of victim blaming that can only exacerbate the stigma.

Consider the case of Doug Warney, an intellectually impaired individual with mental health issues. He was convicted in a 1997 murder in New York State based largely on a confession obtained after a twelve-hour interrogation. After spending nine years incarcerated, Warney was DNA exonerated. Yet when he sought compensation via New York's compensation statute, he was denied on the ground that his wrongful conviction was his own fault. The APA (2010) filed an amicus brief on his behalf in which it asserted that "research indicates that many individuals ultimately proven innocent make false

confessions due to the nature of the interrogation they faced (such as excessive lengths of time and misrepresentations of evidence), their own intellectual deficits or psychological vulnerabilities (age, intellectual disabilities, mental illness) or, in many cases, both" (p. 10). Warney was eventually compensated when the State Court of Appeals overturned the lower court ruling (*Warney v. State of New York*, 2011).

Perhaps there is reason for optimism. In two studies of a three-study project conducted in Canada, participants rated exonerees more favorably—including those who were wrongfully convicted by confession—after watching a video of a single exoneree describing his experience. They indicated more support for financial compensation, self-reported less anxiety about a personal meeting, and were more inclined to believe in their innocence. More work is needed to determine if other exoneree videos have this effect, and if the effect endures over time (Zannella et al., 2022).

Miranda as a "Safeguard"

In light of the personal and situational factors that increase the risk of false confessions and the cumulative disadvantages that follow, one wonders what safeguards are in place to protect those accused from coercion. The answer: *Miranda*. An estimated 108 countries dispersed throughout the globe now recognize Miranda-like rights that are embodied through warning-and-waiver requirements. The warnings specified in these jurisdictions vary, but typically they include the right to remain silent and the right to legal counsel (The Law Library of Congress, 2016; also see Weisselberg, 2017). What is the origin, evolution, and current law pertaining to this presumed means of protection, and what are the implications in the U.S. and elsewhere?

Origin, Evolution, and Current Law

In 1966, the United States Supreme Court handed down *Miranda v. Arizona,* one of its most important decisions. Reaching back to its one-off decision in *Bram v. United States* (1897), the Court ruled that the Fifth Amendment privilege against self-

incrimination applied to custodial police interrogation. According to the Miranda Court, psychological interrogation, as embodied by the Reid technique, impeded the privilege against self-incrimination because it contained "inherently compelling" pressures brought to bear on suspects via incommunicado custody, a police-dominated atmosphere, and various forms of trickery and deceit. The Court thus held that investigators must inform suspects of their right to silence, counsel, and notice that their words can be used against them; that they must elicit a voluntary, knowing and intelligent wavier before interrogation can commence; and that the state bears a heavy burden to demonstrate that these requirements have been met.

Although *Miranda v. Arizona* (1966) represented a significant effort to protect suspects, it is, in practice, largely ineffective at preventing involuntary and/or unreliable confessions. The problem is, the post-Miranda Supreme Court has repeatedly limited the original requirements in four fundamental ways. First, although warning and waiver requirements were clearly rooted in the Fifth Amendment, the Court later de-constitutionalized *Miranda*, declaring that these requirements are a mere prophylactic safeguard (e.g., *Oregon v. Elstad*, 1985). The effect of relegating *Miranda* in this way has been profound, as it has led some courts to interpret *Miranda* as a non-constitutional rule of evidence, thereby enabling interrogators at times to disregard the warning-and-waiver requirements (Weisselberg, 1998).

Second, the Court has carved out numerous exceptions to the requirements, further undermining the original ruling. In 1971, the Court created an "impeachment" exception whereby suspects whose confessions were excluded at trial because of a *Miranda* violation could nevertheless have their confessions introduced into evidence if any of their testimony was deemed inconsistent (*Harris v. New York*, 1971). The Court also created the "public safety" exception, noting that police need not administer warnings or elicit a waiver if the interrogation is "reasonably prompted by a concern for

public safety" (*New York v. Quarles*, 1984, p. 656), as well as a routine booking exception through which police no longer need to Mirandize suspects to ask only "routine booking questions" (*Pennsylvania v. Muniz*, 1990).

Third, the Court redefined the meaning of custody, a condition that triggered the need for *Miranda* in the first place. Originally, custody was defined as existing when a suspect is not free to leave. Then in *California v. Beheler* (1983), the Court ruled that a suspect who made a statement at the stationhouse but was not arrested until days later was not in custody at the time of interrogation and therefore no *Miranda* warnings were required. This gave rise to "Beheler warnings" in which police tactically advise suspects at the station that they are not under arrest and hence free to leave. Having done so, they can declare the situation non-custodial and forego the requirement. The Court then declared that roadside traffic stops were not custodial even though detained motorists are not free to leave (*Berkemer v. McCarty*, 1984) and that the situation is non-custodial when a suspect is interrogated by an undercover officer while physically detained in a jail cell (*Illinois v. Perkins*, 1990), thereby giving rise to *Miranda*-less interrogations by proxy now known as "Perkins Operations" (Davis et al., 2023). In short, the post-*Miranda* Supreme Court has redefined the meaning of custody in ways that enable police investigators to legally circumvent Miranda.

Fourth, the Court changed the invocation and waiver requirements. In 1966, the Court held that suspects must explicitly waive their rights, and do so knowingly and voluntarily. Interrogators would thus typically ask two follow-up questions: (1) Do you understand your rights, and (2) Are you willing to speak to me at this time? In 1979, however, the Supreme Court held that waivers can be "implicit" (i.e., inferred from context even if not explicitly waived), leading police to discern that it is no longer necessary to ask these followup questions (*North Carolina v. Butler*, 1979). Then in

Berghuis v. Thompkins (2010), the Court declared that a suspect must, ironically, expressly invoke the right to silence; asserting that right by silence is not enough.

Are Waivers Knowing, Intelligent, and Voluntary?

In the immediate aftermath of *Miranda vs. Arizona* (1966), it became clear that most suspects waived their rights (Wald et al., 1967). Observational studies later confirmed that roughly four out of five suspects waive their rights and submit to questioning (Leo, 1996b). In more recent observations in the U.S., waiver rates have neared or exceeded 90% (Feld, 2013; Kassin et al., 2019). In a self-report survey, 631 North American police investigators estimated that 81% of "people in general" waive their Miranda rights (Kassin et al., 2007). In light of these high rates, research has focused on the question of whether people are waiving their rights knowingly, intelligently, and voluntarily (for an overview, see Smalarz et al., 2016).

Questions of Comprehension

Using standardized instruments normed across thousands of individuals, psychologists early on sought to assess comprehension by the extent to which people factually *understand* the Miranda warning (e.g., knowing they have a right to a lawyer) and *appreciate* their consequential significance (e.g., grasping what a lawyer does). These assessments have shown that many adults do not adequately understand and appreciate their rights (Goldstein et al., 2012; Grisso, 1998; Rogers et al., 2010). When asked to define legal terms and paraphrase statements from warnings, even well-adjusted adults assessed in benign situations exhibit less-than-full comprehension (e.g., Clare et al., 1998; Eastwood et al., 2010; Grisso, 1998). In addition, many people harbor perilous misconceptions about when and how to implement their rights. In one study, for example, roughly one third of respondents erroneously believed that "Once you give up the right to silence, it is permanent;" 46% believed that "If you ask for something to be off the record during an interrogation, it can't legally be used against you; and 62%

believed that "I *might* want a lawyer" qualifies as an invocation of the right to counsel (Rogers et al., 2010; also see Rogers et al., 2013).

The Miranda Court did not compose a standardized, word-for-word set of warnings. Law enforcement agents thus have considerable discretion, resulting in a great deal of variability (similar discretion is also evident in many European countries; see Panzavolta et al., 2015). Indeed, Rogers et al. (2007, 2008) compared Miranda warnings from over 600 jurisdictions and discovered over 900 sets of warnings, uniquely worded, that ranged in length from 21 words to 231 words and varied substantially in reading level. In terms of process, some agencies inform suspects of their rights orally; others also do so in writing. Yet research indicates that verbal-only administrations reduce comprehension (Eastwood & Snook, 2010; Rogers et al., 2013). The lack of standardization can also create difficulties for non-native speakers. For example, Spanish-language translations sometimes exclude important details needed to make a knowing and intelligent decision (e.g., continuing rights; Rogers et al., 2021).

Comprehension levels vary as a function of suspect characteristics, dispositional and transient. For example, consistently low levels of Miranda comprehension and appreciation are exhibited by adults with mental health issues (Cooper & Zapf, 2008) and intellectual impairments (Clare & Gudjonsson, 1995; Erickson et al., 2020; O'Connell et al., 2005; Tazi & Rogers, 2023). In one study, participants who were vulnerable in these ways understood only about 25% of their rights (Rogers et al., 2007b). Similarly, comprehension difficulties are found in adults who are intoxicated while being tested (Mindthoff et al., 2022).

Situational factors can also impact Miranda comprehension. In laboratory experiments in which mock suspects were accused of wrongdoing before a warning was presented, compared to those not accused, the stress induced by the accusation significantly compromised their performance (Rogers et al., 2011; Scherr & Madon,

2012). The use of various manipulative tactics often seen in naturalistic observations of actual interrogations (e.g., trivializing the importance of these rights) can have this effect as well (Scherr & Madon, 2013). Outside the lab, comprehension difficulties are also found in adults who are detained by police (Cooke & Philip, 1998; Fenner et al., 2002; Rogers et al., 2013).

The Question of Voluntariness

Apart from the question of whether people have sufficient comprehension to make knowing and intelligent decisions, the Miranda Court required that suspects waive their rights of their own free will—not prompted by threats, trickery, and cajoling. One problem is that people fail to appreciate the long-term consequences of a waiver, often focusing on the perceived immediate *risks* associated with *invoking* their rights—for example, the fear that police and others will draw adverse inferences (Blackwood et al., 2015; Grisso, 1998). Content analyses show that actual warnings seldom contain language to correct the misconception that an invocation cannot be used as evidence of guilt (Rogers et al., 2008).

Commonly trained police tactics are also designed to get suspects to waive their rights. Leo (1996b) observed both live and videotaped interrogations in which he identified several social influence tactics that police use to elicit waivers—e.g., presenting themselves as an ally, framing the rights as a mere formality, presenting the "opportunity" to talk as a time-limited offer, and constructing implicit waivers. Recent experiments confirm the effects on compliance. In one study, innocent mock suspects falsely accused of wrongdoing were significantly more likely to waive their right to silence when it was presented as trivial than as a means of protection (Scherr & Madon, 2013). In a second study, mock suspects were more likely to waive their right to silence in an implicit waiver condition in which the experimenter launched into questioning than when the rights were explicitly presented (Gillard et al., 2014; Scherr et al., 2016).

In light of historically high waiver rates, another troubling concern is that innocent suspects in particular are at risk. As noted earlier, Kassin and Norwick (2004) varied factual guilt and innocence in the lab and found that participants who were innocent of a mock theft were far more likely to sign a waiver than those who were guilty (81% to 36%). When later asked to explain this decision, most innocent suspects said they signed the waiver because they had done nothing wrong and had nothing to hide (also see Moore & Gagnier, 2008; Scherr & Franks, 2015; Scherr et al., 2018).

To sum up: adults—including university students tested in a benign laboratory setting—often exhibit insufficient comprehension and a willingness to waive their rights. Based on several decades of research, it is now clear that the requirements issued by the *Miranda* Court fail to serve as a safeguard for the accused. This is not an exclusively American problem; comprehension difficulties have been also noted in Canada and in the UK (Chaulk et al., 2014; Clare et al., 1998).

Developmental Considerations

J.D.B. v. North Carolina (2011) affirmed the "objective" nature of police custody for Miranda purposes and held that the suspect's age should be taken into account. If juvenile suspects are in custody, police must Mirandize them and obtain a valid waiver. In *Fare v Michael C.* (1979), the Supreme Court extended the totality of the circumstances approach to determining juvenile Miranda waivers. Since then, numerous studies have examined relevant youth-specific factors, including their understanding of Miranda language, their conceptual grasp of waiver implications, and their knowledge about police interrogation practices.

Across studies, samples, nations of origin, and testing instruments, a robust literature demonstrates impaired rights comprehension and reasoning relative to adults. Predictors of poorer comprehension include age (Grisso, 1981; Viljoen et al., 2005), socioeconomic status (or a proxy; Viljoen & Roesch, 2005; Woolard et al., 2008), and IQ

(especially verbal IQ; McLachlan et al., 2011; Zelle et al., 2015; Rogers et al., 2016). There are also age differences within the adolescent population (Freedman et al., 2014). In addition, developmental language disorders (Lieser et al., 2019) and attention deficit-hyperactivity disorder symptomatology (Viljoen & Roesch, 2005) have been linked to impaired Miranda comprehension in adolescent populations.

Adolescents' errors on forensic assessment instruments reveal specific misconceptions. In an early large-scale study, more than one-fifth of adolescent defendants believed that police could revoke a suspect's right to silence—and a majority believed that suspects could be penalized for asserting that right or that judges could force defendants to implicate themselves (Grisso, 1981). In a later study, detained youths reported numerous misconceptions related to police and counsel. For example, 23% believed that people are allowed to retract their statements if police lie; 39% believed that police are "looking out for your best interests" (Rogers et al., 2014).

Studies using forensic assessments have greatly informed our understanding of Miranda's protection of youths. In addition to assessing their capacities within optimal testing conditions, however, it is important to examine performance in situations that approximate real life (Rogers et al., 2018). Analyses of the Miranda language show that juvenile-specific warnings are highly variable (Rogers et al., 2008) and sometimes longer and more complicated than general Miranda warnings (Rogers et al., 2012). Notably, one study of 293 juvenile-specific warnings used in the U.S. found that 86% of waiver forms explicitly asked interviewees to *waive* their rights to silence and counsel, and very few asked whether they wanted to *exercise* those rights (Rogers et al., 2012). Observations of actual juvenile interrogations confirm that rights administration is inconsistent and often problematic in the U.S., Canada, and the UK (Cleary & Vidal, 2016; Feld, 2013; McCardle et al., 2021). In an observational study conducted in England, for example,

investigators tended to administer the police caution quickly and noted inaccuracies in the way they attempted to explain it to juvenile suspects (Sim & Lamb, 2018).

Proposed Remedies

Confession is a potent form of evidence that triggers a cascade of events from arrest, prosecution, and conviction, through post-conviction effects of exoneration and compensation. As to what causes false confessions, research has identified several risks factors involving both the interrogation situation as well as personal suspect characteristics. In light of the numerous instances that have surfaced in recent years; the fact that Miranda has not served as an adequate safeguard; the corruptive effects of confession on other evidence, often resulting in convictions by trial or guilty pleas; the post-conviction stigma that follows, even in the face of exoneration; and science-based advances to interviewing practices and policies; we propose seven recommendations. These recommendations should inspire collaborative efforts among law enforcement professionals, judges, attorneys, social scientists, and lawmakers to devise effective safeguards.

1. Video Record All Suspect Interviews and Interrogations

In the original Scientific Review Paper, Kassin et al. (2010) stated without equivocation that the most essential recommendation was to lift the veil of secrecy from the interrogation process: "Specifically, *all custodial interviews and interrogations of felony suspects should be videotaped in their entirety and with a camera angle that focuses equally on the suspect and interrogator*" (p. 25). We now reiterate that position.

In England, under the Police and Criminal Evidence Act of 1984, the mandatory requirement for tape-recording police interviews was introduced to safeguard the legal rights of suspects and the integrity of the process. At first resisted by police, this requirement positively transformed how suspect interviews were conducted and evaluated. Over the years, the need for taping has pressed for action in the United States

as well. In *Convicting the Innocent,* Borchard (1932) expressed concern that police abuses during interrogations led to involuntary and unreliable confessions. Utilizing the technology of the time, his solution was to make "[phonographic records" [of interrogations] which shall alone be introducible in court" (pp. 370-371).

Over the years, others too have advocated for recording (for an historical overview, see Drizin & Reich, 2006). When the first SRP was published, only nine states had mandated video recording of suspect interviews for some or all crimes. At present, 30 states, the District of Columbia, and all federal law enforcement agencies have a requirement in place. In several other states, the courts stopped short of a requirement but issued strongly worded opinions that endorsed recording (e.g., Iowa, Massachusetts, New Hampshire).

There are numerous advantages to a videotaping policy. First, the presence of a camera, an accountability cue, will deter some interrogators from using egregious tactics, and thereby help to prevent false confessions. Second, recording will inhibit frivolous defense claims of coercion where none existed, and thereby reduce the time detectives must spend in court defending their confession-taking practices. Third, a videotaped record provides trial judges and juries an *objective* and *accurate* record of the process by which the statement was taken and the origin of the details it contained—common sources of dispute that result from ordinary forgetting and self-serving distortions in memory.

Although many law enforcement agencies used to oppose the practice of recording interrogations, much of this opposition has thawed. A survey of more than 465 police and sheriff's departments revealed that the voluntary practice is widespread (Sullivan, 2008). Without legislative or judicial compulsion, some departments routinely record interviews and interrogations in major felony investigations and have declared support for the practice. Among the collateral benefits cited were that recording permits detectives to focus on the suspect rather than on taking copious notes, provides an

instant replay of the suspect's statement that sometimes reveals incriminating comments initially overlooked, reduces the time detectives have to spend in court defending their practices, and increases public trust in law enforcement. Countering the most common apprehensions, the respondents in these interviews reported that the practice did not prove costly or inhibit suspects from talking (also see Sullivan, 2019). Today, many professional organizations support this practice—including the American Bar Association, the American Psychological Association, The National Association of Criminal Defense Lawyers, the National District Attorney's Association, and the International Association of Chiefs of Police.

Recent research provides empirical answers concerning the actual effects of video recording on the behavior of police, suspects, and juries. In a field study conducted in a midsized city police department, 61 experienced investigators inspected a staged crime scene and interrogated a male mock suspect in sessions that were surreptitiously recorded. Half the suspects had committed the mock crime; the other half were innocent. Half the police participants were informed that the sessions were being recorded; half were not. Blind coding of the interrogations revealed the use of several common tactics designed to get suspects to confess. For example, police in the camera-informed condition were less likely than those in the -uninformed condition to use minimization tactics. They were also perceived by suspects as trying less hard to elicit a confession (Kassin et al., 2014).

A second field study examined the hypothesis that recording provides a more accurate account, and may thereby improve factfinding. In Phase 1, experienced officers investigated a mock crime scene, interrogated two innocent suspects, and filed an incident report. All 32 sessions were covertly recorded and later used to assess the accuracy of the reports. In Phase 2, lay observers read either a police report or a verbatim transcript of the interrogation. Results showed that police and suspects diverged in their perceptions of the interrogations; police committed frequent errors of omission in their reports, understating

the use of various tactics; and Phase 2 observers who read a police report, compared to those who read a transcript, saw the process as less coercive and were more likely to misjudge suspects as guilty (Kassin et al., 2017).

These are not isolated results. Basic research shows that conversational memory is fraught with bias and error (Brown-Schmidt & Benjamin, 2018) and that people often commit source-monitoring errors, remembering what was said but not who said it (Johnson et al., 1993). In a study involving forensic interviewers of alleged child abuse victims, Lamb et al. (2000) found that interviewers often neglected to report their own utterances in their verbatim notes and often cited the children, not their own prompting questions, as the source of details. Indeed, this latter danger was inadvertently realized by retired Detective James Trainum (2007) who recounted a case in which a suspect who had confessed to him was later exonerated: "Years later, during a review of the videotapes, we discovered our mistake. We had fallen into a classic trap. We believed so much in our suspect's guilt that we ignored all evidence to the contrary. To demonstrate the strength of our case, we showed the suspect our evidence, and unintentionally fed her details that she was able to parrot back to us at a later time. It was a classic false confession case and without the video we would never have known."

Despite the benefits, there are still some opponents in the law enforcement community. Setting aside strategic concerns (e.g., the fear that judges and juries might not approve of the tactics used), opposition is centered on the pragmatic argument—potentially relevant in two-party consent states: that the presence of a camera will distract or inhibit suspects. In cooperation with a small city police department, Kassin et al. (2019) tested this hypothesis by randomly informing or not informing 122 crime suspects that their interrogations would be video-recorded through a concealed camera. Not a single camera-informed suspect refused to continue. In fact, they spoke as often and as much as did those who were not informed; they were as likely to waive Miranda at

the outset and later; they were as likely to make admissions and confessions; and the lead detectives rated them afterward as no less cooperative or forthcoming. Importantly, no differences were observed in ultimate case dispositions when tracked 14 months later. Although more research is needed, results did not support the hypothesis that recording inhibits suspects.

For all the benefits cited above, in the absence of demonstrable costs, and to ensure transparency, our first recommendation is that every suspect interview should be recorded from start to finish, uninterrupted, without loopholes or excuses for the failure to do so—and that no off-camera questioning should take place (e.g., in transit or during restroom breaks). Several states now offer but should reject as excusing conditions a suspect's alleged refusal to go on camera, equipment unavailability or malfunction, and even inadvertence.

Perhaps the most concerning loophole in recording laws is the temporal provision that only "custodial" interrogations must be recorded, not pre-custodial interviews. "Custody" is the condition that activates the Miranda requirement. Yet except for arrest, which signifies a suspect in custody, the courts have struggled with this construct. Research now shows that participant suspects and observers do not agree as to what constitutes custody, the restriction on one's freedom to leave. Consistent with actor-observer differences in attribution, observers often infer a freedom that suspects themselves do not experience (Alceste et al., 2018). Indeed, a followup vignette study indicated that custody is in the eye of the beholder, as police and judges often overestimate how free they perceive a suspect to be compared to laypeople and social psychologists (Alceste & Kassin, 2021). In the digital twenty-first century, there is no defensible reason for mandatory recording laws to limit the requirement to so-called custodial situations.

There is also a *visual-spatial* aspect of what it means to record the entire process. As a matter of policy, it is important not only that all suspect questioning be recorded from start to finish but that the camera adopt a neutral "equal focus" perspective. In extensive research on illusory causation effects in attribution, Lassiter and colleagues recorded mock interrogations from three different camera angles so that the suspect, the interrogator, or both were visible. Consistently, lay participants who saw only the suspect judged the situation as less coercive than those focused on the interrogator. By directing visual attention toward the accused, the camera can lead observers to underestimate the amount of pressure exerted by the "hidden" detective (Lassiter & Irvine, 1986). Additional studies have confirmed that people are more attuned to the situational factors that elicit confessions when the interrogator is also on camera (see Lassiter et al., 2001). Even experienced trial judges are influenced by variations in camera perspective (Lassiter et al., 2007; for an application to perceptions of bodycam footage, see Boivin et al., 2017).

2. Require Evidence-Based Suspicion to Conduct Interrogation

In the most recent Scientific Review Paper on eyewitness identifications, Wells et al. (2020) recommended that there should be *evidence-based* grounds to believe that an individual is guilty of the crime being investigated before inserting that individual in an identification procedure—that “Conducting lineups in the absence of evidence-based reasons for suspicion is a risk factor for mistaken identification” (p. 11). For reasons similar to those articulated, police should have evidence-based grounds for suspicion before subjecting an individual to an interrogation and hence risking a false confession.

As noted earlier, many police investigators are trained in the BAI and other methods for detecting deception by observing a suspect’s verbal and nonverbal behavior. Demeanor is not evidence. Indeed, research previously described clearly indicates that such means of assessment do not offer a reliable diagnostic basis for inferring deception. Rather, such approaches are more likely to yield a presumption of guilt that can lead to

the use of more pressure-filled tactics, longer interrogations, and an increased risk of false confessions. Applying an evidence-based suspicion standard before initiating a pre-interrogation interview would thus diminish the likelihood that an innocent person is miscategorized and therein subjected to more coercive interrogation practices.

As illustrated by numerous wrongful convictions, conducting an interrogation in the absence of an evidence-based suspicion increases the risks associated with eliciting a false confession. Determinations of a suspect's likelihood of guilt should thus be based upon the strength of available evidence. Importantly, Moody et al. (2023) demonstrated that as the prior probability of guilt increases (i.e., the strength of evidence suggesting guilt prior to interrogation), the risk of false confession diminishes (because fewer innocent subjects are interrogated) and the posterior probability of a true (guilty) confession increases. It follows that a sufficiently strong case should be used to determine whether a suspect should be subjected to interrogation.

When assessing evidence-based suspicion, it is important that investigators base their evaluations upon evidence that *directly* and *independently* incriminates the suspect in the alleged crime—and that the *reliability* of such evidence be considered. Indirect or circumstantial evidence offers an insufficient basis for diagnostic inferences of guilt; rather, investigators should develop direct evidential links between the suspect and the alleged criminal act. It is also important that investigators consider the extent to which evidential links are independent in their corroboration of guilt—not tainted, as when police form and communicate a suspicion to a prospective eyewitness, informant, or medical examiner seeking to determine the cause of an injury or death. Finally, different items of evidence can vary in reliability and thereby the strength of a causal inference that might be drawn. Statements from a witness or victim, for example, should be considered less reliable than video surveillance footage that clearly depicts the suspect at the crime scene or the suspect's DNA obtained through independent testing.

Police will often identify a person of interest or investigative lead who they believe is central to the case with respect to knowledge, motive, access, and opportunity to commit the criminal act. We agree that it is important to speak with such individuals in a manner that allows them to address relevant investigative questions. In this regard, the rapport-based, information gathering approaches described earlier serve as an appropriate and scientifically supported approach for asking them to recollect their whereabouts when the crime was committed, discussions they had with others, or other relevant knowledge they might have (Meissner et al., 2023).

3. Impose Limits on the Confrontational Approach

In light of recent events, the time is ripe to evaluate current methods of interrogation used in the U.S. All parties would agree that the surgical objective is to secure confessions from perpetrators but not from innocent suspects. Hence, the process should be structured to produce outcomes that are diagnostic, as measured by the observed ratio of true to false confessions. Yet except for physical brutality or deprivation, threats of harm or punishment, explicit promises of leniency, and flagrant Miranda violations, there are no clear criteria by which to regulate the process. Instead, American courts historically have taken a "totality of circumstances" approach that does not adequately account for psychological forms of manipulation. As *Miranda* does not safeguard the innocent, it is necessary to revisit these psychological tactics. As illustrated by the Reid technique, many interrogators deploy a confrontational guilt-presumptive process that relies heavily on trickery and deceit. For investigators who adhere to this approach rather than transition to evidence-based forms of interviewing, the following limits should be imposed to minimize the risk of false confessions.

Custody and Interrogation Time

Prolonged isolation from significant others constitutes a form of deprivation that can heighten a suspect's distress and increase the incentive to escape. Excessive time in

detention may also be accompanied by fatigue, despair, as well as the deprivation of sleep, food, and other biological needs. As noted earlier, most interrogations last from 30 minutes up to two hours, whereas an analysis of proven false confession cases indicates that these interrogations, whether questioning was continuous or noncontinuous, lasted for an average of 16.3 hours (Drizin & Leo, 2004).

In keeping with normative law enforcement practices, and in an effort to minimize the risk to innocent suspects, policy discussions should begin with a proposal for the imposition of time limits, or at least flexible guidelines, when it comes to detention and interrogation, as well as periodic breaks. At a minimum, police departments should consider placing internal time limits on the process that can be exceeded—initially and at regular intervals thereafter, if necessary—only with authorization from a supervisor of detectives. Moreover, the hours of detention that precede interrogation should also be taken into account.

Presentations of False Evidence

A particularly egregious problem concerns the presentation of false evidence, often depicted as incontrovertible, which takes the form of outright lying to suspects. In *Frazier v. Cupp* (1969), the U.S. Supreme Court sanctioned this type of deception and has not revisited this ruling despite all that has occurred. Yet the risks are substantial. This conclusion is derived from a convergence of sources, including actual cases involving wrongful convictions; foundational psychology rooted in the studies of perception, memory, decision making, and social influence; and controlled experiments using an array of methodologies. Across the board, the false evidence effect is found in adults and is even greater in children.

John Reid and Associates continues to argue that lying is a necessary evil, effective without risk to innocent suspects (Inbau et al., 2013). Yet the combined real world and scientific evidence is overwhelming. Hence, a growing number of highly experienced

practitioners have articulated contrasting points of view regarding the risk to innocents, the adverse effects on the public's trust, and public safety (see Kassin, 2022 for critical commentaries from Mark Fallon, former special agent and counter-terrorism expert with NCIS; Stuart Greer, former police commander in New Jersey specializing in criminal investigations; Andy Griffiths, senior investigating officer with the U.K. Police Force; Matt Jones, retired homicide detective from Arizona and founder of a company that trains investigators in science-based interviewing; Steven Kleinman, a retired colonel with the U.S. Air Force with experience interrogating suspected terrorists; David Thompson, President of Wicklander-Zulawski, a law enforcement consulting and training organization based in Chicago; and James Trainum, a retired homicide detective from the D.C. Metro Police).

In light of the profound risks, we believe that the false evidence ploy should be banned outright, rendering any resulting confessions *per se* inadmissible—as if elicited by explicit promises, threats, and physical violence. Such bans currently exist in England, Iceland, Germany, Spain, New Zealand, Australia, Japan, Taiwan, and all Nordic countries. Currently, US lawmakers in several states are stepping up to rectify the situation. In 2021, Illinois and Oregon passed laws that prohibit police from lying to children and adolescents brought in for interrogation. In 2022, similar bills were passed in California, Utah, and Delaware. In 2023, Indiana, Connecticut, and Colorado followed suit and similar bills are under consideration in several additional states. These developments are significant but they do not go far enough. Indeed, the false evidence effect also afflicts adults. Hopefully, remaining states and federal agencies will follow, prompting much needed changes to interrogation training and practice nationwide.

Minimization Tactics That Imply Leniency

A third area of concern involves the use of minimization themes that imply leniency upon confession. While American federal constitutional law has long rejected

confessions induced by explicit promises of leniency, the courts have accepted those elicited through the use of minimization tactics, commonly used, that communicate leniency by pragmatic implication. As noted earlier, numerous innocent suspects who confessed in these situations went on to self-report the expectation that they would not be punished.

Together, these observations raise troubling questions concerning the effects of minimization on the diagnosticity of confessions. Research reviewed earlier indicates that at least certain minimization themes that offer sympathetic attributions and downplay the moral seriousness of the offense have two effects. First, they lead people, including teenagers, to infer that they would be treated with leniency. Second, they elicit admissions from innocent suspects. In light of these risks, we believe that techniques of minimization, as embodied in the "themes" that interrogators are trained to develop, should be carefully scrutinized.

There are several possible approaches to be taken—ranging from a call for additional research that compares the inferences drawn from different minimization themes to an outright ban on this practice. Between these positions, it is clear that police should avoid characterizing a crime or the suspect's alleged actions in a way that implies leniency. Studies reviewed earlier do not indicate that false confessions are elicited merely by telling suspects that they will feel better after confession or that they are moral and good people. However, minimization themes that imply a mitigation of legal responsibility (e.g., the crime was accidental, pressured, provoked, or an act of self-defense) should be treated as if the promises implied were actually made.

4. Adopt Science-Based Investigative Interviewing Practices

From a macro perspective, we recommend that law enforcement agencies around the world should not only impose limits on the problematic use of deceptive tactics but adopt science-based investigative interviewing practices as the alternative. Thirty years

of research has substantiated that accusatorial interrogation practices adversely affect diagnosticity, as seen in a heightened resistance by suspects in general and a substantial increase in false confessions by the innocent (Catlin et al., 2023; Meissner et al., 2014).

The use of deceptive practices also yields two profound secondary costs. The first concerns public safety. Norris et al. (2020) examined a set of cases in which DNA was used both to exonerate the innocent and to identify the actual perpetrator. Within that set, they identified 109 true perpetrators who had escaped arrest and prosecution, 102 of whom committed 337 additional offenses—including 43 homicides and 94 sex offenses. By extrapolation, Norris et al. estimated that the wrongful convictions that occur annually may lead to more than 41,000 additional but largely preventable crimes. When a case is closed on an innocent confessor, the real perpetrator remains at large and likely to reoffend.

The second cost concerns the public's trust. When police resort to using deceptive practices, they erode people's trust in law enforcement and diminish perceptions of procedural justice (Etienne & McAdams, 2021). In short, there is simply no evidential or scientific basis upon which the use of accusatorial practices serves either the public good or the pursuit of justice. Fortunately, better alternatives exist to support law enforcement's efforts. Hence, we encourage agencies to develop policies and practices that replace deceptive interrogation practices with science-based investigative interviewing.

As noted earlier, research has substantiated the benefits of adopting an alternative science-based approach to investigative interviewing. Rather than focusing exclusively on confession, such practices prioritize the development of cooperation with the subject and the elicitation of information that allows investigators to corroborate evidence already collected and identify additional leads. Effective techniques have been developed that support these objectives, while also substantially diminishing the

likelihood of false confessions. This approach involves: (1) the development of cooperation via rapport and trust; (2) the elicitation of information using productive questioning and mnemonic interview approaches that enhance a subject's recollection; (3) the use of strategic questioning and assessment of verbal or story-based cues to evaluate credibility; and (4) the strategic withholding of evidence as a way to identify statement-evidence inconsistencies and resolve a subject's responses to discrepancies. Overall, this approach increases cooperation over counterinterrogation resistance, increases the information elicited, improves assessments of veracity, and effectively challenges statement-evidence inconsistencies in a productive manner.

Substantial progress toward the implementation of these interviewing practices has been made in recent years. First, considerable research has evaluated science-based training programs with respect to the willingness of investigators to adopt such tactics and their effectiveness once deployed (Akca et al, 2021). Second, as PEACE has become the standard of practice in various countries—namely, the United Kingdom, Norway, Australia, and New Zealand—there is a growing consensus worldwide that these more ethical, science-based principles should guide all law enforcement, military, and intelligence-gathering interviews (Mendez & Drummond, 2021; Mendez et al., 2021; Sivasubramaniam & Goodman-Delahunty, 2021).

Change in the United States and Canada has been slow, weighted down by a strong cultural preference for accusatorial practices (Miller et al., 2018). Nevertheless, the U.S. Government's development of the HIG and its research and training programs oriented toward a science-based approach has begun to shift practices (Meissner et al., 2017). Most notably, the Federal Law Enforcement Training Center's (FLETC) Behavioral Science Division has revised its basic training to focus on science-based practices. FLETC is responsible for training investigators from more than 100 federal agencies and offering courses to state, local, tribal, and international agencies. Major

federal law enforcement agencies such as the Federal Bureau of Investigation, Homeland Securing Investigations, Drug Enforcement Agency, Air Force Office of Special Investigations, and Naval Criminal Investigative Services have thus adopted science-based interview and interrogation training standards.

State and local police departments across the United States are also shifting to science-based alternatives. A renowned interrogation training company, Wicklander-Zulawski and Associates, no longer trains in the Reid technique and has, instead, shifted to evidence-based practices that better align with the science (https://www.w-z.com/2022/12/30/investigative-interviewing-in-a-changing-world/). In addition, some major law enforcement agencies (e.g., the Los Angeles and Wichita Police Departments) have adopted science-based training and practice, while their state-level training and accreditation bodies are following suit. Such transitions serve as important models for agencies seeking to adhere with best practice standards.

5. Protect Youthful and Other Vulnerable Suspect Populations

Psychologists, legal scholars, and law enforcement professionals agree that young people and those, including adults, with mental health issues, cognitive, developmental, or intellectual impairments, need additional supports in the interrogation room. The UK instituted parent/guardian notification procedures for young suspects almost four decades ago with the Police and Criminal Evidence Act of 1984. In the United States, the American Bar Association (ABA; 2010), American Academy of Child and Adolescent Psychiatry (AACAP; 2013), American Psychological Association (APA; 2022), and International Association of Chiefs of Police (IACP; 2012) passed resolutions, policy statements, or guidelines for protecting young people during interrogations.

Despite widespread recognition of the need, implementation of policy and practice reforms has been fragmented at best. Examples of suggested youth-focused reforms include: specialized investigator training in false confessions, confirmation bias,

and the perils of human lie detection (Kassin et al., 2010; APA, 2022); using open-ended rather than leading questions (IACP, 2012); avoiding deception and promises of leniency (IACP, 2012); requiring police to involve parents or other suitably qualified persons to support youth during interrogation (Medford et al., 2003); requiring the presence of defense attorneys (August & Henderson, 2020); and using simplified Miranda warnings (AACAP, 2013).

Many individual jurisdictions have implemented elements of these reforms with success. However, some have proven challenging to operationalize or execute, and others have had unintended consequences. For example, some states require police to use simplified Miranda warnings or developmentally appropriate language, yet they fail to specify what constitutes "developmentally appropriate" (Goldstein et al., 2018). Attempts to make Miranda warnings "youth friendly" can also backfire, as juvenile-specific warnings are often longer and more complex than general warnings (Rogers et al., 2008). As another example, policy efforts to codify parent involvement in juvenile interrogations can further disadvantage youths in cases where parents are unable or unwilling to protect their children (see Cleary, 2022). Recently, Joseph Buckley (2021), president of Reid & Associates, noted that "individuals who are mentally impaired and juveniles should clearly be considered more susceptible to false confessions than the population at large." This acknowledgment seems promising—until one notes that their training manual (Inbau et al., 2013) defines "childhood" as ages 1-9 and "adolescence" as ages 10-15—definitions wildly out of step with developmental science.

We recommend mandatory assistance of support persons as the most effective way to protect vulnerable suspects' rights and bolster their understanding and appreciation of legal decisions. In the UK, suspects under age 18 as well as adults with a mental health condition must be accompanied by an "appropriate adult"—a support person independent of police whose role "is to safeguard the rights, entitlements and

welfare of juveniles and vulnerable persons" (Home Office, 2019, p. 7). This requirement should be adopted internationally to ensure the integrity and reliability of police interviews. The UK's National Appropriate Adult Network developed an evidence-based screening tool to help investigators identify people who meet the legal definition of a "vulnerable person" that could aid in this endeavor (Gudjonsson, 2023).

In the U.S., defense attorneys are best suited to the role of mandatory support person because they are already integrated into the criminal justice system. As a result of recent legislation, two states (California and Maryland) now forbid police from questioning obtaining Miranda waivers or questioning minors before they have consulted with an attorney. In light of recent wrongful convictions and the research reviewed in this article, we urge other states—and nations—to follow suit. Requiring defense attorneys to be present during interrogation would serve as the single most effective way to protect youthful and other vulnerable suspects.

6. Shield Lay Witnesses and Forensic Examiners from Confessions

Consistent with decades of research on confirmation biases, which are pervasive, it is now clear that confession evidence is so potent that it can taint eyewitnesses, informants, alibis, and forensic examiners and pathologists. This phenomenon can be seen in analyses of wrongful convictions, which show that most false confessions are accompanied by other evidence errors, thereby creating the illusion that the false confession was independently corroborated by extrinsic evidence (Kassin, 2012). This phenomenon can also be seen in laboratory experiments noted earlier showing that confessions can lead initially uncertain mock witnesses to identify the confessor in a lineup, laypeople to detect a "match" between handwriting samples, polygraph examiners to see more deception in ambiguous polygraph charts, and fingerprint examiners to change judgments previously made. Following upon actual cases involving exonerated confessors for whom exculpatory evidence was ignored or otherwise

discredited, knowledge of a confession can also suppress exculpatory information by closing investigations or causing alibis to second-guess their recollection that the suspect was in their presence during the commission of a crime (for an overview of forensic confirmation bias effects, see Kassin et al., 2013).

Research has suggested a number of ways to limit contextual biases in crime labs and the forensic sciences, more generally—including linear sequential unmasking (Quigley-McBride et al., 2022) and the use of filler-control procedures that mimic eyewitness "lineups" (Quigley-McBride & Wells, 2018; Saks et al., 2003). For the more circumscribed objectives of this paper, we believe that something akin to blind-testing is the single best and most feasible way to ensure the independence of judgment—and, hence, the corroborating value—of lay witnesses and forensic examiners.

Simply put, and echoing recommendations for double-blind eyewitness lineups (Wells et al., 1998, 2020), police should not disclose a suspect's confession to eyewitnesses from whom they seek a lineup identification; alibis that suspects had cited during their denials; CSI agents investigating a crime scene; forensic examiners tasked with matching fingerprints, fibers, fluids, handwriting, and other physical evidence; and forensic pathologists conducting autopsies to determine the cause and manner of death. Indeed, we recommend, more broadly, that forensic examiners and pathologists be shielded, to the extent possible, from other undue influences, such as direct contact with the investigating officers and other irrelevant information.

7. Abolish "Contributory Clauses" in Compensation Statutes

Research described earlier shows that a powerful stigma attaches itself to individuals who confess. To prevent additional unjust effects after factual innocence has been established, it is necessary to abolish the "contributory clauses" attached to some compensation statutes. Contributory clauses have been used to exclude exonerees from receiving state compensation if they were deemed to have contributed to their own

wrongful conviction. Most often, this refers to individuals who had falsely confessed and/or pled guilty. Currently, 21 state statutes include some form of a contributory clause; 10 states explicitly prohibit those who falsely pled guilty (Madrigal & Norris, 2022).

Symptomatic of the fundamental attribution error, and the myth that innocent people would not confess or plead guilty to a crime they did not commit, these clauses indicate the degree to which people—including judges, attorneys and law makers—do not understand this aspect of human behavior as a matter of common sense. The fact that false confessions and guilty pleas are found in so many wrongful convictions belies this notion. Moreover, the vast majority, if not all, known wrongful convictions involving false confessions and guilty pleas stem not from individuals who volunteered but rather from those who initially denied involvement and were then induced through interrogation and plea practices that were psychologically coercive and/or applied to suspects who were impaired in some way. To deny these individuals compensation, while morally absolving those responsible for their wrongful convictions is a form of re-victimization that should be stopped.

We urge legislators to follow the archives and the social science research reviewed in this article and eliminate contributory clauses. These statutes should be reformed in a manner that guarantees compensation to all exonerees—period (see Scherr, et al., 2018; 2020; Shlosberg et al., 2014). Making these decisions discretionary allows the stigma of confession to exert its misguided effects. Moreover, these contributory clauses establish conflicts of interests that can impede subsequent civil suit claims. Indeed, the state has a vested interest in claiming that the wrongful conviction was "brought about" by the exoneree, not by the actions of police and prosecutors.

The case of Bladimil Arroyo, convicted of a 2001 murder in New York City, illustrates why contributory clauses should be abolished. In 2019, a reinvestigation of

Arroyo's conviction raised serious concerns about the conduct of police and prosecutors (consistent with law enforcement's initial theory, Arroyo confessed to stabbing the victim; as it turned out, however, the victim was shot). Arroyo was released and exonerated. Yet the New York Court of Claims later dismissed his claim seeking compensation. While conceding that his confession was factually incorrect, this court added, "that conclusion, while undermining the confession, does not establish that Claimant was free from culpability....Claimant, knowing the truth, may have believed that confessing to an act that would later be shown incorrect would ultimately lend credence to his assertion that he was not involved." (*Arroyo v. State of New York*, 2022, p. 6).

Conclusion

In 1932, Edwin Borchard published *Convicting the innocent: Sixty five actual errors of criminal justice*, in which several false confession cases were included. Addressing the question of how these errors were uncovered, he noted how "sheer good luck" played a prominent role and lamented on "how many unfortunate victims of error have no such luck, it is impossible to say, but there are probably many."

Since the original SRP was published in 2010, the data base on wrongful convictions has expanded, revealing more false confessions than previously anticipated; the scientific literature has exploded, exposing not only the situational and personal risk factors that contribute to this phenomenon but the collateral consequences that follow—including the corruptive effects of confession on other evidence, the increased likelihood of conviction at trial, the increased tendency to plead guilty despite innocence, the failure of Miranda to serve as a safeguard, and the stigma that shadows false confessors within the courts and in public perceptions, even after exoneration.

In light of these developments, we propose the following recommendations: (1) Mandate the video recording of all suspect interviews and interrogations, from start to

finish and from a neutral camera angle; (2) require that police have an evidence-based suspicion, not a mere hunch (e.g., based on demeanor), before commencing interrogation; (3) impose limits on confrontational approaches to interrogation, namely by banning the presentation of false evidence and minimization themes that imply leniency; (4) adopt a science-based model of investigative interviewing; (5) protect youthful and other vulnerable suspect populations by affording them the opportunity to consult with defense attorneys; (6) shield lay witnesses and forensic examiners from confessions to ensure the independence of their judgments; and (7) abolish contributory clauses from compensation statutes that doubly victimize innocent persons who were induced to confess. Together, these recommendations should reduce the frequency of false confessions and subsequent wrongful convictions.

References

Adam, L., & van Golde, C. (2020). Police practice and false confessions: A search for the implementation of investigative interviewing in Australia. *Alternative Law Journal, 45*, 52–59.

Akca, D., Larivière, C. D., & Eastwood, J. (2021). Assessing the efficacy of investigative interviewing training courses: A systematic review. *International Journal of Police Science & Management*, *23*(1), 73-84.

Alceste, F., Jones, K., & Kassin, S. M. (2020). Facts only the perpetrator could have known? A study of contamination in mock crime interrogations. *Law and Human Behavior, 44*, 128-142.

Alceste, F., & Kassin, S. M. (2021). Perceptions of custody: Similarities and disparities among police, judges, social psychologists, and laypeople. *Law and Human Behavior, 45,* 197–214.

Alceste, F., Luke, T. J., & Kassin, S. M. (2018). Holding yourself captive: Perceptions of custody during interviews and interrogations. *Journal of Applied Research in Memory and Cognition, 7,* 387-397.

Alceste, F., Luke, T. J., Redlich, A. D., Hellgren, J., Amrom, A., & Kassin, S. M. (2021). The Psychology of confessions: A Comparison of expert and lay opinions. *Applied Cognitive Psychology, 35*, 39-51.

Alceste, F., Sanchez, P. Y., Luke, T., Dalsklev, M., Rizzelli, L., & Kassin, S. M. (2023). Practice makes perfect: Effects of mere rehearsal on lay judgments of confessions. *Psychology, Crime, and Law*.

Alison, L. J., Alison, E., Noone, G., Elntib, S., & Christiansen, P. (2013). Why tough tactics fail and rapport gets results: Observing Rapport-Based Interpersonal Techniques (ORBIT) to generate useful information from terrorists. *Psychology, Public Policy, and Law, 19*(4), 411-431. https://doi.org/10.1037/a0034564

Alison, L., Alison, E., Noone, G., Elntib, S., Waring, S., & Christiansen, P. (2014). The efficacy of rapport-based techniques for minimizing counter-interrogation tactics amongst a field sample of terrorists. *Psychology, Public Policy, and Law, 20*(4), 421–430. https://doi.org/10.1037/law0000021

Alschuler, A. (1997). Constraint and confession. *Denver University Law Review, 74,* 957-988.

Alschuler, A. (2016). A nearly perfect system for convicting the innocent. *Albany Law Review, 79*, 919-940.

American Academy of Child and Adolescent Psychiatry (2013). *Policy statement on interviewing and interrogating juvenile suspects.*

American Bar Association (2010). *ABA policy on simplified Miranda warnings For juveniles*.

American Psychological Association. (2008). *Brief for amicus curiae. Wright v. Pennsylvania*. https://www.apa.org/about/offices/ogc/amicus/wright

American Psychological Association. (2010). *Amicus brief in Warney v. State of New York*. http://www.apa.org/about/offices/ogc/amicus/warney.aspx

American Psychological Association. (2014). Resolution on interrogations of criminal suspects. Retrieved from http://www.apa.org/about/policy/interrogations.aspx

American Psychological Association (2018). *Amicus Curiae Brief in Brendan Dassey v. Michael A. Dittman*. March 26, 2018.

American Psychological Association. (2022). Resolution on interrogations of criminal suspects. http://www.apa.org/about/policy/interrogations.aspx

Amnesty International (2015). *China: Torture and forced confessions rampant amid systematic trampling of lawyers' rights,* November 12, 2015.

Amnesty International Report (2021/22). *The State of the World's Human Rights*. https://www.amnesty.org/en/documents/pol10/4870/2022/en/

Appleby, S. C., Hasel, L. E., & Kassin, S. M. (2013). Police-induced confessions: An empirical analysis of their content and impact. *Psychology, Crime and Law, 19*, 111-128.

Appleby, S. C., & Kassin, S. M. (2016). When self-report trumps science: Effects of confessions, DNA, and prosecutorial theories on perceptions of guilt. *Psychology, Public Policy, and Law, 22,* 127-140.

Arroyo v. State of New York (2022). Claim No. 133136.

Asch, S.E. (1956). Studies of independence and conformity: A minority of one against a unanimous majority. *Psychological Monographs, 70*, 416.

August, C. N., & Henderson, K. S. (2021). Juveniles in the interrogation room: Defense attorneys as protective factor. *Psychology, Public Policy, and Law, 27*, 268–282.

Aviv, R. (2017). Memories of a murder. *The New Yorker*, June 19, 2017, pp. 36-47.

Baldwin, J. (1993). Police interview techniques: Establishing truth or proof? *British Journal of Criminology*, *33*, 325-352.

Banaji, M. R., & Greenwald, A. G. (2013). *Blindspot: Hidden biases of good people.* Delacorte Press.

Barthel, J. (1976). *A death in Canaan*. Dutton.

Bartlett, J. & Zottoli, T. (2021). The paradox of conviction probability: Mock defendants want better deals as risk of conviction increases. *Law and Human Behavior, 45*(1), 39–54. https://doi.org/10.1037/lhb0000432

Bauer, A. (2018). *Beyond the usual beating: The Jon Burge police torture scandal and social movements for police accountability in Chicago*. University of Chicago Press.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*(3), 497–529. https://doi.org/10.1037/0033-2909.117.3.497

Bedau, H. A., & Radelet, M. L. (1987). Miscarriages of justice in potentially capital cases. *Stanford Law Review, 40*, 21-179.

Belkin, I. (2011). China's tortuous path toward ending torture in criminal investigations. *Columbia Journal of Asian Law, 24,* 273–301.

Bell, B. E., & Loftus, E. F. (1989). Trivial persuasion in the courtroom: The power of (a few) minor details. *Journal of Personality and Social Psychology, 56*(5), 669–679. https://doi.org/10.1037/0022-3514.56.5.669

Berghuis v. Thompkins, 560 U.S. 370 (2010).

Berkemer v. McCarty, 468 U.S. 420 (1984).

Bibas, S. (2004). Plea bargaining outside the shadow of trial. *Harvard Law Review, 117*(8), 2463-2547. http://dx.doi.org/10.2139/ssrn.464880

Blagrove, M. (1996). Effects of length of sleep deprivation on interrogative suggestibility. *Journal of Experimental Psychology: Applied, 2*, 48-59.

Blair, J. P. (2005). A test of the unusual false confession perspective using cases of proven false confessions. *Criminal Law Bulletin, 41*, 127–144.

Boivin, R., Gendron, A., Faubert, C., & Poulin, B. (2017). The body-worn camera perspective bias. *Journal of Experimental Criminology, 13*(1), 125–142.

Bond, C. F., & DePaulo, B. M. (2006). Accuracy of deception judgments. *Personality & Social Psychology Review, 10,* 214-234.

Borchard, E. M. (1932). *Convicting the innocent: Errors of criminal justice.* Yale University Press.

Brady v. Maryland, 373 U.S. 83 (1963).

Brady v. US, 397 U.S. 742 (1970).

Bram v. United States, 168 U.S. 532 (1897).

Brimbal, L., Dianiska, R. E., Swanner, J. K., & Meissner, C. A. (2019). Enhancing cooperation and disclosure by manipulating affiliation and developing rapport in

investigative interviews. *Psychology, Public Policy, & Law*, *25*, 107-115. https://doi.org/10.1037/law0000193

Brimbal, L., Meissner, C. A., Kleinman, S. M., Phillips, E. P., Atkinson, D. J., Dianiska, R. E., Rothweiler, J., Oleszkiewicz, S., & Jones, M. S. (2021). Evaluating the benefits of developing rapport and trust in investigative interviews: A training study with law enforcement investigators. *Law & Human Behavior*, 45, 55-67. https://doi.org/10.1037/lhb0000437

Brown v. Mississippi, 297 U.S. 278 (1936).

Brants, C. (2013). Wrongful convictions and inquisitorial process: The case of the Netherlands. *University of Cincinnati Law Review, 80*, 1069-1114.

Brignall, R. (2015). *A police Mr. Big sting goes wrong: The story of Kyle Unger*. Lorimer.

Brown v. Walker, 161 U.S. 591 (1896).

Brown, J., Madore, E., Carter, M. N., Spillar, V., & Jozan, A. (2022). Fetal alcohol spectrum disorder (FASD) and suggestibility: A survey of United States federal case law. *International Journal of Law and Psychiatry, 80*:101763. doi: https://doi.org/10.1016/j.ijlp.2021.101763.

Brown-Schmidt, S., & Benjamin, A. S. (2018). How we remember conversation: Implications in legal settings. *Policy Insights from the Behavioral and Brain Sciences, 5*(2), 187–194.

Buckley, J. (2006). The Reid technique of interviewing and interrogation. In T. Williamson (Ed.), *Investigative interviewing: Rights, research, regulation* (pp. 190-206). Willan Publishing.

Buckley, J. P. (2021, December 15). *Mental illness and false confessions: A wakeup call to investigators*. The Crime Report. https://thecrimereport.org/2021/12/15/mental-illness-and-false-confessions-a-wakeup-call-to-investigators/

Buffey v. Ballard, No. 14-0642. (2015). West Virginia Supreme Court of Appeals (November 10, 2015).

Burns, S. (2011). *The Central Park Five: A chronicle of a city wilding*. Knopf.

Bushway, S. D., & Redlich, A. D. (2012). Is plea bargaining in the 'shadow of the trial' a mirage? *Journal of Quantitative Criminology*, *28(3),* 437-454. doi: 10.1007/s10940-011-9147-5

Bushway, S. D., Redlich, A. D. & Norris, R. J. (2014). An explicit test of plea bargaining in the "shadow of the trial." *Criminology, 52*(4), 723-754. https://doi.org/10.1111/1745-9125.12054

California v. Beheler, 463 U.S. 1121 (1983).

Camp, N. P., Voigt, R., Jurafsky, D., & Eberhardt, J. L. (2021). The thin blue waveform: Racial disparities in officer prosody undermine institutional trust in the police. *Journal of Personality and Social Psychology, 121*(6), 1157–1171.

Campbell, K. M. (2018). *Miscarriages of Justice in Canada : Causes, Responses, Remedies*. University of Toronto Press.

Candel, I., Merckelbach, H., Loyen, S., & Reyskens, H. (2005). "I hit the Shift-key and then the computer crashed": Children and false admissions. *Personality and Individual Differences, 38*, 1381-1387.

Cardenas, S.A. (2023). Charged up and anchored down: A test of two pathways to judgmental and decisional anchoring biases in plea negotiations. *Psychology, Public Policy, and Law*. https://doi.org/10.31234/osf.io/7s4vz

Casey, B. J. (2015). Beyond simple models of self-control to circuit-based accounts of adolescent behavior. *Annual Review of Psychology*, *66*(1), 295–319. https://doi.org/10.1146/annurev-psych-010814-015156

Casey, B. J., Simmons, C., Somerville, L. H., & Baskin-Sommers, A. (2022). Making the sentencing case: Psychological and neuroscientific evidence for expanding the

age of youthful offenders. *Annual Review of Criminology*, *5*(1), 321–343. https://doi.org/10.1146/annurev-criminol-030920-113250

Catlin, M. & Redlich, A.D. (2023). Redefining "Years Lost": The impact of wrongful convictions on lifespan. *Wrongful Conviction Law Review*.

Catlin, M., Wilson, D. B., Redlich, A. D., Bettens, T., Meissner, C. A., Bhatt, S., & Brandon, S. (2023). PROTOCOL: Interview and interrogation methods and their effects on true and false confessions: An update and extension. *Campbell Systematic Reviews*, *19*(1), e1314. https://doi.org/10.1002%2Fcl2.1314

Cauffman, E., Shulman, E. P., Steinberg, L., Claus, E., Banich, M. T., Graham, S., & Woolard, J. (2010). Age differences in affective decision making as indexed by performance on the Iowa Gambling Task. *Developmental Psychology*, *46*(1), 193–207. https://doi.org/10.1037/a0016128

Center for Law, Brain & Behavior at Massachusetts General Hospital (2022). White paper on the science of late adolescence: A guide for judges, attorneys and policy makers. https://clbb.mgh.harvard.edu/white-paper-on-the-science -of-late-adolescence/

Chan, J. C. K., & McDermott, K. B. (2006). Remembering pragmatic inferences. *Applied Cognitive Psychology, 20*, 633-639.

Charman, S. D., Gregory, A. H., & Carlucci, M. (2009). Exploring the diagnostic utility of facial composites: Beliefs of guilt can bias perceived similarity between composite and suspect. *Journal of Experimental Psychology: Applied*, *15*(1), 76–90. https://doi.org/10.1037/a0014682

Childs, S., Given-Wilson, Z., Butler, S., Memon, A., & Gudjonsson, G. (2021). Vulnerability to interrogative suggestibility from negative events. A comparison of separated asylum-seeking youth and aged-matched peers. *Personality and Individual Differences, 173*.

Cialdini, R. B. (2009). *Influence: Science and practice* (5th ed.). Pearson.

Clare, I., & Gudjonsson, G. H. (1995). The vulnerability of suspects with intellectual disabilities during police interviews: A review and experimental study of decision-making. *Mental Handicap Research, 8*, 110-128.

Clare, I. C. H., Gudjonsson, G. H., & Harari, P. M. (1998). Understanding of the current police Caution (England and Wales). *Journal of Community & Applied Social Psychology, 8,* 323–329.

Clarke, C., & Milne, R. (2001). *National evaluation of the PEACE investigative interviewing course.* Police Research Award Scheme. London: Home Office.

Cleary, H. M. D. (2014). Police interviewing and interrogation of juvenile suspects: A descriptive examination of actual cases. *Law and Human Behavior, 38*, 271–282.

Cleary, H. M. D. (2017). Applying the lessons of developmental psychology to the study of juvenile interrogations: New directions for research, policy, and practice. *Psychology, Public Policy, and Law*, *23*(1), 118–130. https://doi.org/10.1037/law0000120

Cleary, H. M. D. (2022). Ten reasons why parents aren't adequate protectors of youth in police interrogations. *The Champion, 46(*10), 20-32.

Cleary, H. M. D. & Bull, R. (2017). Jail inmates' perspectives on police interrogation. *Psychology, Crime, & Law, 25*, 157-170. ttps://doi.org/10.1080/1068316X.2018.1503667

Cleary, H. M. D. & Bull, R. (2021). Contextual factors predict self-reported confession decision-making: A field study of suspects' actual police interrogation experiences. *Law and Human Behavior, 45* (4), 310–323.

Cleary, H., M. D., Guarnera, L. A., Aaron, J., Crane, M. (2021). How trauma may magnify the risk of involuntary and false confessions among adolescents. *Wrongful Conviction Law Review*, *2* (3), 173-204.

Cleary, H. M. D., & Vidal, S. (2016). Miranda in actual juvenile interrogations: Delivery, waiver, and readability. *Criminal Justice Review*, *41*(1), 98–115. https://doi.org/10.1177/0734016814538650

Cleary, H. M. D., & Warner, T. C. (2016). Police training in interviewing and interrogation methods: A comparison of techniques used with adult and juvenile suspects. *Law and Human Behavior*, *40*(3), 270–284. https://doi.org/10.1037/lhb0000175

Cleary, H. M. D., & Warner, T. C. (2017). Parents' knowledge and attitudes about youths' interrogation rights. *Psychology, Crime & Law, 23*, 777–793.

Clow, K. A. & Leach, A. (2015a). After innocence: Perceptions of individuals who have been wrongfully convicted. *Legal and Criminological Psychology, 20*, 147-164.

Clow, K. A. & Leach, A. (2015b). Stigma and wrongful conviction: All exonerees are not perceived equal. *Psychology, Crime & Law, 21*, 172-185. DOI:10.1080/1068316X.2014.951645

Cohen, A. O., et al. (2016). When is an adolescent an adult? Assessing cognitive control in emotional and nonemotional contexts. *Psychological Science*, *27*, 549–562. https://doi.org/10.1177/0956797615627625

Collins, R., Lincoln, R., & Frank, M. G. (2002) Effect of rapport in forensic interviewing. *Psychiatry, Psychology, & Law*, *9*, 69-78. https://10.1375/pplt.2002.9.1.69

Colomb, C., Ginet, M., Wright, D., Demarchi, S., & Sadler, C. (2013). Back to the real: Efficacy and perception of a modified cognitive interview in the field. *Applied Cognitive Psychology*, *27*(5), 574-583.

Commonwealth v. Godschalk, 679 A.2d 1295, 1297 (1996).

Connery, D. S. (1977). *Guilty until proven innocent*. Putnam.

Conroy, J. (2000). *Unspeakable acts, ordinary people: The dynamics of torture.*

University of California Press.

Cooper, G. S., Meterko, V., & Gadtaula, P. (2019). Innocents who plead guilty: An analysis of patterns in DNA exoneration cases. *Federal Sentencing Reporter, 31*(4-5), 234-238. https://doi.org/10.1525/fsr.2019.31.4-5.234

Cooper, V. G., & Zapf, P. A. (2008). Psychiatric patients' comprehension of *Miranda* rights. *Law and Human Behavior, 32,* 390-405.

Correll, J., Hudson, S., Guillermo, S., & Ma, D. S. (2014). The police officer's dilemma: A decade of research on racial bias in the decision to shoot. *Social and Personality Psychology Compass, 8*, 201–213.

Costanzo, M., Blandón-Gitlin, I., & Davis, D. (2016). The purpose, content, and effects of expert testimony on interrogations and confessions. In B. Bornstein & M. Miller (Eds.), *Advances in psychology and law* (pp. 141–178). Springer.

Cox, S. (2018). *The Reykjavik Confessions*. BBC Books.

Dando, C. J., & Bull, R. (2011). Maximising opportunities to detect verbal deception: Training police officers to interview tactically. *Journal of Investigative Psychology and Offender Profiling*, *8*, 189-202. https://doi.org/10.1002/jip.145

Dando, C. J., Bull, R., Ormerod, T. C., & Sandham, A. L. (2015). Helping to sort the liars from the truth-tellers: The gradual revelation of information during investigative interviews. *Legal and criminological psychology*, *20*(1), 114-128. https://doi.org/10.1111/lcrp.12016

Dando, C., Wilcock, R., & Milne, R. (2009). The cognitive interview: The efficacy of a modified mental reinstatement of context procedure for frontline police investigators. *Applied Cognitive Psychology*, *23*, 138-147. https://doi.org/10.1002/acp.1451

Davis, D., Blandon-Gitlin, I., Cleary, H., Costanzo, M., Leo, R.A., & Margolis, S. (2023).

Interrogation by proxy: The growing role of lay and undercover interrogators in eliciting criminal confessions. *Criminal Law Bulletin*.

Demos, M., Ricciardi, L. (2015). *Making a murderer* [A Netflix original documentary]. Synthesis Films.

Denault, V., Talwar, V., Plusquellec, P., & Larivière, V. (2022). On deception and lying: An overview of over 100 years of social science research. *Applied Cognitive Psychology*. Advance online publication. https://doi.org/10.1002/acp.3971

DePaulo, B.M., Lindsay, J.J., Malone, B.E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). Cues to deception. *Psychological Bulletin, 129*, 74-112.

Dervan, L.E. (2012). Bargained justice: Plea bargaining's innocence problem and the Brady safety-valve. *Utah Law Review, 51,* 51-97.

Dervan, L. & Edkins, V. A. (2013). The innocent defendant's dilemma: An innovative empirical study of plea bargaining's innocence problem. *Journal of Criminal Law and Criminology, 103*, 1-48.

Dezember, A. Luna, S., Woestehoff, S., Stoltz, M., Manley, M., Quas, J.A, & Redlich, A.D. (2022). Plea validity in circuit court: Judicial colloquies in misdemeanor vs. felony charges. *Psychology, Crime, & Law, 28*, 268-288.

Dezember, A. & Redlich, A.D. (2023). *Examining Alford pleas and the presumption of strong evidence*. Manuscript in preparation. [SHOULD BE UNDER REVIEW SOON]

Dianiska, R. E., Swanner, J. K., Brimbal, L., & Meissner, C. A. (2019). Conceptual priming and context reinstatement: A test of direct and indirect interview techniques. *Law & Human Behavior*, *43*, 131-143. https://doi.org/10.1037/lhb0000323

Dianiska, R. E., Swanner, J. K., Brimbal, L., & Meissner, C. A. (2021). Using disclosure,

common ground, and verification to develop rapport and elicit information. *Psychology, Public Policy, & Law*, *27*, 341-353. https://doi.org/10.1037/law0000313

DiFava, R., Bettens, T., Wilford, M., & Redlich, A.D. (2023). Confession evidence results in more guilty pleas than eyewitness evidence. *Journal of Experimental Criminology*. https://doi.org/10.1007/s11292-023-09577-7

Drake, K. E. (2010). Interrogative suggestibility: Life adversity, neuroticism, and compliance. *Personality and Individual Differences, 48*(4), 493-498.

Drake, K. E. (2014). The role of trait anxiety in the association between the reporting of negative life events and interrogative suggestibility. *Personality and Individual Differences, 60*, 54-59.

Drake, K. E., Sigfusdottir, I. D., Sigurdsson, J. F., & Gudjonsson, G. H. (2016). Investigating the interplay between the reported witnessing and experiencing of physical violence within the home, the death of a parent or sibling, stress-sensitivity, and reported false confessions in males. *Personality and Individual Differences, 88,* 114-119.

Driver, E. D. (1968). Confessions and the social psychology of coercion. *Harvard Law Review, 82*, 42–61. http://dx.doi.org/10.2307/1339294

Drizin, S. A., & Leo, R.A. (2004). The problem of false confessions in the post-DNA world. *North Carolina Law Review, 82*, 891-1007.

Dror, I. E., & Charlton, D. (2006). Why experts make errors. *Journal of Forensic Identification, 56,* 600-616.

Dror, I. E., & Hampikian, G. (2011). Subjectivity and bias in forensic DNA mixture interpretation. *Science & Justice, 51*, 204–208.

Dror, I. E., Kukucka, J., Kassin, S. M., & Zapf, P. A. (2018). No one is immune to contextual bias—Not even forensic pathologists. *Journal of Applied Research in Memory and Cognition, 7*, 316-317.

Dror, I. E., Melinek, J., Arden, J. L., Kukucka, J., Hawkins, S., Carter, J., & Atherton, D. S. (2021). Cognitive bias in forensic pathology decisions. *Journal of Forensic Sciences, 66*, 1751–1757.

Duke, M. C., Wood, J. M., Bollin, B., Scullin, M., & LaBianca, J. (2018). Development of the Rapport Scales for Investigative Interviews and Interrogations (RS3i), Interviewee Version. *Psychology, Public Policy, and Law, 24*(1), 64–79. https://doi.org/10.1037/law0000147

Eastwood, J., & Snook, B. (2010). Comprehending Canadian police cautions: Are the rights to silence and legal counsel understandable? *Behavioral Sciences and the Law, 28,* 366–377. https://doi.org/10.1002/bsl.898

Eastwood, J., Snook, B., & Luther, K. (2018). Measuring the effectiveness of the sketch procedure for recalling details of a live interactive event. *Applied Cognitive Psychology*, *32*(6), 747-754. https://doi.org/10.1002/acp.3454

Eberhardt, J. L. (2019). *Biased: Uncovering the hidden prejudice that shapes what we see, think, and do*. Viking.

Edkins, V.A. & Dervan, L.E. (2018). Freedom now or a future later: Pitting the lasting implications of collateral consequences against pretrial detention in decisions to plead guilty. *Psychology, Public Policy, and Law, 24*, 204-215. http://dx.doi.org/10.1037/law0000159

Edkins, V. A., & Redlich, A. D. (2019). *A system of pleas: Social science's contributions to the real legal system*. Oxford University Press. https://doi.org/10.1093/oso/9780190689247.003.0001

Elaad, E., Ginton, A., & Shakhar, G. (1994). The effects of prior expectations and outcome knowledge on polygraph examiners' decisions. *Journal of Behavioral Decision Making*, *7*(4), 279–292. https://doi.org/10.1002/bdm.3960070405

Erickson, S. L., Salekin, K. L., Johnson, L. N., & Doran, S. C. (2020). The predictive power of intelligence: Miranda abilities of individuals with intellectual disability. *Law and Human Behavior*, *44*, 60–70. https://doi.org/10.1037/lhb0000356

Etienne, M., & McAdams, R. (2021). Police Deception in Interrogation as a Problem of Procedural Legitimacy. *Texas Tech Law Review*, *54*, 21-38.

Evans, J. R., Meissner, C. A., Brandon, S. E., Russano, M. B., & Kleinman, S. M. (2010). Criminal versus HUMINT interrogations: The importance of psychological science to improving interrogative practice. *Journal of Psychiatry & Law, 38*, 215-249. https://doi.org/10.1177/009318531003800110

Evans, J. R., Meissner, C. A., Ross, A. B., Houston, K. A., Russano, M. B., & Horgan, A. J. (2013a). Obtaining guilty knowledge in human intelligence interrogations: Comparing accusatorial and information-gathering approaches with a novel experimental paradigm. *Journal of Applied Research in Memory & Cognition*, *2*, 83-88. https://doi.org/10.1016/j.jarmac.2013.03.002

Evans, J. R., Michael, S. W., Meissner, C. A., & Brandon, S. E. (2013b). Validating a new assessment method for deception detection: Introducing a psychologically based credibility assessment tool. *Journal of Applied Research in Memory & Cognition*, *2*, 33-41. https://doi.org/10.1016/j.jarmac.2013.02.002

Fair Trials (2021, December). *Efficiency over justice: Insights into trial waiver systems in Europe*. https://www.fairtrials.org/app/uploads/2022/01/TWSE-report.pdf

Fallon, L., & Snook, B. (2021). Minimization, the Trojan horse of interviewing? Measuring perceptions of witness interviewing strategies. *Criminal Justice and Behavior, 48*(12), 1805–1826. https://doi.org/10.1177/00938548211025062

Fare v. Michael C., 442 U.S. 707 (1979).

Feld, B. C. (2013). *Kids, cops, and confessions: Inside the interrogation room*. New York University Press.

Findley, K. A. (2009). Innocence protection in the appellate process. *Marquette Law Review, 93*, 591–638.

Findley, K. A., & Scott, M. S. (2006). The multiple dimensions of tunnel vision in criminal cases. *Wisconsin Law Review,* 291-397.

Fisher Inquiry (1977). *Report of an Inquiry by the Hon. Sir Henry Fisher into the circumstances leading to the trial of the three persons on charges arising out of the death of Maxwell Confait and the fire at 27 Doggett Road, London, SE6*. London: HMSO.

Fisher, G. (2003). *Plea bargaining's triumph: A history of plea bargaining in America*. Stanford University Press.

Fisher, R. P. and Geiselman, R. E. (1992). *Memory Enhancing Techniques for Investigative Interviewing: The Cognitive Interview*. Thomas.

Fisher, R. P., & Geiselman, R. E. (2018). Investigative interviewing. In V. Hasselt & M. Bourke's (Eds), *Handbook of Behavioral Criminology* (pp. 451-466). Springer.

Fisher, R. P., Geiselman, R. E., & Raymond, D. S. (1987). Critical analysis of police interview techniques. *Journal of Police Science and Administration*, *15*, 177-185.

Fisher, R. P., Geiselman, R. E., & Amador, M. (1989). Field test of the cognitive interview: Enhancing the recollection of actual victims and witnesses of crime. *Journal of Applied Psychology, 74*(5), 722–727. https://doi.org/10.1037/0021-9010.74.5.722

Freedman, S., Eastwood, J., Snook, B., & Luther, K. (2014). Safeguarding youth interrogation rights: The effect of grade level and reading complexity of youth

waiver forms on the comprehension of legal rights. *Applied Cognitive Psychology*, *28*(3), 427–431. https://doi.org/10.1002/acp.3001

Frenda, S. J., Berkowitz, S. R., Loftus, E. F., & Fenn, K. M. (2016). Sleep deprivation and false confessions. *PNAS Proceedings of the National Academy of Sciences of the United States of America, 113*, 2047–2050.

Frenda S.J., Patihis L., Loftus E.F., Lewis H.C., & Fenn K.M. (2014). Sleep deprivation and false memories. *Psychological Science, 25* (9):1674-1681.

Fulminante v. Arizona, 499 U.S. 279 (1991).

Firstman, R., & Salpeter, J. (2008). *A criminal injustice: A true crime, a false confession, and the fight to free Marty Tankleff*. Ballantine Books.

Frazier v. Cupp, 394 U.S. 731 (1969).

Frank, J., & Frank, B. (1957). *Not guilty*. Doubleday.

Gabbert, F., Hope, L., Luther, K., Wright, G., Ng, M., & Oxburgh, G. (2021). Exploring the use of rapport in professional information-gathering contexts by systematically mapping the evidence base. *Applied Cognitive Psychology*, *35*(2), 329-341. https://doi.org/10.1002/acp.3762

Garrett, B. L. (2010). The substance of false confessions. *Stanford Law Review, 62*, 1051–1119.

Garrett, B. L. (2011). *Convicting the innocent: Where criminal prosecutions go wrong*. Harvard University Press.

Garrett, B. L. (2015). Contaminated confessions revisited. *Virginia Law Review, 101,* 395–454.

In re Gault, 387 U.S. 1 (1967).

Gauger, G., & von Bergen (2008). *In spite of the system: A personal story of wrongful conviction & exoneration.* Fourcatfarm Press.

Geiselman, R. E. (2012). The cognitive interview for suspects (CIS). *American Journal of*

Forensic Psychology, 30(3), 5-20.

Geiselman, R. E., & Callot, R. (1990). Reverse versus forward recall of script-based texts. *Applied Cognitive Psychology*, *4*, 141-144. https://doi.org/10.1002/acp.2350040206

Geven, L. M., Ben-Shakhar, G., Kindt, M., & Verschuere, B. (2020). Memory-based deception detection: Extending the cognitive signature of lying from instructed to self-initiated cheating. *Topics in Cognitive Science, 12*(2), 608–631. https://doi.org/10.1111/tops.12353

Gilbert, D. T., & Malone, P. S. (1995). The correspondence bias. *Psychological Bulletin, 117,* 21–38.

Gilbert, J. A., & Fisher, R. P. (2006). The effects of varied retrieval cues on reminiscence in eyewitness memory. *Applied Cognitive Psychology*, *20*, 723-739. https://doi.org/10.1002/acp.1232

Goff, P., et al. (2014). The essence of innocence: Consequences of dehumanizing Black children. *Journal of Personality and Social Psychology, 106*, 526–545.

Goffman E. (1963). *Stigma: Notes on the Management of Spoiled Identity*. Prentice Hall.

Goldstein, N. E. S., Haney-Caron, E., Levick, M., & Whiteman, D. (2018). Waving good-bye to waiver: A developmental argument against youths' waiver of Miranda rights. *NYU Journal of Legislation and Public Policy*, *21*, 1–67.

Goldstein, N. E. S., Zelle, H., & Grisso, T. (2012). *The Miranda rights comprehension instruments*. Professional Resource Press.

Goodman-Delahunty, J., Granhag, P.A., Hartwig, M., & Loftus, E. (2010). Insightful or wishful: Lawyers' ability to predict case outcomes. *Psychology, Public Policy, and Law, 16*, 133-157.

Goodman-Delahunty, J., Martschuk, N., & Dhami, M. K. (2014). Interviewing high value detainees: Securing cooperation and disclosures. *Applied Cognitive Psychology*, *28*(6), 883-897. https://doi.org/10.1002/acp.3087

Granhag, P. A., & Hartwig, M. (2008). A new theoretical perspective on deception detection: On the psychology of instrumental mind-reading. *Psychology, Crime & Law*, *14*(3), 189-200. https://doi.org/10.1080/10683160701645181

Grano, J. D. (1994). *Confessions, truth, and the law*. University of Michigan Press.

Greenspan, R., & Scurich, N. (2016). The interdependence of perceived confession voluntariness and case evidence. *Law and Human Behavior, 40*, 650–659. doi:10.1037/lhb0000200

Grisso, T. (1981). *Juveniles' waiver of rights: Legal and psychological competence*. Plenum.

Grisso, T. (1998). *Instruments for assessing understanding and appreciation of Miranda rights*. Professional Resources Press Inc.

Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., Lexcen, F., Reppucci, N. D., & Schwartz, R. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior*, *27*(4), 333–363. https://doi.org/10.1023/A:1024065015717

Gross, S.R., Jacoby, K., Matheson, D.J., Montgomery, N., & Patel, S (2005). Exonerations in the United States, 1989 through 2003. *Journal of Criminal Law & Criminology, 95, 523-553*.

Gross, S. & Possley, M. (2016*). For 50 years, you've had the "right to remain silent": So why do so many suspects confess to crimes they didn't commit?* The Marshall Project.

Gross, S. R., & Shaffer, M. (2012). *Exonerations in the United States, 1989-2012*.

Retrieved from The University of Michigan Law School & Northwestern University Law School, The National Registry of Exonerations website.

Gross, S. R. et al. (2022). *Race and Wrongful Convictions in the United States 2022*. September 23, 2002.

Gudjonsson, G. H. (1984). A new scale of interrogative suggestibility. *Personality and Individual Differences, 5*, 303-314.

Gudjonsson, G. H. (1987). A parallel form of the Gudjonsson suggestibility scale. *British Journal of Clinical Psychology, 26*, 215-221.

Gudjonsson, G. H. (1992). *The psychology of interrogations, confessions, and testimony*. Wiley.

Gudjonsson, G. H. (1997). *The Gudjonsson Suggestibility Scales Manual*. Hove: Psychology Press.

Gudjonsson, G. H. (2003). *The psychology of interrogations and confessions: A handbook*. John Wiley & Sons.

Gudjonsson, G. H. (2010). Psychological vulnerabilities during police interviews. Why are they important? *Legal and Criminological Psychology*, *15*, 161-175.

Gudjonsson, G. (2017). Memory distrust syndrome, confabulation and false confession. *Cortex, 87*, 156-165. DOI 10.1007/s00406-016-0735-0.

Gudjonsson, G. H. (2018). *The psychology of false confessions. Forty years of science and practice*. Wiley Blackwell.

Gudjonsson, G. H. (2021). Science-based pathways to understanding false confessions and wrongful convictions. *Frontiers in* P*sychology, 12::*633936. doi: 10.3389/fpsyg.2021.633936.

Gudjonsson, G. H. (2023). Background to interviewing vulnerable persons. In Oxburgh,

G.E., Myklebust, T., Fallon, M., & Hartwig, M. (in press), *Interviewing and interrogation: A review of research and practice since World War II*. Torkel Opsahl Academic EPublisher: Brussels.

Gudjonsson, G. H., & Clark, N. K. (1986). Suggestibility in police interrogation: A social psychological model. *Social Behaviour, 1*, 83-104.

Gudjonsson, G. H., Gonzalez, R., & Young, S. (2019). The risk of making a false confessions: The role of developmental disorders, conduct disorder, psychiatric symptoms, and compliance. *Journal of Attention* Disorders, 25, 715-723. doi: 10.1177/1087054719833169.

Gudjonsson, G. H., Heaton-Armstrong, A., Griffiths, T., Justice, L., Rumbold, J., & Wolchover, D. (2021). The impact of confabulation on testimonial reliability. *Criminal Law Review*, *10*, 828-850.

Gudjonsson, G.H., & MacKeith, J.A.C. (1982). False confessions: Psychological effects of interrogation. In A. Trankell (Ed.), *Reconstructing the past: The role of psychologists in criminal trials* (pp. 253-269). Kluwer.

Gudjonsson, G. H., & Pearse, J. (2011). Suspect interviews and false confessions. *Current Directions in Psychological Science, 20*(1), 33–37.

Gudjonsson, G. H., & Sigurdsson, J. F. (1994). How frequently do false confessions occur? An empirical study among prison inmates. *Psychology, Crime, and Law, 1*, 21-26.

Gudjonsson, G. H., Sigurdsson, J. F., Asgeirsdottir, B. B., & Sigfusdottir, I. D. (2009). Interrogation and false confession among adolescents in seven European countries: What background and psychological variables best discriminate between false confessors and non-false confessors? *Psychology, Crime, and Law, 15* (8), 711-728.

Gudjonsson, G. H., Sigurdsson, J. F., Sigurdardottir, A. S., Steinthorsson, H., & Sigurdardottir, V. M. (2014). The role of memory distrust in cases of internalised false confession. *Applied Cognitive Psychology, 28,* 336–348.

Gudjonsson, G., H., Sigurdsson, J. F., Sigfusdottir, I. D., & Young, S. (2012). False confessions to police and their relationship with conduct disorder, ADHD, and life adversity *Personality and Individual Differences, 52*, 696-701. DOI information: 10.1016/j.paid.2011.12.025.

Gudjonsson, G. H., Sigurdsson, J. F., & Tryggvadottir, H. B. (2011). The relationship of compliance with a background of childhood neglect and physical and sexual abuse. *Journal of Forensic Psychiatry and Psychology, 22*, 87-98.

Gudjonsson, G., Vagni, M., Maiorano, T., Pajardi, D. (2020). The relationship between trauma symptoms and immediate and delayed suggestibility in children who have been sexually abused. *Journal of Investigative Psychology and Offender Profiling*, *17*, 250-263. https://doi.org/10.1002/jip.1554.

Guyll, M., Madon, S. Yang, Y. Lannin, D. G., Scherr, K., & Greathouse, S. (2013). Innocence and resisting confession during interrogation: Effects on physiologic activity. *Law and Human Behavior, 37*, 366-375.

Guyll, M., Yang, Y., Madon, S., Smalarz, L., & Lannin, D. G. (2019). Mobilization and resistance in response to interrogation threat. *Law and Human Behavior, 43*(4), 307–318. https://doi.org/10.1037/lhb0000337

Harris v. New York, 401 U.S. 222 (1971).

Harris, R. J., & Monaco, G. E. (1978). Psychology of pragmatic implication: Information processing between the lines. *Journal of Experimental Psychology: General, 107*, 1-22.

Harrison, Y., & Horne, J.A. (2000). The impact of sleep deprivation on decision making: A review. *Journal of Experimental Psychology: Applied*, *6*, 236-249.

Hartwig, M., & Bond, C. F., Jr. (2011). Why do lie-catchers fail? A lens model meta-analysis of human lie judgments. *Psychological Bulletin, 137*, 643–659.

Hartwig, M., Granhag, P. A., Strömwall, L., & Vrij, A. (2005). Detecting deception via strategic closure of evidence. *Law and Human Behavior, 29*, 469-484.

Hartwig, M., Granhag, P. A., & Strömwall, L. A. (2007). Guilty and innocent suspects' strategies during police interrogations. *Psychology, Crime & Law*, *13*(2), 213-227. https://doi.org/10.1080/10683160600750264

Hartwig, M., Granhag, P.A., Strömwall, L.A., & Kronkvist, O. (2006). Strategic use of evidence during police interviews: When training to detect deception works. *Law and Human Behavior, 30,* 603-619.

Harvey, A. C., Vrij, A., Leal, S., Hope, L., & Mann, S. (2017). Deception and decay: Verbal lie detection as a function of delay and encoding quality. *Journal of Applied Research in Memory and Cognition*, *6*(3), 306-318. https://doi.org/10.1016/j.jarmac.2017.04.002

Hasel, L.E., & Kassin, S.M. (2009). On the presumption of evidentiary independence: Can confessions corrupt eyewitness identifications? *Psychological Science, 20*, 122-126.

Hauch, V., Sporer, S. L., Michael, S. W., & Meissner, C. A. (2016). Does training improve the detection of deception? A meta-analysis. *Communication Research, 43*(3), 283–343. https://doi.org/10.1177/0093650214534974

Hellgren, J., & Kassin, S. M. (2022). The defense lawyer's plea recommendation: Disentangling the influences of perceived guilt and probability of conviction. *Psychology, Public Policy, and Law, 28,* 546-559. https://doi.org/10.1037/law0000365

Helm, R. K. (2022). Cognition and Incentives in Plea Decisions: Categorical Differences in Outcomes as the Tipping Point for Innocent Defendants. *Psychology, Public Policy, and Law, 28,* 344-355. http://dx.doi.org/10.1037/law0000321

Helm, R. K., Reyna, V. F., Franz, A. A., Novick, R. Z., Dincin, S., & Cort, A. E. (2018). Limitations on the ability to negotiate justice: attorney perspectives on guilt, innocence, and legal advice in the current plea system. *Psychology, Crime & Law, 24*(9), 915-934. https://doi.org/10.1080/1068316X.2018.1457672

Henderson, K., & Levett, L. (2016). Can expert testimony sensitize jurors to variations in confession evidence? *Law and Human Behavior, 40*, 638-649.

Henkel, L. A., Coffman, K., & Dailey, E. M. (2008). A survey of people's attitudes and beliefs about false confessions. *Behavioral Sciences and the Law, 26*, 555-584.

Herrera v. Collins, 506 U.S. 390 (1993).

Herrnstein, R. J. (1970). On the law of effect. *Journal of the Experimental Analysis of Behavior, 7,* 243-266.

Herrnstein, R. J., Rachlin, H., & Laibson, D. I. (Eds.) (1997). *The matching law: Papers in psychology and economics*. Russell Sage Foundation.

Hill, C., Memon, A., & McGeorge, P. (2008). The role of confirmation bias in suspect interviews: A systematic evaluation. *Legal and Criminological Psychology, 13*, 357-371.

Hilton, D.J. (1995). The social context of reasoning: Conversational inference and rational judgment. *Psychological Bulletin, 118*, 248-271.

Hollien, H., Harnsberger, J. D., Martin, C. A., & Hollien, K. A. (2008). Evaluation of the NITV CVSA. *Journal of Forensic Sciences, 53(*10), 183-193. https://doi.org/10.1111/j.1556-4029.2007.00596.x

Home Office (1985). *Police and Criminal Evidence Act 1984*. HMSO: London.

Home Office (2003). *Police and Criminal Evidence Act 1984. Codes of Practice A-E Revised Edition*. HMSO: London.

Home Office (2019). *Police and Criminal Evidence Act 1984 (PACE). CODE C Revised Code of Practice for the detention, treatment and questioning of persons by Police Officers*. London: TSO. Online www.tsoshop.co.uk.

Honts, C. R., Forrest, K., & Stepamescu. A. (2019). Polygraph examiners unable to discriminate true-false juvenile confessions. *Polygraph & Forensic Credibility Assessment, 48*, 1–9.

Honts, C. R., Kassin, S. M., & Craig, R. (2014). "I'd know a false confession if I saw one": A constructive replication with juveniles. *Psychology, Crime and Law, 20,* 695-704.

Hope, L., Gabbert, F., Kinninger, M., Kontogianni, F., Bracey, A., & Hanger, A. (2019). Who said what and when? A timeline approach to eliciting information and intelligence about conversations, plots, and plans. *Law and Human Behavior, 43*(3), 263-277. https://doi.org/10.1037/lhb0000329

Hope, L., Mullis, R., & Gabbert, F. (2013). Who? What? When? Using a timeline technique to facilitate recall of a complex event. *Journal of Applied Research in Memory and Cognition*, *2*, 20-24. https://doi.org/10.1016/j.jarmac.2013.01.002

Hopkins, E. J. (1931). *Our lawless police: A study of the unlawful enforcement of the law*. Viking Press.

Horgan, A. J., Russano, M. B., Meissner, C. A., & Evans, J. R. (2012). Minimization and maximization techniques: Assessing the perceived consequences of confessing and confession diagnosticity. *Psychology, Crime & Law, 18*, 65–78.

Horselenberg, R., Merckelbach, H., Smeets, T., Franssens, D., Ygram Peters, G-J., & Zeles, G. (2006). False confessions in the lab: Do plausibility and consequences matter? *Psychology, Crime and Law, 12*, 61-75.

Howard, S. (2019). Exonerees in Black and White: The influence of race on perceptions of those who falsely confessed to a crime. *Psychology, Crime & Law, 25(9)*, 911–924. https://doi.org/10.1080/1068316X.2019.1597091

Huang, K.-J., & Teoh, Y.-S. (2019). Rapport building in suspect interviewing: A comparison of relationship- and procedure-based approaches in a laboratory setting. *Psychology, Public Policy, and Law, 25*(4), 253-265. https://doi.org/10.1037/law0000209

Huff, C. R., Rattner, A., & Sagarin, E. (1996). *Convicted but innocent: Wrongful conviction and public policy*. Sage Publications.

Icenogle, G., & Cauffman, E. (2021). Adolescent decision making: A decade in review. *Journal of Research on Adolescence*, *31*(4), 1006–1022. https://doi.org/10.1111/jora.12608

Icenogle, G., et al. (2019). Adolescents' cognitive capacity reaches adult levels prior to their psychosocial maturity: Evidence for a "maturity gap" in a multinational, cross-sectional sample. *Law and Human Behavior*, *43*(1), 69–85. https://doi.org/10.1037/lhb0000315

Illinois v. Perkins, 496 U.S. 292 (1990).

Inbau, F. E., Reid, J. E., Buckley, J. P., & Jayne, B. C. (2013). *Criminal interrogation and confessions* (5th ed.). Jones & Bartlett Learning.

Inglis, T. (2004). *Truth, power and lies: Irish society and the case of the Kerry babies*. University College Dublin Press.

International Association of Chiefs of Police. (2012). *Reducing Risks: An Executive's Guide to Effective Juvenile Interview and Interrogation.*

J.D.B. v. North Carolina, 564 U.S. 261 (2011).

Jenkins, B. D., Le Grand, A. M., Neuschatz, J. S., Golding, J. M., Wetmore, S. A., &

Price, J. L. (2021). Testing the forensic confirmation bias: How jailhouse informants violate evidentiary independence. *Journal of Police and Criminal Psychology*. https://doi.org/10.1007/s11896-020-09422-x

Johnson, B., King, R., & Spohn, C. (2016). Sociolegal approaches to the study of guilty pleas and prosecution. *Annual Review of Law and Social Science, 12*, 479-495.

Johnson, D. T. (2021). On the pressure to produce admissions of guilt in Japan and the United States, *USALI East-West Studies*, *1* (6), 1 -10.

Johnson, M. K. (2006). Memory and reality. *American Psychologist, 61*(8), 760–771. https://doi.org/10.1037/0003-066X.61.8.760

Johnson, M. K., Hashtroudi, S., & Lindsay, D. S. (1993). Source monitoring. *Psychological Bulletin, 114*(1), 3–28.

Jones, E. E., & Davis, K. E. (1965). From acts To dispositions The attribution process In person perception. *Advances in Experimental Social Psychology, 2,* 219-266.

Josefsson, D. (2015). *The strange case of Thomas Quick: The Swedish serial killer and the psychoanalyst who created him*. Portobello Books.

Kaplan, J., Cutler, B. L., Leach, A.-M., Marion, S., & Eastwood, J. (2020). Perceptions of coercion in interrogation: Comparing expert and lay opinions. *Psychology, Crime & Law, 26*, 384–401.

Kassin, S. M. (1997). The psychology of confession evidence. *American Psychologist, 52*, 221-233.

Kassin, S. M. (2005). On the psychology of confessions: Does *innocence* put *innocents* at risk? *American Psychologist, 60,* 215-228.

Kassin, S. M. (2007). Internalized false confessions. In M. Toglia, J. Read, D. Ross, & R. Lindsay (Eds.), *Handbook of eyewitness psychology: Volume 1* (pp. 175-192). Erlbaum.

Kassin, S. M. (2012). Why confessions trump innocence. *American Psychologist, 67,* 431-445.

Kassin, S. M. (2017). False confessions: How can psychology so basic be so counterintuitive? *American Psychologist, 72*, 951-964.

Kassin, S. M. (2017). The killing of Kitty Genovese: What *else* does this case tell us? *Perspectives on Psychological Science, 12,* 374–381.

Kassin, S. M. (2022). *Duped: Why innocent people confess – and why we believe their confessions*. Prometheus Books.

Kassin, S. M. (2022). Law enforcement experts on why police shouldn't be allowed to lie to suspects. *Time.com*, December 16, 2022.

Kassin, S. (2022). The 'Money Train' Murder: Anatomy of Three False Confessions. *New York Law Journal,* August 2, 2022.

Kassin, S. M., Bogart, D., & Kerner, J. (2012). Confessions that corrupt: Evidence from the DNA exoneration case files. *Psychological Science, 23*, 41-45.

Kassin, S. M., Drizin, S. A., Grisso, T., Gudjonsson, G. H., Leo, R. A., & Redlich, A. D. (2010). Police-induced confessions, risk factors and recommendations: Looking ahead. *Law and Human Behavior, 34*, 49-52.

Kassin, S. M., Dror, I., & Kukucka, J. (2013). The forensic confirmation bias: Problems, perspectives, and proposed solutions. *Journal of Applied Research in Memory & Cognition, 2,* 42-52.

Kassin, S. M., & Fong, C. T. (1999). "I'm innocent!" Effects of training on judgments of truth and deception in the interrogation room. *Law and Human Behavior, 23,* 499-516.

Kassin, S. M., Goldstein, C. J., & Savitsky, K. (2003). Behavioral confirmation in the interrogation room: On the dangers of presuming guilt. *Law and Human Behavior, 27,* 187-203.

Kassin, S. M., & Gudjonsson, G. H. (2004). The psychology of confession evidence: A review of the literature and issues. *Psychological Science in the Public Interest*, *5*, 35-69.

Kassin, S. M., & Kiechel, K. L. (1996). The social psychology of false confessions: Compliance, internalization, and confabulation. *Psychological Science, 7*, 125-128.

Kassin, S. M., Kukucka, J., Lawson, V. Z., & DeCarlo, J. (2014). Does video recording alter the behavior of police during interrogation?: Mock crime-and-investigation study. *Law and Human Behavior, 38*, 73-83.

Kassin, S. M., Kukucka, J., Lawson, V. Z., & DeCarlo, J. (2017). Police reports of mock suspect interrogations: A test of accuracy and perception. *Law and Human Behavior, 41*, 230–243.

Kassin, S. M., Leo, R. A., Meissner, C. A., Richman, K. D., Colwell, L. H., Leach, A-M., & La Fon, D. (2007). Police interviewing and interrogation: A Self-report survey of police practices and beliefs, *Law and Human Behavior, 31,* 381-400.

Kassin, S. M., & McNall, K. (1991). Police interrogations and confessions: Communicating promises and threats by pragmatic implication. *Law and Human Behavior, 15,* 233-251.

Kassin, S. M., Meissner, C. A., & Norwick, R. J. (2005). "I'd know a false confession if I saw one": A comparative study of college students and police investigators. *Law and Human Behavior, 29,* 211-227.

Kassin, S., & Norwick, R. (2004). Why people waive their Miranda rights: The power of innocence. *Law and Human Behavior, 28*, 211-221.

Kassin, S. M., Redlich, A. D., Alceste, F., & Luke, T. J. (2018). On the general acceptance of confessions research: Opinions of the scientific community. *American Psychologist, 73*, 63-80.

Kassin, S. M., Russano, M., Amrom, A., Hellgren, J., Kukucka, J., & Lawson, V. (2019). Does video recording inhibit crime suspects?: Evidence from a fully randomized field experiment. *Law and Human Behavior, 43*, 44-55.

Kassin, S.M., & Sukel, H. (1997). Coerced confessions and the jury: An experimental test of the "harmless error" rule. *Law and Human Behavior, 21*, 27-46.

Kassin, S.M., & Wrightsman, L. S. (1980). Prior confessions and mock juror verdicts. *Journal of Applied Social Psychology, 10,* 133-146.

Kassin, S. M., & Wrightsman, L. S. (1985). Confession evidence. In S. Kassin & L. Wrightsman (Eds.), *The psychology of evidence and trial procedure* (pp. 67-94). Sage Publications.

Kaur, G. (2022). Conviction cannot be based solely on extra judicial confession if not duly proved - SC while acquitting five murder convicts. *Verdictum*. 4 Nov 2022.

Kelly, C. E., Miller, J. C., & Redlich, A. D. (2016). The dynamic nature of interrogation. *Law and Human Behavior, 40* (3), 295–309.

Kelly, C. E., Miller, J. C., Redlich, A. D., & Kleinman, S. M. (2013). A taxonomy of interrogation methods. *Psychology, public policy, and law*, *19*, 165-178. http://dx.doi.org/10.1037/a0030310

Kelly, C. E., Russano, M. B., Miller, J. C., & Redlich, A. D. (2019). On the road (to admission): Engaging suspects with minimization. *Psychology, Public Policy, and Law, 25*(3), 166–180. https://doi.org/10.1037/law0000199

Kieckhaefer, J. & Luna, S. (2022). Can you put a price on 14 years of life? Examining predictors of monetary compensation for exonerees. *Psychology, Crime & Law*. Advanced Online publication. DOI: 10.1080/1068316X.2022.2093871

Kienzle, M. R., & Levett, L. M. (2018). A novel paradigm for examining alibi corroboration and evidence interaction: Does a confession affect the likelihood of alibi corroboration for friends and strangers? *Psychology, Public Policy, and Law,*

24, 353–364.

King, L., & Snook, B. (2009). Peering inside a Canadian interrogation room: An examination of the Reid model of interrogation, influence tactics, and coercive strategies. *Criminal Justice and Behavior, 36*, 674–694. https://doi.org/10.1177/0093854809335142

Kings County Conviction Review Unit (2020). *426 years: An examination of 25 Wrongful convictions in Brooklyn, New York*. http://www.brooklynda.org/wp-content/uploads/2020/07/KCDA_CRUReport_v4r3-FINAL.pdf

Klaver, J., Lee, Z., & Rose, V. G. (2008). Effects of personality, interrogation techniques and plausibility in an experimental false confession paradigm. *Legal and Criminological Psychology, 13,* 71-88.

Kostelnik, J.O., & Reppucci, N. D. (2009). Reid training and sensitivity to developmental maturity in interrogation: Results from a national survey of police. *Behavioral Sciences & the Law, 27*(3), 361–379. https://doi.org/10.1002/bsl.871

Kramer, G. M., Wolbransky, M., & Heilbrun, K. (2007). Plea bargaining recommendations by criminal defense attorneys: Evidence strength, potential sentence, and defendant preference. *Behavioral Sciences & the Law, 25*(4), 573–585. https://doi.org/10.1002/bsl.759

Kukucka, J., Applegarth, H. K., & Mello, A. L. (2020). Do exonerees face employment discrimination similar to actual offenders? *Legal and Criminological Psychology, 25*(1), 17–32.

Kukucka, J., Clow, K. A., Horodyski, A. M., Deegan, K., & Gayleard, N. M. (2021). Do exonerees face housing discrimination? An email-based field experiment and content analysis. *Psychology, Public Policy, and Law, 27(4)*, 570-580. https://doi.org/10.1037/law0000323

Kukucka, J., & Evelo, A. J. (2019). Stigma against false confessors impacts post-exoneration financial compensation. *Behavioral Sciences & the Law, 37(4)*, 372–387. https://doi.org/10.1002/bsl.2403

Kukucka, J., & Kassin, S. M. (2014). Do confessions taint perceptions of handwriting evidence? An empirical test of the forensic confirmation bias. *Law and Human Behavior, 38,* 56-70.

Kukucka, J., Kassin, S. M., Zapf, P. A., & Dror, I. E. (2017). Cognitive bias and blindness: A global survey of forensic science examiners. *Journal of Applied Research in Memory and Cognition, 6,* 452-459.

Lafler v. Cooper, 566 U.S. 156 (2012). https://www.oyez.org/cases/2011/10-209

Lamb, M. E., Orbach, Y., Sternberg, K. J., Hershkowitz, I., & Horowitz, D. (2000). Accuracy of investigators' verbatim notes of their forensic interviews with alleged child abuse victims. *Law and Human Behavior, 24*, 699-707.

Lancaster, G. L., Vrij, A., Hope, L., & Waller, B. (2013). Sorting the liars from the truth tellers: The benefits of asking unanticipated questions on lie detection. *Applied Cognitive Psychology*, *27*(1), 107-114. https://doi.org/10.1002/acp.2879

Lange, N. D., Thomas, R. P., Dana, J., & Dawes, R. M. (2011). Contextual biases in the interpretation of auditory evidence. *Law and Human Behavior, 35*, 178–187. http://dx.doi.org/10.1007/s10979-010-9226-4

LaPaglia, J. A., Wilford, M. M., Rivard, J. R., Chan, J. C. K., & Fisher, R. P. (2014). Misleading suggestions can alter later memory reports even following a cognitive interview. *Applied Cognitive Psychology, 28*, 1–9. https://doi.org/10.1002/acp.2950.

Lassiter, G. D. (Ed.) (2004). *Interrogations, confessions, and entrapment*. Kluwer.

Lassiter, G. D., Geers, A. L., Munhall, P. J., Handley, I. M., & Beers, M. J. (2001).

Videotaped confessions: Is guilt in the eye of the camera? *Advances in Experimental Social Psychology, 33*, 189–254.

Lassiter, G. D., Diamond, S. S., Schmidt, H. C., & Elek, J. K. (2007). Evaluating videotaped confessions: Expertise provides no defense against the camera-perspective effect. *Psychological Science, 18,* 224-226.

Latané, B. (1981). The psychology of social impact. *American Psychologist, 36*, 343-356.

Latham, J., and Gudjonsson, G. (2016). *Sugar Paper Theories*. Here Press.

Leins, D. A., Fisher, R. P., & Ross, S. J. (2013). Exploring liars' strategies for creating deceptive reports. *Legal and Criminological Psychology*, *18*(1), 141-151. https://doi.org/10.1111/j.2044-8333.2011.02041.x

Leo, R. A. (2005). Re-thinking the study of miscarriages of justice: Developing a criminology of wrongful conviction. *Journal of Contemporary Criminal Justice, 21,* 201-223.

Leo, R. A. (1996a). Inside the interrogation room. *Journal of Criminal Law and Criminology, 86,* 266-303.

Leo, R. A. (1996b). Miranda's revenge: Police interrogation as a confidence game. *Law and Society Review, 30*, 259-288.

Leo, R. A. (2008). *Police Interrogation and American Justice*. Harvard University Press.

Leo, R. A., & Drizin, S. A. (2010). The three errors: Pathways to false confession and wrongful conviction. In G. D. Lassiter & C. A. Meissner (Eds.), *Police interrogations and false confessions: Current research, practice, and policy recommendations* (pp. 9–30). American Psychological Association.

Leo, R. A., & Ofshe, R. J. (1998). The consequences of false confessions: Deprivations of liberty and miscarriages of justice in the age of psychological interrogation. *Journal of Criminal Law and Criminology, 88*, 429-496.

Levine, T. R., Kim, R. K., & Blair, J. P. (2010). (In)accuracy at detecting true and false confessions and denials: An initial test of a projected motive model of veracity judgments. *Human Communication Research, 36,* 82–102. doi:10.1111/j.1468-2958.2009.01369.x

Levy, A. (2015, April 6). The price of a life: What's the right way to compensate someone for decades of lost freedom? *The New Yorker*.

Lidén, M., Gräns, M., & Juslin, P. (2018). The presumption of guilt in suspect interrogations: Apprehension as a trigger of confirmation bias and debiasing techniques. *Law and Human Behavior, 42*, 336–354.

Lin, T.-W. (2021). A review of Hsieh Chih-Hung's verdict of innocence from the perspective of a campaigner for his exoneration]. *Criminal Policies and Crime Prevention, 27*, 179–221.

Link B. G. & Phelan J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology, 27*, 363–385.

Loftus, E. F. (2005). Planting misinformation in the human mind: A 30-year investigation of the malleability of memory. *Learning & Memory, 12*, 361-366.

Loftus, E. F. (2017). Eavesdropping on memory. *Annual Review of Psychology, 68,* 1–18. https://doi.org/10.1146/annurev-psych-010416-044138

Loftus, E. F., Miller, D. G., & Burns, H. J. (1978). Semantic integration of verbal information into a visual memory. *Journal of Experimental Psychology: Human Learning and Memory, 4*, 19–31. https://doi.org/10.1037/0278-7393.4.1.19

Logue, M., Book, A. S., Frosina, P., Huizinga, T., & Amos, S. (2015). Using reality monitoring to improve deception detection in the context of the cognitive

interview for suspects. *Law and Human Behavior, 39*(4), 360–367. https://doi.org/10.1037/lhb0000127

Luke, T. J. (2019). Lessons from Pinocchio: Cues to deception may be highly exaggerated. *Perspectives on Psychological Science, 14*, 646–671.

Luke, T. J., & Alceste, F. (2020). The mechanisms of minimization: How interrogation tactics suggest lenient sentencing through pragmatic implication. *Law and Human Behavior, 44,* 266–285.

Luke, T. J., Dawson, E., Hartwig, M., & Granhag, P. A. (2014). How awareness of possible evidence induces forthcoming counter-interrogation strategies. *Applied Cognitive Psychology, 28*(6), 876–882. https://doi.org/10.1002/acp.3019

Luke, T. J., & Granhag, P. A. (2022). The shift-of-strategy (SoS) approach: using evidence strategically to influence suspects' counter-interrogation strategies. *Psychology, Crime & Law*, 1-26. https://doi.org/10.1080/1068316X.2022.2030738

Lupária, L. (Ed.) (2015*) Understanding wrongful conviction. The protection of the innocent across Europe and America*. Kluwer.

Lupária, L., & Greco, C. (2020). Unveiling Wrongful Convictions Between the U.S. and Italy: Cross-learning from Each Other's Mistakes. *The Wrongful Conviction Law Review*, *1*, 101–123.

Lykken, D.T. (1998). *A tremor in the blood: Uses and abuses of the lie detector*. Perseus Books.

Mac Giolla, E., & Luke, T. J. (2021). Does the cognitive approach to lie detection improve the accuracy of human observers? *Applied Cognitive Psychology, 35*(2), 385-392. https://doi.org/10.1002/acp.3777

Madon, S., Guyll, M., Scherr, K. C., Greathouse, S., & Wells, G. L. (2012). Temporal

discounting: The differential effect of proximal and distal consequences on confession decisions. *Law and Human Behavior, 36*, 13–20.

Madon, S., Yang, Y., Smalarz, L., Guyll, M., & Scherr, K. C. (2013). How factors present during the immediate interrogation situation produce short-sighted confession decisions. *Law and Human Behavior, 37,* 60–74.

Major, B., & O'Brien, L.T. (2005). The social psychology of stigma. *Annual Review of Psychology, 56*, 393-421.

Malloy, L. C., Shulman, E. P., & Cauffman, E. (2014). Interrogations, confessions, and guilty pleas among serious adolescent offenders. *Law and Human Behavior*, *38*(2), 181–193. https://doi.org/10.1037/lhb0000065

Mann, S. Vrij, A., and Bull, R. (2004). Detecting true lies: Police officers' ability to detect suspects' lies. *Journal of Applied Psychology, 89*, 137-149.

Marcus, P. (2006). It's not just about Miranda: Determining the voluntariness of confessions in criminal prosecutions. *Valparaiso University Law Review, 40*, 601-644.

Marion, S. B., Kukucka, J., Collins, C., Kassin, S. M., & Burke, T. M. (2016). Lost proof of innocence: The impact of confessions on alibi witnesses. *Law and Human Behavior, 40,* 65-71.

Martin, A. (2011, November 27). The prosecution's case against DNA. *The New York Times Magazine*, p. MM44.

Masip, J., Alonso, H., Garrido, E., & Antón, C. (2005). Generalized communicative suspicion (GCS) among police officers: Accounting for the investigator bias effect. *Journal of Applied Social Psychology, 35*, 1046–1066. http://dx.doi.org/10.1111/j.1559-1816.2005.tb02159.x

Masip, J., Barba, A., & Herrero, C. (2012). Behaviour Analysis Interview and common

sense: A study with novice and experienced officers. *Psychiatry, Psychology and Law, 19*, 21–34. https://doi.org/10.1080/13218719.2010.543402

Masip, J., & Herrero, C. (2013). 'What would you say if you were guilty?' Suspects' strategies during a hypothetical Behavior Analysis Interview concerning a serious crime. *Applied Cognitive Psychology, 27*, 60–70. https://doi.org/10.1002/acp.2872

Masip, J., Herrero, C., Garrido, E., & Barba, A. (2011). Is the behaviour analysis interview just common sense? *Applied Cognitive Psychology, 25*(4), 593-604. https://doi.org/10.1002/acp.1728

Mastroberardino, S., & Marucci, F. S. (2013). Interrogative suggestibility: Was it just compliance or a genuinely false memory? *Legal and Criminological Psychology, 18,* 274–286.

McLachlan, K., Roesch, R., & Douglas, K. S. (2011). Examining the role of interrogative suggestibility in Miranda rights comprehension in adolescents. *Law and Human Behavior*, *35*(3), 165–177. https://doi.org/10.1007/s10979-009-9198-4

Medford, S., Gudjonsson, G. H., & Pearse, J. (2003). The efficacy of the appropriate adult safeguard during police interviewing. *Legal and Criminological Psychology*, *8*(2), 253–266. https://doi.org/10.1348/135532503322363022

Meissner, C. A. (2021). "What works?" Systematic reviews and meta-analyses of the investigative interviewing research literature. *Applied Cognitive Psychology*, *2*, 322-328. https://doi.org/10.1002/acp.3808

Meissner, C. A., & Kassin, S. M. (2002). "He's guilty!": Investigator bias in judgments of truth and deception. *Law & Human Behavior, 26*, 469-480.

Meissner, C. A., Redlich, A. D., Michael, S. W., Evans, J. R., Camilletti, C. R., Bhatt, S.,

& Brandon, S. (2014). Accusatorial and information-gathering interrogation methods and their effects on true and false confessions: A meta-analytic review. *Journal of Experimental Criminology, 10*, 459–486.

Meissner, C. A., Surmon-Böhr, F., Oleszkiewicz, S., & Alison, L. J. (2017). Developing an evidence-based perspective on interrogation: A review of the U.S. government's high-value detainee interrogation group research program. *Psychology, Public Policy, and Law, 23*(4), 438–457.

Memon, A., Meissner, C. A., & Fraser, J. (2010). The cognitive interview: A meta-analytic review and study space analysis of the past 25 years. *Psychology, Public Policy, & Law*, *16*, 340-372. https://doi.org/10.1037/a0020518

Méndez, J. E., & Drummond, V. (2021). The Méndez principles: A new standard for effective interviewing by police and others, while respecting human rights. *Just Security*. Published online June 1, 2021.

Méndez, J. E., Thomson, M., et al. (2021). Principles on effective interviewing for investigations and information gathering. *Norwegian Centre for Human Rights*. Published online May 19, 2021: https://www.jus.uio.no/smr/english/about/id/news/principles-launched.html

Meyer, J. R., & Reppucci, N. D. (2007). Police practices and perceptions regarding juvenile interrogations and interrogative suggestibility. *Behavioral Sciences and the Law, 25,* 1-24.

Milgram, S. (1974). *Obedience to authority: An experimental view*. Harper & Row.

Miller, J. C., Redlich, A. D., & Kelly, C. E. (2018). Accusatorial and information-gathering interview and interrogation methods: a multi-country comparison. *Psychology, Crime & Law*, *24*(9), 935-956.

Milne, R., & Bull, R. (1999). *Investigative interviewing: Psychology and practice*. Wiley.

Mindthoff, A., et al. (2018). A survey of potential jurors' perceptions of interrogations

and confessions. *Psychology, Public Policy, and Law, 24*(4), 430–448. https://doi.org/10.1037/law0000182

Mindthoff, A., Evans, J. R., Wolfs, A. C. F., Polanco, K., Goldstein, N. E. S., & Schreiber Compo, N. (2022). The detrimental impact of alcohol intoxication on facets of *Miranda* comprehension. *Law and Human Behavior, 46*(4), 264–276. https://doi.org/10.1037/lhb0000490

Miranda v. Arizona, 384 U.S. 436 (1966).

Mogavero, M. C. (2020). An exploratory examination of intellectual disability and mental illness associated with alleged false confessions. *Behavioral Sciences and Law, 38*, 299–316. https://doi.org/10.1002/bsl.2463316MOGAVERO

Molinaro, P. F., Fisher, R. P., Mosser, A. E., & Satin, G. E. (2019). Train-the-trainer: Methodology to learn the cognitive interview. *Journal of Investigative Psychology and Offender Profiling*, *16*(1), 32-43.

Moody, S. A., Cabell, J. J., Livingston, T. N., & Yang, Y. (2023). Evidence-based suspicion and the prior probability of guilt in police interrogations. *Law and Human Behavior*. https://doi.org/10.1037/lhb0000513

Moore, T. E., & Gagnier, K. (2008). "You can talk if you want to": Is the police caution on the "right to silence" understandable? *Criminal Reports, 51*, 233–249.

Munsterberg, H. (1908). *On the witness stand.* Doubleday.

Myers, S. L (2018). How China Uses Forced Confessions as Propaganda Tool. *The New York Times,* April 13, 2018, p. A10.

Nahari, G., Vrij, A., & Fisher, R. P. (2014a). Exploiting liars' verbal strategies by examining the verifiability of details. *Legal and Criminological Psychology, 19*(2), 227-239. https://doi.org/10.1111/j.2044-8333.2012.02069.x

Nahari, G., Vrij, A., & Fisher, R. P. (2014b). The verifiability approach: Countermeasures facilitate its ability to discriminate between truths and lies. *Applied Cognitive Psychology, 28*(1), 122–128. https://doi.org/10.1002/acp.2974

Najdowski, C. J. (2011). Stereotype threat in criminal interrogations: Why innocent Black suspects are at risk for confessing falsely. *Psychology, Public Policy, and Law, 17*(4), 562–591.

Najdowski, C. J., Bottoms, B. L., & Goff, P. A. (2015). Stereotype threat and racial differences in citizens' experiences of police encounters. *Law and Human Behavior, 39(*5), 463–477.

Najdowski, C. J., & Stevenson, M. C. (2022). A call to dismantle systemic racism in criminal legal systems. *Law and Human Behavior*, *46*(6), 398–414. https://doi.org/10.1037/lhb0000510

Nakhaeizadeh, S., Dror, I. E., & Morgan, R. (2014). Cognitive bias in forensic anthropology: Visual assessment of skeletal remains is susceptible to confirmation bias. *Science & Justice, 54,* 208–214.

Narchet, F. M., Meissner, C. A., & Russano, M. B. (2011). Modeling the influence of investigator bias on the elicitation of true and false confessions. *Law and Human Behavior, 35(*6), 452–465. https://doi.org/10.1007/s10979-010-9257-x

Nash, R. A., & Wade, K. A. (2009). Innocent but proven guilty: Using false video evidence to elicit false confessions and create false beliefs. *Applied Cognitive Psychology*, *23*, 624-637.

National Academy of Sciences. (2009). *Strengthening Forensic Science in the United States: A Path Forward*. National Academies Press.

National Academies of Sciences, Engineering, and Medicine. (2019). *The promise of adolescence: Realizing opportunity for all youth*. R. J. Bonnie & E. P. Backes (Eds.). National Academies Press. https://doi.org/10.17226/25388

National Registry of Exonerations (2015). Guilty pleas and false confessions. https://www.law.umich.edu/special/exoneration/Documents/NRE.Guilty.Plea.Article4.pdf

Neequaye, D. A., & Mac Giolla, E. (2022). The Use of the term Rapport in the investigative interviewing literature: A critical examination of definitions. *Meta-Psychology*, *6*, MP.2021.2808. https://doi.org/10.15626/MP.2021.2808

Neuschatz, J. S., & Golding, J. M. (2022). *Jailhouse informants: Psychological and legal perspectives*. NYU Press.

Neuschatz, J. S., Lawson, D. S., Swanner, J. K., Meissner, C. A., & Neuschatz, J. S. (2008). The effects of accomplice witnesses and jailhouse informants on jury decision making. *Law and Human Behavior, 32*, 137-149.

New York v. Quarles, 467 U.S. 649 (1984).

Newbury, C. R., Crowley, R., Rastle, K., & Tamminen, J. (2021). Sleep deprivation and memory: Meta-analytic reviews of studies on sleep deprivation before and after learning. *Psychological Bulletin, 147* (11), 1215–1240.

Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology, 2*, 175–220. doi:1089-2680/98

Noc, M., Ginet, M., & Deslauriers-Varin, N. (2023). False confession in innocent suspects: A look at the Cognitive Interview for Suspects. *Journal of Police & Criminal Psychology*, *38*, 186-198.

Normile, C. J., & Scherr, K. C. (2018). Police tactics and guilt status uniquely influence suspects' physiologic reactivity and resistance to confess. *Law and Human Behavior, 42*, 497–506.

Norris, R.J., Weintraub, J.N., Acker, J.R., Redlich, A.D., & Bonventre, C.L. (2020). The criminal costs of wrongful convictions: Can we reduce crime by protecting the innocent? *Criminology and Public Policy*, 19, 367–388.

North Carolina v. Alford, 400 U.S. 25 (1970).

North Carolina v. Butler, 441 U.S. 369 (1979).

Nunan, J., Stanier, I., Milne, R., Shawyer, A., & Walsh, D. (2020). Source handler telephone interactions with covert human intelligence sources: An exploration of question types and intelligence yield. *Applied cognitive psychology*, *34*(6), 1473-1484. https://doi.org/10.1002/acp.3726

Oberlader, V. A., Quinten, L., Banse, R., Volbert, R., Schmidt, A. F., & Schönbrodt, F. D. (2021). Validity of content-based techniques for credibility assessment—How telling is an extended meta-analysis taking research bias into account? *Applied Cognitive Psychology, 35*(2), 393–410. https://doi.org/10.1002/acp.3776

O'Connell, M. J., Garmoe, W., & Goldstein, N. E. S. (2005). Miranda comprehension in adults with mental retardation and the effects of feedback style on suggestibility. *Law and Human Behavior, 29*, 359-369.

Ofshe, R. J., & Leo, R. A. (1997). The decision to confess falsely: Rational choice and irrational action. *Denver University Law Review, 74*, 979-1122.

Oleszkiewicz, S., Madfors, M., Jones, M., & Vredeveldt, A. (2023). Proximity-based evidence disclosure: Providing an operational purpose for disclosing evidence in investigative interviews. *Under review*.

Oleszkiewicz, S., & Watson, S. J. (2021). A meta-analytic review of the timing for disclosing evidence when interviewing suspects. *Applied Cognitive Psychology*, *35*(2), 342-359. https://doi.org/10.1002/acp.3767

Olson, E. A., & Charman, S. D. (2012). 'But can you prove it?'—Examining the quality of innocent suspects' alibis. *Psychology, Crime & Law, 18*(5), 453–471. https://doi.org/10.1080/1068316X.2010.505567

Onishi, N. (2007). Pressed by police, even innocent confess in Japan. *The New York Times,* May 11, 2007.

Ormerod, T. C., & Dando, C. J. (2015). Finding a needle in a haystack: Toward a psychologically informed method for aviation security screening. *Journal of Experimental Psychology: General, 144*(1), 76–84. https://doi.org/10.1037/xge0000030

Oregon v. Elstad, 470 U.S. 298 (1985).

Otgaar, H., Mergaerts, L., De Beuf, T. L. F., Battista, F., & Nieuwkamp, R. (2022). The importance of margins of error in legal psychology for the prevention of miscarriages of justice: A comparison between Belgium and the Netherlands in academic research and teaching. Leuven Institute of Criminology, Catholic University Leuven.

Otgaar, H., Schell-Leugers, J. M., Howe, M. L., Vilar, A. D. L. F., Houben, S.T. L., & Merckelbach, H. (2021). The link between suggestibility, compliance, and false confessions: A review using experimental and field studies. *Applied Cognitive Psychology*, *35* (2), 445-455. https://doi.org/10.1002/acp.3788

Owen-Kostelnik, J., Reppucci, N, D. & Meyer, J. D. (2006). Testimony and interrogation of minors: Assumptions about maturity and morality. *American Psychologist, 61*, 286-304.

Oxburgh, G., Myklebust, T., Fallon, M., & Hartwig, M. (Eds.) (2022), *Interviewing and interrogation: A review of research and practice since World War II*. Torkel Opsahl Academic EPublisher.

Oxburgh, G., Ost, J., Morris, P., & Cherryman, J. (2014). The impact of question type and empathy on police interviews with suspects of homicide, filicide and child sexual abuse. *Psychiatry, Psychology, & Law, 21*(6), 903-917. https://doi.org/10.1080/13218719.2014.918078

Palena, N., Caso, L., Vrij, A., & Nahari, G. (2021). The verifiability approach: A meta

-analysis. *Journal of Applied Research in Memory and Cognition, 10*(1), 155-166. https://doi.org/10.1037/h0101785

Panzavolta, M., de Vocht, D., van Oosterhout, M., & Vanderhallen, M. (Eds.) (2015). *Interrogating young suspects: Procedural safeguards from a legal perspective.* Cambridge, UK: Intersentia.

Pearse, J. & Gudjonsson, G. H. (1999). Measuring influential police interviewing tactics: A factor analytic approach. *Legal and Criminological Psychology, 4*, 221-238.

Penney, S. (1998). Theories of confession admissibility: A historical view. *American Journal of Criminal Law, 25*, 309-383.

Pennsylvania v. Muniz, 496, U.S. 582 (1990).

Perillo, J. T., & Kassin, S. M. (2011). Inside interrogation: The lie, the bluff, and false confessions. *Law and Human Behavior, 35,* 327-337.

Perske, R. (2008). False confessions from 53 persons with intellectual disabilities: The list keeps growing. *Intellectual and Developmental Disabilities, 46*, 468–479. DOI: 10.1352/2008.46:468–479.

Petersen, K., Redlich, A.D., & Wilson, D.B. (2022). Discount for who?: Comparing the effects of evidence and demographic characteristics on plea discounts. *Journal of Quantitative Criminology, 18*, 321-342.

Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change.* Springer-Verlag.

Pezdek, K. & O'Brien, (2014). Plea bargaining and appraisals of eyewitness evidence by prosecutors and defense attorneys. *Psychology, Crime, & Law*, *20(3)*, 222-241. doi: 10.1080/1068316X.2013.770855

Pilcher, J. J., & Huffcut, A. (1996). Effects of sleep deprivation on performance: A meta-analysis. *Sleep, 19,* 318-326.

Pimentel, P. S., Arndorfer, A., & Malloy, L. C. (2015). Taking the blame for someone

else's wrongdoing: The effects of age and reciprocity. *Law and Human Behavior*, *39*(3), 219–231. https://doi.org/10.1037/lhb0000132

President's Commission on Law and the Administration of Justice (1967). *The challenge of crime in a free society*. United States Government Printing Office.

Quigley-McBride A., Dror, I. E., Roy, T., Garrett B. L., & Kukucka, J. (2022). A practical tool for information management in forensic decisions: Using Linear Sequential Unmasking-Expanded in casework. *Forensic Sciences International: Synergy*. *2022, 4*, 100216. doi: 10.1016/j.fsisyn.2022.100216. PMID: 35243284; PMCID: PMC8866671.

Quigley-McBride, A., & Wells, G. L. (2018). Fillers can help control for contextual bias in forensic comparison tasks. *Law and Human Behavior, 42*, 295–305. https://doi.org/10.1037/lhb0000295

Rachlin, H. (2000). *The science of self-control*. Harvard University Press.

Rivard, J. R., Fisher, R. P., Robertson, B., & Mueller, D. H. (2014). Testing the cognitive interview with professional interviewers: Enhancing recall of specific details of recurring events. *Applied Cognitive Psychology, 28*(6), 917-925. https://doi.org/10.1002/acp.3026

Radelet, M., Bedau, H., & Putnam, C. (1992). *In spite of innocence*. Northeastern University Press.

Rakoff, J. (2014, November). Why innocent people plead guilty. *The New York Review of Books*. http://www.nybooks.com/articles/archives/2014/nov/20/why-innocent-people-plead-guilty/

Råstam, H. (2013). *Thomas Quick: The making of a serial killer*. Leicester: W.F. Howes.

Redlich, A. D., Bibas, S., Edkins, V. A., & Madon, S. (2017). The psychology of defendant plea decision making. *American Psychologist, 72*(4), 339–352. https://doi.org/10.1037/a0040436

Redlich, A.D. & Bonventre, C. (2015). Content and comprehensibility of adult and juvenile tender-of-plea forms: Implications for knowing, intelligent, and voluntary guilty pleas. *Law and Human Behavior, 39*, 162-176.

Redlich, A. D., Bushway, S. D., & Norris, R. J. (2016). Plea decision-making by attorneys and judges. *Journal of Experimental Criminology, 12*(4), 537-561. https://doi.org/10.1007/s11292-016-9264-0

Redlich, A. D., & Goodman, G. S. (2003). Taking responsibility for an act not committed: Influence of age and suggestibility. *Law and Human Behavior, 27*, 141-156.

Redlich, A. D., & Özdogru, A. A. (2009). Alford pleas in the age of innocence. *Behavioral Sciences & the Law, 27*(3), 467-488. https://doi.org/10.1002/bsl.876

Redlich, A. D., Silverman, M., & Steiner, H. (2003). Pre-adjudicative and adjudicative competence in juveniles and young adults. *Behavioral Sciences and the Law, 21*, 393-410.

Redlich, A. D., Shteynberg, R. V., & Nirider, L. H. (2019). Pragmatic implication in the interrogation room: Comparison of juveniles and adults. *Journal of Experimental Criminology*, *16*, 555–564. https://doi.org/10.10007/s11292-019-09377-y

Redlich, A.D., Wilford, M. M., Berger, N., & Dipano, M. (in press). Commonalities in false guilty plea cases. *Psychology, Crime, and Law*.

Redlich, A.D., Wilford, M. M., & Bushway, S. (2017). Understanding guilty pleas through the lens of social science. *Psychology, Public Policy, and Law, 23*, 458-471.

Redlich, A. D., Yan, S., Norris, R. J., & Bushway, S. D. (2018). The influence of false confessions on guilty pleas and plea discounts. *Psychology, Public Policy, and Law, 24*(2), 147-157. https://doi.org/10.1037/law0000144

Reid, J. E., & Arther, R. O. (1953). Behavior symptoms of lie-detector subjects. *Journal of Criminal Law and Criminology, 44*, 104-108.

Rejali, D. (2009). *Torture and Democracy*. Princeton University Press.

Rimer, S. (2002). Convict's DNA sways labs, not a determined prosecutor. *New York Times*, February 6, 2002.

Ridley, A. M., & Gudjonsson, G. H. (2013). Suggestibility and individual differences: Psychosocial and memory measures. In A. M. Ridley, F. Gabbert, F., & D. J. La Rooy (Eds.), *Suggestibility in legal contexts* (pp. 85–106). Wiley-Blackwell.

Roberts, M. H., Klatzkin, R. R., & Mechlin, B. (2015). Social support attenuates physiological stress responses and experimental pain sensitivity to cold pressor pain. *Annals of Behavioral Medicine, 49* (4), 557–569.

Robertson, C. (2011). Deal Frees 'West Memphis Three' in Arkansas. *The New York Times,* August 20, p. A1.

Rofe, Y. (1984), Stress and affiliation: A utility theory, *Psychological Review, 91*, 235-250.

Rogers, R., Blackwood, H. L., Fiduccia, C. E., Steadham, J. A., Drogin, E. Y., & Rogstad, J. E. (2012). Juvenile Miranda warnings: Perfunctory rituals or procedural safeguards? *Criminal Justice and Behavior*, *39*(3), 229–249. https://doi.org/10.1177/0093854811431934

Rogers, R., Fiduccia, C. E., Drogin, E. Y., Steadham, J. A., Clark, J. W., III, & Cramer, R. J. (2013). General knowledge and mis-knowledge of Miranda rights: Are effective Miranda advisements still necessary*? Psychology, Public Policy, and Law, 19,* 432-442.

Rogers, R., Gillard, N. D., Wooley, C. N., & Fiduccia, C. E. (2011). Decrements in Miranda abilities: An investigation of situational effects via a mock-crime

paradigm. *Law and Human Behavior, 35*(5), 392–401. https://doi.org/10.1007/s10979-010-9248-y

Rogers, R., Harrison, K., Shuman, D., Sewell, K., & Hazelwood, L. (2007). An analysis of Miranda warnings and waivers: Comprehension and coverage. *Law and Human Behavior, 31,* 177-192.

Rogers, R., Hazelwood, L., Sewell, K., Harrison, K., & Shuman, D. (2008). The language of Miranda warnings in American jurisdictions: A replication and vocabulary analysis. *Law and Human Behavior*, *32*, 124-136.

Rogers, R., Hazelwood, L. L., Sewell, K. W., Shuman, D. W., & Blackwood, H. L. (2008). The comprehensibility and content of juvenile Miranda warnings. *Psychology, Public Policy, and Law*, *14*(1), 63–87. https://doi.org/10.1037/a0013102

Rogers, R., Rogstad, J. E., Gillard, N. D., Drogin, E. Y., Blackwood, H. L., & Shuman, D. W. (2010). "Everyone knows their Miranda rights": Implicit assumptions and countervailing evidence. *Psychology, Public Policy, and Law, 16,* 300-318.

Rogers, R., Sharf, A. J., Carter, R. M., Winningham, D. B., & Sternad, R. N. (2018). The MRCI with juvenile detainees: Optimizing performance or emphasizing ecological validity? *Behavioral Sciences & the Law*, *36*(1), 1–11. https://doi.org/10.1002/bsl.2328

Rogers, R., Steadham, J. A., Carter, R. M., Henry, S. A., Drogin, E. Y., & Robinson, E. V. (2016). An examination of juveniles' Miranda abilities: Investigating differences in Miranda recall and reasoning. *Behavioral Sciences & the Law*, *34*(4), 515–538. https://doi.org/10.1002/bsl.2243

Rogers, R., Steadham, J. A., Fiduccia, C. E., Drogin, E. Y., & Robinson, E. V. (2014). Mired in Miranda misconceptions: A study of of legally involved juveniles at different levels of psychosocial maturity. *Behavioral Sciences & the Law, 32*(1), 104-120. https://doi.org/10.1002/bsl.2099

Roper v. Simmons, 543 U.S. 551 (2005).

Rosenthal, B. (2009). *Records of the Salem Witch Hunt*. Cambridge University Press.

Royal Commission on Criminal Justice Report (1993). Cmnd. 2263. London: HMSO.

Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. *Advances in Experimental Social Psychology,* 10, 173–220.

Russano, M. B., Meissner, C. A., Narchet, F. M., & Kassin, S. M. (2005). Investigating true and false confessions within a novel experimental paradigm. *Psychological Science, 16*, 481-486.

Russano, M. B., Narchet, F. M., Kleinman, S. M., & Meissner, C. A. (2014). Structured interviews of experienced HUMINT interrogators. *Applied Cognitive Psychology, 28*(6), 847–859. https://doi.org/10.1002/acp.3069

Saks, M. J., Risinger, D. M., Rosenthal, R., & Thompson, W. C. (2003). Context effects in forensic science: A review and application of the science of science to crime laboratory practice in the United States. *Science & Justice, 43,* 77–90.

Salseda, L. M., Dixon, D. R., Fass, T., Miora, D., & Leark, R. A. (2011). An evaluation of Miranda rights and interrogation in autism spectrum disorders. *Research in Autism Spectrum Disorders*, *5,* 79–85. doi:10.1016/j.rasd.2010.06.014.

Sangero, B. (2014). *Convicting the innocents in Israel and around the world – causes and solutions*. Resling.

Santtila, P., Alkiora, P., Ekholm, M. and Niemi, P. (1999). False confessions to robbery: the role of suggestibility, anxiety, memory disturbance and withdrawal symptoms. *The Journal of Forensic Psychiatry, 10*, 399-415.

Santos, F. (2006). DNA evidence frees a man imprisoned for half his life. *The New York Times,* September 21, 2006.

Savage, M. E., Clow, K. A., Schuller, R. A., & Ricciardelli, R. (2018). After exoneration:

Attributions of responsibility impact perceptions. *Canadian Journal of Law and Society, 33(01)*, 85–103. https://doi.org/10.1017/cls.2018.6

Schacter, D. L. (2001). *The seven sins of memory: How the mind forgets and remembers*. Houghton Mifflin.

Schacter, D. L. (2022). Memory sins in applied settings: What kind of progress? *Journal of Applied Research in Memory and Cognition, 11*(4), 445-460. https://doi.org/10.1037/mac0000078

Scheck, B., Neufeld, P., & Dwyer, J. (2000). *Actual innocence*. Doubleday.

Schell-Leugers, J. M., Schneider, T., Gyenis, R., Leuker, C., & Sauerland, M. (2021). Will you confess to what I did? Close relationships and in-group membership facilitate voluntary blame-taking. *Journal of Applied Social Psychology, 51*, 987–998. https://doi.org/10.1111/jasp.12815

Scherr, K. C., Alberts, K. M., Franks, A. S., & Hawkins, I. (2016). Overcoming innocents' naiveté: Pre-interrogation decision-making among innocent suspects. *Behavioral Sciences & the Law, 34,* 564–579.

Scherr, K. C., & Franks, A. S. (2015). The world is not fair: An examination of innocent and guilty suspects' waiver decisions. *Law and Human Behavior, 39*, 142–151.

Scherr, K. C., & Madon, S. (2012). You have the right to understand: Deleterious effect of stress on Miranda comprehension. *Law and Human Behavior, 36*, 275–282.

Scherr, K. C., & Madon, S. (2013). "Go ahead and sign": An experimental examination of Miranda waivers and comprehension. *Law and Human Behavior, 37*, 208–218.

Scherr, K. C., & Normile, C. J. (2022). False confessions predict a delay between release from incarceration and official exoneration. *Law and Human Behavior, 46*.

Scherr, K. C., Normile, C. J., Luna, S., Redlich, A. D., Lawrence, M., & Catlin, M. (2020). False admissions of guilt associated with wrongful convictions

undermine people's perceptions of exonerees. *Psychology, Public Policy, and Law, 26,* 233–244.

Scherr, K. C., Normile, C. J., & Putney, H. (2018). Perpetually stigmatized: False confessions prompt underlying mechanisms that motivate negative perceptions of exonerees. *Psychology, Public Policy, and Law, 24*, 341–352.

Scherr, K., C., Redlich, A. D., & Kassin, S. M. (2020). Cumulative disadvantage: A psychological framework for understanding how innocence can lead to confession, wrongful conviction, and beyond. *Perspectives on Psychological Science, 15,* 353-383.

Schiff, S. (2015). *Witches: Suspicion, betrayal, and hysteria in 1692 Salem*. Little Brown.

Schneider, T., & May, L. (2022). How do coerced-compliant false confessions occur? A psychological overview of known risk factors using the case of Ulvi K. *Marburg Law Review, 1,* 12–22.

Schreiber Compo, N., Gregory, A. H., & Fisher, R. P. (2012) Interviewing behaviors in police investigators: a field study of a current US sample. *Psychology, Crime & Law*, *18*, 359-375. https://doi.org/10.1080/1068316X.2010.494604

Schweizer, S., Gotlib, I. H., & Blakemore, S.-J. (2020). The role of affective control in emotion regulation during adolescence. *Emotion*, *20*(1), 80–86. https://doi.org/10.1037/emo0000695

Scoboria, A., Wade, K. A., Lindsay, D.S., Azad, T., Strange, D., Ost, J., Hyman, I. E. (2017) A mega-analysis of memory reports from eight peer-reviewed false memory implantation studies. *Memory, 25 (*2), 146-163.

Senate Committee on Intelligence (2015). *The Official Senate Report on CIA Torture*. Skyhorse Publishing.

Senese, L. C. (2016). *Anatomy of interrogation themes: The Reid Technique of*

interviewing and interrogation (2nd edition). John E. Reid and Associates, Inc.

Shaw, J., & Porter, S. (2015). Constructing rich false memories of committing crime. *Psychological Science, 26*, 291-301.

Shepherd, E., & Griffiths, A. (2013*). Investigative interviewing: The conversation management approach* (2e). Oxford University Press.

Sherif, M. (1936). *The psychology of social norms*. Harper.

Sherrer, H. (2005). Murdered woman's innocent boyfriend exonerated after bizarre "confession" is exposed as false. *Justice: Denied*, January 2005.

Sherrer, H. (2008). Exonerated of two murders, Fritz Moen posthumously awarded $4 Million. *Justice Denied, 40*, pp. 17-20.

Shifton, J. J. (2019). How confession characteristics impact juror perceptions of evidence in criminal trials. *Behavioral Sciences & the Law, 37*(1), 90–108. https://doi.org/10.1002/bsl.2398

Shinn v. Martinez Ramirez, 596 U.S. ___ (2022).

Shlosberg, A., Mandery, E., West, V., & Callaghan, B. (2014). Expungement and post-exoneration offending. *Journal of Criminal Law & Criminology, 104*, 353–388.

Sigurdsson, J. F., Gudjonsson, G. H., Einarsson, E., and Gudjonsson G. (2006). Differences in personality and mental state between suspects and witnesses immediately after being interviewed by the police. *Psychology, Crime and Law, 12,* 619-628.

Sim, M. P. Y., & Lamb, M. E. (2018). An analysis of how the police 'caution' is presented to juvenile suspects in England. *Psychology, Crime & Law*, *24*(8), 851–872. https://doi.org/10.1080/1068316X.2018.1442449

Sivasubramaniam, D., & Goodman-Delahunty, J. (2021). International consensus on effective and ineffective interviewing strategies: a survey of experienced practitioners. *Police Practice and Research*, *22*(1), 921-937.

Skinner, B. F. (1938). *The behavior of organisms*. Appleton-Century-Crofts.

Smalarz, L., Scherr, K., & Kassin, S. M. (2016). Miranda at 50: A psychological analysis. *Current Directions in Psychological Science, 25,* 455-460.

Smith, S. M., & Vela, E. (2001). Environmental context-dependent memory: A review and meta-analysis. *Psychonomic Bulletin & Review, 8*(2), 203-220. https://doi.org/10.3758/BF03196157

Snook, B., Barron, T., Fallon, L., Kassin, S.M., Kleinman, S., Leo, R.A., Meissner, C.A., Morello, L., Nirider, L.H., Redlich, A.D., & Trainum, J. L. (2021). Urgent issues and prospects in reforming interrogation practice in the United States and Canada. *Legal and Criminological Psychology, 26,* 1-24.

Snow, M. D., Malloy, L. C., & Goldstein, N. E. S. (2021). Information gathering in school contexts: A national survey of school resource officers. *Law and Human Behavior*, *45*(4), 356–369. https://doi.org/10.1037/lhb0000451

Snyder, M., & Swann, W. B. (1978). Behavioral confirmation in social interaction: From social perception to social reality. *Journal of Experimental Social Psychology, 14*(2), 148–162. https://doi.org/10.1016/0022-1031(78)90021-5

Soukara, S., Bull, R., Vrij, A., Turner, M., & Cherryman, J. (2009). What really happens in police interviews of suspects? Tactics and confessions. *Psychology, Crime & Law, 15*(6), 493–506.

Starr, D. (2013). The Interview. *The New Yorker*, December 9, 2013, pp. 42-49.

Starr, M., & Silkoff, S. (2023). 16 years on: Roman Zadorov acquitted of Tair Rada's murder. *The Jerusalem Post*, March 30, 2023. https://www.jpost.com/israel-news/article-735889

State v. Kaufman, 51 Iowa, 578 (1879).

Steinberg, L. (2014). *Age of opportunity: Lessons from the new science of adolescence.* First Mariner Books.

Steinberg, L. (2017). Adolescent brain science and juvenile justice policymaking. *Psychology, Public Policy, and Law, 23*(4), 410–420. https://doi.org/10.1037/law0000128

Steinberg, L., Cauffman, E., Woolard, J., Graham, S., & Banich, M. (2009). Are adolescents less mature than adults? Minors' access to abortion, the juvenile death penalty, and the alleged APA "flip-flop." *American Psychologist*, *64*(7), 583–594. https://doi.org/10.1037/a0014763

Steinberg**,** L., & Cauffman, E. (1996). Maturity of judgment in adolescence: Psychosocial factors in adolescent decision making**.** *Law and Human Behavior, 20,* 249-272.

Steinberg, L. & Scott, E. (2003). Less guilty by reason of adolescence: Developmental immaturity, diminished responsibility, and the juvenile death penalty. *American Psychologist, 58*¸ 1009-1018.

Stewart, J. M., Woody, W. D., & Pulos, S. (2018). The prevalence of false confessions in experimental laboratory simulations: A meta-analysis. *Behavioral Sciences & the Law, 36*, 12–31.

Stridbeck, U. (2020) Coerced-reactive confessions: The Case of Thomas Quick. *Journal of Forensic Psychology Research and Practice, 20* (4), 305-322.

Strömwall, L. A., Hartwig, M., & Granhag, P. A. (2006). To act truthfully: Nonverbal behaviour and strategies during a police interrogation. *Psychology, Crime & Law*, *12*(2), 207-219. https://doi.org/10.1080/10683160512331331328

Suedfeld, P. (Ed.) (1990). *Psychology and torture*. Washington, DC: Hemisphere.

Suchotzki, K., Verschuere, B., Van Bockstaele, B., Ben-Shakhar, G., & Crombez, G. (2017). Lying takes time: A meta-analysis on reaction time measures of deception. *Psychological Bulletin,143*, 428–453. https://doi.org/10.1037/bul0000087.

Sullivan, Y. P., Vail, A. W., & Anderson, H. W. (2008). The case for recording police interrogation. *Litigation*, *34* (3), 1-8.

Sullivan, T. P. (2019). Current report on recording custodial interrogations in the United States. *The Champion*, April, pp. 54-55.

Tazi, K. Y., & Rogers, R. (2023). Falling through the cracks: Failing to identify compromised Miranda abilities for defendants with limited cognitive capacities. *Behavioral Sciences & the Law*. Advance online publication.

Tekin, S., Granhag, P. A., Strömwall, L., Giolla, E. M., Vrij, A., & Hartwig, M. (2015). Interviewing strategically to elicit admissions from guilty suspects. *Law and Human Behavior, 39*(3), 244–252. https://doi.org/10.1037/lhb0000131

Tekin, S., Granhag, P. A., Strömwall, L. A., & Vrij, A. (2016). How to make perpetrators in denial disclose more information about their crimes. *Psychology, Crime & Law, 22*(6), 561–580. https://doi.org/10.1080/1068316X.2016.1168425

The Law Library of Congress (2016). *Miranda warning equivalents abroad*. Global Research Center.

Thielgen, M. M, Schade, S., & Niegisch, P. (2022). Police officers' interrogation expertise and major objectives in police service and training: A comprehensive overview of the Literature. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2022.823179

Thomas G. C., & Leo, R. A. (2002). The effects of *Miranda v. Arizona*: "Embedded" in our national culture? *Crime and Justice: A Review of Research*, *29*, 203-271.

Thompson, W. C. (2010). An American Psychology-Law Society scientific review paper on police interrogation and confession [Editorial]. *Law and Human Behavior, 34(1)*, 1–2. https://doi.org/10.1007/s10979-009-9213-9

Thorndike, E. L. (1911). *Animal intelligence: Experimental studies*. MacMillan.

Tickle-Degnen, L., & Rosenthal, R. (1990). The nature of rapport and its nonverbal

correlates. *Psychological Inquiry, 1*, 285–293.

Timor, M., Giladi, B., & Guendelman, Y. (2017*). Shadow of Truth.* EGG Films.

Trainum, J. (September 20, 2007). I took a false confession--so don't tell me it doesn't happen! *The California Majority Report,* http://www.camajorityreport.com/index.php?module=articles&func=display&ptid=9&aid=2306.

Trainum, J. (2016). *How the police generate false confessions: An inside look at the interrogation room*. Rowman Littlefield.

U.S. v. Ruiz, 536 U.S. 622 (2002).

Uchino, B. N., Cacioppo, J. T., & Kiecolt-Glaser, J. K. (1996). The relationship between social support and physiological processes: A review with emphasis on underlying mechanisms and implications for health, *Psychological Bulletin, 119*, 488-531.

Vagni, M., Maiorano, T., Pajardi, D., & Gudjonsson, G. H. (2015). Immediate and delayed suggestibility among suspected child victims of sexual abuse. *Personality and Individual Differences, 79,* 129-133.

Valente, M. (October 11, 2016). *Joseph Buffey enters Alford plea, walks free*. Available at, https://www.wdtv.com/content/news/Charges-dismissed-against-Joseph-Buffey--396651991.html

Vallano, J. P., & Compo, N. S. (2011). A comfortable witness is a good witness: Rapport -building and susceptibility to misinformation in an investigative mock-crime interview. *Applied cognitive psychology*, *25*(6), 960-970. https://doi.org/10.1002/acp.1789

Vallano, J. P., Evans, J. R., Schreiber Compo, N., & Kieckhaefer, J. M. (2015). Rapport-building during witness and suspect interviews: A survey of law enforcement. *Applied Cognitive Psychology, 29*(3), 369–380. https://doi.org/10.1002/acp.3115

Vallano, J. P., Guyll, M., Ditchfield, R., & Slapinski, K. (2022). An experimental manipulation of rapport and moral minimization within a criminal interview. *Psychology, Public Policy, and Law, 28*(4), 515–531. https://doi.org/10.1037/law0000370

Vallano, J. P., & Schreiber Compo, N. (2015). Rapport-building with cooperative witnesses and criminal suspects: A theoretical and empirical review. *Psychology, Public Policy, and Law, 21*(1), 85–99. https://doi.org/10.1037/law0000035

van den Eeden, C. A. J., de Poot, C. J., van Koppen, P. J. (2016). Forensic expectations: Investigating a crime scene with prior information. *Science & Justice, 56,* 475-481.

Vaughan, M., Milne, R., Dalton, G., & Retford, S. (2022). Managing interviews in high-stake crime cases: practice guidance for developing suspect interview strategies using a LOST WEBSITES framework. *The Journal of Forensic Practice, 24* (4), 420-435.

Verschuere, B., Bogaard, G., & Meijer, E. (2021). Discriminating deceptive from truthful statements using the verifiability approach: A meta-analysis. *Applied Cognitive Psychology*, *35*(2), 374-384. https://doi.org/10.1002/acp.3775

Viljoen, J. L., Klaver, J., & Roesch, R. (2005). Legal decisions of preadolescent and adolescent defendants: Predictors of confessions, pleas, communication with attorneys, and appeals. *Law and Human Behavior*, *29*(3), 253–277. https://doi.org/10.1007/s10979-005-3613-2

Viljoen, J. L., & Roesch, R. (2005). Competence to waive interrogation rights and adjudicative competence in adolescent defendants: Cognitive development, attorney contact, and psychological symptoms. *Law and Human Behavior*, *29*(6), 723–742. https://doi.org/10.1007/s10979-005-7978-y

Voigt, R., et al. (2017). Language from police body camera footage shows racial

disparities in officer respect. *PNAS Proceedings of the National Academy of Sciences of the United States of America, 114*(25), 6521–6526. https://doi.org/10.1073/pnas.1702413114

Vredeveldt, A., & Penrod, S. D. (2013). Eye-closure improves memory for a witnessed event under naturalistic conditions. *Psychology, Crime & Law, 19*(10), 893-905. https://doi.org/10.1080/1068316X.2012.700313

Vrij, A., Fisher, R. P., & Blank, H. (2017). A cognitive approach to lie detection: A meta -analysis. *Legal and Criminological Psychology, 22*(1), 1–21. https://doi.org/10.1111/lcrp.12088

Vrij, A., Hartwig, M., & Granhag, P. A. (2019). Reading lies: Nonverbal communication and deception. *Annual Review of Psychology, 70*, 295–337.

Vrij, A., Leal, S., Granhag, P. A., Mann, S., Fisher, R. P., Hillman, J., & Sperry, K. (2009). Outsmarting the liars: The benefit of asking unanticipated questions. *Law and Human Behavior, 33*(2), 159–166. https://doi.org/10.1007/s10979-008-9143-y

Vrij, A., Leal, S., Mann, S., Vernham, Z., & Brankaert, F. (2015). Translating theory into practice: Evaluating a cognitive lie detection training workshop. *Journal of Applied Research in Memory and Cognition, 4*(2), 110–120. https://doi.org/10.1016/j.jarmac.2015.02.002

Vrij, A., Mann, S., & Fisher, R. P. (2006). An Empirical Test of the Behaviour Analysis Interview. *Law and Human Behavior, 30*(3), 329–345. https://doi.org/10.1007/s10979-006-9014-3

Vrij, A., Mann, S. A., Fisher, R. P., Leal, S., Milne, R., & Bull, R. (2008). Increasing cognitive load to facilitate lie detection: The benefit of recalling an event in reverse order. *Law and Human Behavior, 32*(3), 253–265. https://doi.org/10.1007/s10979-007-9103-y

Vrij, A., Mann, S., Leal, S., Vernham, Z., & Vaughan, M. (2016). Train the trainers: A first step towards a science-based cognitive lie detection training workshop delivered by a practitioner. *Journal of Investigative Psychology and Offender Profiling, 13*(2), 110-130. https://doi.org/10.1002/jip.1443

Vrij, A., Meissner, C. A., Fisher, R. P., Kassin, S. M., Morgan, C. A., & Kleinman, S.M. (2017). Psychological perspectives on interrogation. *Perspectives on Psychological Science, 12*, 927-955.

Wachi, T., Kuraishi, H., Watanabe, K., Otsuka, Y., Yokota, K., & Lamb, M. E. (2018). Effects of rapport building on confessions in an experimental paradigm. *Psychology, Public Policy, and Law, 24*(1), 36–47. https://doi.org/10.1037/law0000152

Wade, K., Garry, M., & Pezdek, K. (2018). Deconstructing rich false memories of committing crime: Commentary on Shaw and Porter (2015). *Psychological Science, 29,* 471–476.

Wagenaar, W.A. (2002). False confessions after repeated interrogation: The Putten murder case. *European Review, 10,* 519-537.

Wald, M., Ayres, R., Hess, D. W., Schantz, M., & Whitebread, C. (1967). Interrogations in New Haven: The impact of Miranda. *The Yale Law Journal, 76*, 1519-1648.

Walkley, J. (1987). *Police interrogation. A handbook for investigators*. Police Review Publishing Company.

Wallace, D. B., & Kassin S. M. (2012). Harmless error analysis: How do judges respond to confession errors? *Law and Human Behavior, 3*6, 151-157.

Walsh, D., Oxburgh, G., Redlich, A., & Myklebust, T. (Eds.) (2016). *International developments in investigative interviewing and interrogations.* Routledge.

Warden, R (2005). *Wilkie Collins's the dead alive: The novel, the case, and wrongful convictions*. Northwestern University Press.

Warney v. State of New York. 16 N.Y.3d 428 (N.Y. 2011).

Webster, E. (2020). The prosecutor as a final safeguard against false convictions: How prosecutors assist with exoneration. *Journal of Law & Criminology, 110*, 245–305.

Weisselberg, C. D. (1998). Saving Miranda. *Cornell Law Review, 84,* 109-192.

Weisselberg, C. D. (2017). Exporting and importing Miranda. *Boston University Law Review, 97,* 1235–1291.

Wells, G. L., Kovera, M. B., Douglass, A. B., Brewer, N., Meissner, C. A., & Wixted, J. T. (2020). Policy and procedure recommendations for the collection and preservation of eyewitness identification evidence. *Law and Human Behavior, 44(1),* 3–36. https://doi.org/10.1037/lhb0000359

Wells, G. L., Small, M., Penrod, S., Malpass, R. S., Fulero, S. M., & Brimacombe, C.A.E. (1998). Eyewitness identification procedures: Recommendations for lineups and photospreads. *Law and Human Behavior, 22*, 1-39.

West, E., & Meterko, V. (2015). Innocence Project: DNA exonerations, 1989-2014: Review of data and findings from the first 25 years. *Albany Law Review, 79*, 717–796.

Westervelt, S., & Cook, K. (2012). *Life after death row*. Rutgers University Press.

Wetmore, S. A., Neuschatz, J. S., & Gronlund, S. D. (2014). On the power of secondary confession evidence. *Psychology, Crime & Law, 20*, 339–357. http://dx.doi.org/10.1080/1068316X.2013.777963

White, W. S. (2001). *Miranda's waning protections: Police interrogation practices after Dickerson*. University of Michigan Press.

Wickersham Commission Report (1931). National Commission on Law Observance and Law Enforcement. (1931). *Report on lawlessness in law enforcement*. U.S. Government Printing Office.

Wilford, M. M., Sutherland, K. T., Gonzales, J. E., & Rabinovich, M. (2021). Guilt status influences plea outcomes beyond the shadow-of-the-trial in an interactive simulation of legal procedures. *Law and Human Behavior, 45*(4), 271-286. https://doi.org/10.1037/lhb0000450

Williamson, T. (Ed.) (2006). *Investigative interviewing: Rights, research, regulation.* Willan Publishing.

Woody, W. D., & Forrest, K. (2020). *Understanding police interrogation: Confessions and consequences*. New York University Press.

Woody, W. D., et al. (2018). Effects of false-evidence ploys and expert testimony on jurors, juries, and judges. *Cogent Psychology*, *5*(1). https://doi.org/10.1080/23311908.2018.1528744

Woolard, J. L., Cleary, H. M. D., Harvell, S. A. S., & Chen, R. (2008). Examining adolescents' and their parents' conceptual and practical knowledge of police interrogation: A family dyad approach. *Journal of Youth and Adolescence*, *37*(6), 685–698. https://doi.org/10.1007/S10964-008-9288-5

Wright, D. S., Wade, K. A., & Watson, D. G. (2013). Delay and déjà vu: Timing and repetition and increase the power of false evidence. *Psychonomic Bulletin & Review, 4,* 812–818. doi:10.3758/s13423-013-0398-z

Yan, S. & Bushway, S.D. (2018) Plea discounts or trial penalties? Making sense of the trial-plea sentence disparities, *Justice Quarterly, 35*, 1226-1249, doi: 10.1080/07418825.2018.1552715

Yan, S., Wilford, M.M., & Ferreira, P. (2022). Terms and conditions apply: The effect of probation length and obligation disclosure on true and false guilty pleas. *Journal of Experimental Criminology*. Online first.

Yang, Y., Guyll, M., & Madon, S. (2017). The interrogation decision-making model: A theoretical framework for confessions. *Law and Human Behavior, 41,* 80–92.

Young, S., et al. (2020). Guidance for identification and treatment of individuals with attention deficit/hyperactivity disorder and autism spectrum disorder based upon expert consensus. *BMC Medicine, 18*:146. https://doi.org/10.1186/s12916-020-01585-y.

Zalman, M., & Smith, B. (2007). The attitudes of police executives towards Miranda and interrogation policies. *Journal of Criminal Law and Criminology 97*, 873-942.

Zannella, L., Clow, K.A., Hall, V., & Ricciardelli, R. (2022). Shaping attitudes toward wrongfully convicted individuals: an examination of brief video interventions, *Psychology, Crime & Law*. DOI: 10.1080/1068316X.2022.2096222

Zelle, H., Romaine, C. L. R., & Goldstein, N. E. S. (2015). Juveniles' Miranda comprehension: Understanding, appreciation, and totality of circumstances factors. *Law and Human Behavior, 39*(3), 281–293. https://doi.org/10.1037/lhb0000116

Zimbardo, P. G. (1967). The psychology of police confessions. *Psychology Today, 1,* 17–20, 25–27.

Zimring, F., & Frase, R. (1979). *The criminal justice system*. Little, Brown.

Zottoli, T. M., Daftary-Kapur, T., Edkins, V. A., Redlich, A. D., King, C. M., Dervan, L. E., & Tahan, E. (2019). State of the States: A survey of statutory law, regulations and court rules pertaining to guilty pleas across the United States. *Behavioral Sciences & the Law, 37*(4), 388–434. https://doi.org/10.1002/bsl.2413

Zottoli, T. M., Daftary-Kapur, T., Winters, G. M., & Hogan, C. (2016). Plea discounts, time pressures, and false-guilty pleas in youth and adults who pleaded guilty to felonies in New York City. *Psychology, Public Policy, and Law, 22*, 250–259. https://doi.org/10.1037/law0000095