

Police-Induced Confessions: Risk Factors and Recommendations

Saul M. Kassin · Steven A. Drizin · Thomas Grisso ·
Gisli H. Gudjonsson · Richard A. Leo ·
Allison D. Redlich

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Abstract Recent DNA exonerations have shed light on the problem that people sometimes confess to crimes they did not commit. Drawing on police practices, laws concerning the admissibility of confession evidence, core principles of psychology, and forensic studies involving multiple methodologies, this White Paper summarizes what is known about police-induced confessions. In this review, we identify suspect characteristics (e.g., adolescence; intellectual disability; mental illness; and certain personality traits), interrogation tactics (e.g., excessive interrogation time; presentations of false evidence; and minimization), and the phenomenology of innocence (e.g., the tendency to waive *Miranda* rights) that influence confessions as well as their effects on judges and juries. This article concludes with a strong recommendation for the mandatory electronic recording of interrogations and considers other possibilities

for the reform of interrogation practices and the protection of vulnerable suspect populations.

Keywords Police interviews · Interrogations · Confessions

In recent years, a disturbing number of high-profile cases, such as the Central Park jogger case, have surfaced involving innocent people who had confessed and were convicted at trial, only later to be exonerated (Drizin & Leo, 2004; Gudjonsson, 1992, 2003; Kassin, 1997; Kassin & Gudjonsson, 2004; Lassiter, 2004; Leo & Ofshe, 1998). Although the precise incidence rate is not known, research suggests that false confessions and admissions are present in 15–20% of all DNA exonerations (Garrett, 2008; Scheck, Neufeld, & Dwyer, 2000; <http://www.innocenceproject.org/>). Moreover, because this sample does not include those false confessions that are disproved before trial, many that result in guilty pleas, those in which DNA evidence is not available, those given to minor crimes that receive no post-conviction scrutiny, and those in juvenile proceedings that contain confidentiality provisions, the cases that are discovered most surely represent the tip of an iceberg.

In this new era of DNA exonerations, researchers and policy makers have come to realize the enormous role that psychological science can play in the study and prevention of wrongful convictions. In cases involving wrongfully convicted defendants, the most common reason (found in three-quarters of the cases) has been eyewitness misidentification. Eyewitness researchers have thus succeeded at identifying the problems and proposing concrete reforms. Indeed, following upon an AP-LS White Paper on the subject (Wells et al., 1998), the U.S. Department of Justice assembled a working group of research

S. M. Kassin (✉)

John Jay College of Criminal Justice, City University
of New York, New York, NY, USA
e-mail: skassin@jjay.cuny.edu

S. A. Drizin

Northwestern University School of Law and Center on Wrongful
Convictions, Chicago, IL, USA

T. Grisso

University of Massachusetts Medical School, Worcester,
MA, USA

G. H. Gudjonsson

Institute of Psychiatry, King's College, London, UK

R. A. Leo

University of San Francisco School of Law, San Francisco,
CA, USA

A. D. Redlich

State University of New York at Albany, Albany, NY, USA

psychologists, prosecutors, police officers, and lawyers, ultimately publishing guidelines for law enforcement on how to minimize eyewitness identification error (Technical Working Group for Eyewitness Evidence, 1999; see Doyle, 2005; Wells et al., 2000). While other problems have been revealed—for example, involving flaws in various forensic sciences (see Faigman, Kaye, Saks, & Sanders, 2002), the number of cases involving confessions—long considered the “gold standard” in evidence—has proved surprising (<http://www.innocenceproject.org/>).

Wrongful convictions based on false confessions raise serious questions concerning a chain of events by which innocent citizens are judged deceptive in interviews and misidentified for interrogation; waive their rights to silence and to counsel; and are induced into making false narrative confessions that form a sufficient basis for subsequent conviction. This White Paper summarizes much of what we know about this phenomenon. It draws on core psychological principles of influence as well as relevant forensic psychology studies involving an array of methodologies. It identifies various risk factors for false confessions, especially in police interviewing, interrogation, and the elicitation of confessions. It also offers recommendations for reform.

Citing the impact on policy and practice of the eyewitness White Paper, Wiggins and Wheaton (2004) called for a similar consensus-based statement on confessions. Fulfilling this call, the objectives of this White Paper are threefold. The first is to review the state of the science on interviewing and interrogation by bringing together a multidisciplinary group of scholars from three perspectives: (1) clinical psychology (focused on individual differences in personality and psychopathology); (2) experimental psychology (focused on the influence of social, cognitive, and developmental processes); and (3) criminology (focused on the empirical study of criminal justice as well as criminal law, procedure, and legal practice). Our second objective is to identify the dispositional characteristics (e.g., traits associated with *Miranda* waivers, compliance, and suggestibility; adolescence; mental retardation; and psychopathology) and situational-interrogation factors (e.g., prolonged detention and isolation; confrontation; presentations of false evidence; and minimization) that influence the voluntariness and reliability of confessions. Our third objective is to make policy recommendations designed to reduce both the likelihood of police-induced false confessions and the number of wrongful convictions based on these confessions.

BACKGROUND

The pages of American legal history are rich in stories about false confessions. These stories date back to the

Salem witch trials of 1692, during which about 50 women confessed to witchcraft, some, in the words of one observer, after being “tyed... Neck and Heels till the Blood was ready to come out of their Noses” (Karlsen, 1989, p. 101). Psychologists’ interest as well can be traced to its early days as a science. One hundred years ago, in *On the Witness Stand*, Hugo Munsterberg (1908) devoted an entire chapter to the topic of “Untrue Confessions.” In this chapter, he discussed the Salem witch trials, reported on a contemporary Chicago confession that he believed to be false, and sought to explain the causes of this phenomenon (e.g., he used such words as “hope,” “fear,” “promises,” “threats,” “suggestion,” “calculations,” “passive yielding,” “shock,” “fatigue,” “emotional excitement,” “melancholia,” “auto-hypnosis,” “dissociation,” and “self-destructive despair”).

DNA Exonerations and Discoveries in the U.S.

In 1989, Gary Dotson was the first wrongfully convicted individual to be proven innocent through the then-new science of DNA testing. Almost two decades later, more than 200 individuals have been exonerated by post-conviction DNA testing and released from prison, some from death row. In 15–20% of these cases, police-induced false confessions were involved (Garrett, 2008; www.innocenceproject.org). A disturbing number of these have occurred in high-profile cases, such as New York City’s Central Park Jogger case, where five false confessions were taken within a single investigation. In that case, five teenagers confessed during lengthy interrogations to the 1989 brutal assault and rape of a young woman in Central Park. Each boy retracted his statement immediately upon arrest, saying he had confessed because he expected to go home afterward. All the boys were convicted and sent to prison, only to be exonerated in 2002 when the real rapist gave a confession, accurately detailed, that was confirmed by DNA evidence (*People of the State of New York v. Kharey Wise et al.*, 2002).

Post-conviction DNA tests and exonerations have offered a window into the causes of wrongful conviction. Researchers and legal scholars have long documented the problem and its sources of error (Borchard, 1932; Frank & Frank, 1957; see Leo, 2005 for a review). Yet criminal justice officials, commentators, and the public have tended until recently to be highly skeptical of its occurrence, especially in death penalty cases (Bedau & Radelet, 1987). The steady stream of post-conviction DNA exonerations in the last two decades has begun to transform this perception. Indeed, these cases have established the leading causes of error in the criminal justice system to be eyewitness misidentification, faulty forensic science, false informant testimony, and false confessions (Garrett, 2008).

The Problem of False Confessions

A false confession is an admission to a criminal act—usually accompanied by a narrative of how and why the crime occurred—that the confessor did not commit. False confessions are difficult to discover because neither the state nor any organization keeps records of them, and they are not usually publicized. Even if they are discovered, false confessions are hard to establish because of the difficulty of proving the confessor's innocence. The literature on wrongful convictions, however, shows that there are several ways to determine whether a confession is false. Confessions may be deemed false when: (1) it is later discovered 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) additional evidence shows it was physically impossible for the confessor to have committed the crime (e.g., he or she was demonstrably elsewhere at the time or too young to have produced the semen found on the victim); (3) the real perpetrator, having no connection to the defendant, is apprehended and linked to the crime (e.g., by intimate knowledge of nonpublic crime details, ballistics, or physical evidence); or (4) scientific evidence affirmatively establishes the confessor's innocence (e.g., he or she is excluded by DNA test results on semen, blood, hair, or saliva).

Drizin and Leo (2004) analyzed 125 cases of proven false confession in the U.S. between 1971 and 2002, the largest sample ever studied. Ninety-three percent of the false confessors were men. Overall, 81% of the confessions occurred in murder cases, followed by rape (8%) and arson (3%). The most common bases for exoneration were the real perpetrator was identified (74%) or that new scientific evidence was discovered (46%). With respect to personal vulnerabilities, the sample was younger than the total population of murderers and rapists: A total of 63% of false confessors were under the age of 25, and 32% were under 18; yet of all persons arrested for murder and rape, only 8 and 16%, respectively, are juveniles (Snyder, 2006). In addition, 22% were mentally retarded, and 10% had a diagnosed mental illness. Surprisingly, multiple false confessions to the same crime were obtained in 30% of the cases, wherein one false confession was used to prompt others. In total, 81% of false confessors in this sample whose cases went to trial were wrongfully convicted.

Although other researchers have also documented false confessions in recent years, there is no known incidence rate, and to our knowledge empirically based estimates have never been published. There are several reasons why an incidence rate cannot be determined. First, researchers cannot identify the universe of false confessions because no governmental or private organization keeps track of this

information. As noted earlier, the sample of discovered cases is thus incomplete. Second, even if one could identify a nonrandom set of hotly contested and possibly false confessions, it is often difficult if not impossible as a practical matter to obtain the primary case materials (e.g., police reports; pretrial and trial transcripts; and electronic recordings of the interrogations) needed to determine “ground truth” with sufficient certainty to prove that the confessor is innocent. Also, it is important to note that although most case studies are based in the U.S. and England, proven false confessions have been documented in countries all over the world—including Canada (CBC News, August 10, 2005), Norway (Gudjonsson, 2003), Finland (Santtila, Alkiora, Ekholm, & Niemi, 1999), Germany (Otto, 2006), Iceland (Sigurdsson & Gudjonsson, 2004), Ireland (Inglis, 2004), The Netherlands (Wagenaar, 2002), Australia (Egan, 2006), New Zealand (Sherrer, 2005), China (Kahn, 2005), and Japan (Onishi, 2007).

For estimating the extent of the problem, self-report methods have also been used. Sigurdsson and Gudjonsson (2001) conducted two self-report studies of prison inmates in Iceland and found that 12% claimed to have made a false confession to police at some time in their lives, a pattern that the authors saw as part of the criminal lifestyle. In a more recent study of Icelandic inmates, the rate of self-reported false confessions had increased (Gudjonsson, Sigurdsson, Einarsson, Bragason, & Newton, 2008). Similar studies have been conducted in student samples within Iceland and Denmark. Among those interrogated by police, the self-reported false confession rates ranged from 3.7 to 7% among college and older university students (Gudjonsson, Sigurdsson, Asgeirsdottir, & Sigfusdottir, 2006; Gudjonsson, Sigurdsson, & Einarsson, 2004; Steingrimsdottir, Hreinsdottir, Gudjonsson, Sigurdsson, & Nielsen, 2007; Gudjonsson, Sigurdsson, Bragason, Einarsson, & Valdimarsdottir, 2004). In a North American survey of 631 police investigators, respondents estimated from their own experience that 4.78% of innocent suspects confess during interrogation (Kassin et al., 2007). Retrospective self-reports and observer estimates are subject to various cognitive and motivational biases and should be treated with caution as measures of a false confession rate. In general, however, they reinforce the wrongful conviction data indicating that a small but significant minority of innocent people confess under interrogation.

POLICE INTERROGATIONS IN CONTEXT

The practices of interrogation and the elicitation of confessions are subject to historical, cultural, political, legal, and other contextual influences. Indeed, although this article is focused on confessions to police within in a

criminal justice framework, it is important to note that similar processes occur, involving varying degrees of pressure, within the disparate frameworks of military intelligence gathering and corporate loss-prevention investigations. Focused on criminal justice, we examine American interrogation practices of the past and present; the role played by *Miranda* rights; the admissibility and use of confession evidence in the courts; and current practices not only in the U.S. but in other countries as well.

“Third-Degree” Practices of the Past

From the late nineteenth century through the 1930s, American police occasionally employed “third-degree” methods of interrogation—inflicting physical or mental pain and suffering to extract confessions and other types of information from crime suspects. These techniques ranged from the direct and explicit use of physical assaults to tactics that were both physically and psychologically coercive to lesser forms of duress. Among the most commonly used “third-degree” techniques were physical violence (e.g., beating, kicking, or mauling suspects); torture (e.g., simulating suffocation by holding a suspect’s head in water, putting lighted cigars or pokers against a suspect’s body); hitting suspects with a rubber hose (which seldom left marks); prolonged incommunicado confinement; deprivations of sleep, food, and other needs; extreme sensory discomfort (e.g., forcing a suspect to stand for hours on end, shining a bright, blinding light on the suspect); and explicit threats of physical harm (for a review, see Leo, 2004). These methods were varied and commonplace (Hopkins, 1931), resulting in large numbers of coerced false confessions (Wickersham Commission Report, 1931).

The use of third-degree methods declined precipitously from the 1930s through the 1960s. They have long since become the exception rather than the rule in American police work, having been replaced by interrogation techniques that are more professional and psychologically oriented. The twin pillars of modern interrogation are behavioral lie-detection methods and psychological interrogation techniques, both of which have been developed and memorialized in interrogation training manuals. By the middle of the 1960s, police interrogation practices had become entirely psychological in nature (Wald, Ayres, Hess, Schantz, & Whitebread, 1967). The President’s Commission on Criminal Justice and the Administration of Justice declared in 1967: “Today the third degree is virtually non-existent” (Zimring & Hawkins, 1986, p. 132). Still, as the United States Supreme Court recognized in *Miranda v. Arizona* (1966), psychological interrogation is inherently compelling, if not coercive, to the extent that it relies on sustained pressure, manipulation, trickery, and deceit.

Current Law Enforcement Objectives and Practices in the U.S.

American police typically receive brief instruction on interrogation in the academy and then more sustained and specialized training when promoted from patrol to detective. Interrogation is an evidence-gathering activity that is supposed to occur after detectives have conducted an initial investigation and determined, to a reasonable degree of certainty, that the suspect to be questioned committed the crime.

Sometimes this determination is reasonably based on witnesses, informants, or tangible evidence. Often, however, it is based on a clinical hunch formed during a pre-interrogation interview in which special “behavior-provoking” questions are asked (e.g., “What do you think should happen to the person who committed this crime?”) and changes are observed in aspects of the suspect’s behavior that allegedly betray lying (e.g., gaze aversion, frozen posture, and fidgety movements). Yet in laboratories all over the world, research has consistently shown that most commonsense behavioral cues are not diagnostic of truth and deception (DePaulo et al., 2003). Hence, it is not surprising as an empirical matter that laypeople on average are only 54% accurate at distinguishing truth and deception; that training does not produce reliable improvement; and that police investigators, judges, customs inspectors, and other professionals perform only slightly better, if at all—albeit with high levels of confidence (for reviews, see Bond & DePaulo, 2006; Meissner & Kassin, 2002; Vrij, 2008).

The purpose of interrogation is therefore not to discern the truth, determine if the suspect committed the crime, or evaluate his or her denials. Rather, police are trained to interrogate only those suspects whose culpability they “establish” on the basis of their initial investigation (Gordon & Fleisher, 2006; Inbau, Reid, Buckley, & Jayne, 2001). For a person under suspicion, this initial impression is critical because it determines whether police proceed to interrogation with a strong presumption of guilt which, in turn, predisposes an inclination to ask confirmatory questions, use persuasive tactics, and seek confessions (Hill, Memon, & McGeorge, 2008; Kassin, Goldstein, & Savitsky, 2003). In short, the single-minded purpose of interrogation is to elicit incriminating statements, admissions, and perhaps a full confession in an effort to secure the conviction of offenders (Leo, 2008).

Designed to overcome the anticipated resistance of individual suspects who are presumed guilty, police interrogation is said to be stress-inducing by design—structured to promote a sense of isolation and increase the anxiety and despair associated with denial relative to confession. To achieve these goals, police employ a number of tactics. As

described in Inbau et al.'s (2001) *Criminal Interrogation and Confessions*, the most influential approach is the so-called Reid technique (named after John E. Reid who, along with Fred Inbau, developed this approach in the 1940s and published the first edition of their manual in 1962). First, investigators are advised to isolate the suspect in a small private room, which increases his or her anxiety and incentive to escape. A nine-step process then ensues in which an interrogator employs both negative and positive incentives. On one hand, the interrogator confronts the suspect with accusations of guilt, assertions that may be bolstered by evidence, real or manufactured, and refuses to accept alibis and denials. On the other hand, the interrogator offers sympathy and moral justification, introducing “themes” that minimize the crime and lead suspects to see confession as an expedient means of escape. The use of this technique has been documented in naturalistic observational studies (Feld, 2006b; Leo, 1996b; Simon, 1991; Wald et al., 1967) and in recent surveys of North American investigators (Kassin et al., 2007; Meyer & Reppucci, 2007).

Miranda Warnings, Rights, and Waivers

One of the U.S. legal system's greatest efforts to protect suspects from conditions that might produce involuntary and unreliable confessions is found in the U.S. Supreme Court decision in *Miranda v. Arizona* (1966). The Court was chiefly concerned with cases in which the powers of the state, represented by law enforcement, threatened to overbear the will of citizen suspects, thus threatening their Constitutional right to avoid self-incrimination.

In *Miranda*, the Court offered a remedy, requiring that police officers had to inform suspects of their rights to remain silent and to the availability of legal counsel prior to confessions. This requirement aimed to strike a balance against the inherently threatening power of the police in relation to the disadvantaged position of the suspect, thus reducing coercion of confessions. In cases involving challenges to the validity of the waiver of rights, courts were to apply a test regarding the admissibility of the confession at trial. Statements made by defendants would be inadmissible if a waiver of the rights to silence and counsel was not made “voluntarily, knowingly, and intelligently.” One year after the *Miranda* decision, *In re Gault* (1967) extended these rights and procedures to youth when they faced delinquency allegations in juvenile court.

Forty years later, there is no research evidence that *Miranda* and *Gault* achieved their ultimate objective. Police officers routinely offer the familiar warnings to suspects prior to taking their statements. But research has not unequivocally determined whether confessions became more or less likely, are any more or less reliable, or are

occurring in ways that are more or less “voluntary, knowing, and intelligent” than in the years prior to *Miranda*. Several years ago, Paul Cassell, an outspoken critic of *Miranda*, had maintained (based on pre–post studies as well as international comparisons) that the confession and conviction rates have dropped significantly as a direct result of the warning and waiver requirements, thus triggering the release of dangerous criminals (Cassell, 1996a, 1996b; Cassell & Hayman, 1996). Yet others countered that his analysis was based on selective data gathering methods and unwarranted inferences (Donahue, 1998; Feeney, 2000; Thomas & Leo, 2002); that these declines, if real, were insubstantial (Schulhofer, 1996); that four out of five suspects waive their rights and submit to questioning (Leo, 1996a, 1996b); and that the costs to law enforcement were outweighed by social benefits—for example, that *Miranda* has had a civilizing effect on police practices and has increased public awareness of constitutional rights (Leo, 1996c; Thomas, 1996).

In recent years, the U.S. Supreme Court has upheld the basic warning-and-waiver requirement (*Dickerson v. United States*, 2000)—for example, refusing to accept confessions given after a warning that was tactically delayed to produce an earlier inadmissible statement (*Missouri v. Seibert*, 2004). Practically speaking, however, research has suggested that the Court's presumption concerning the protections afforded by *Miranda* warnings is questionable. At minimum, a valid waiver of rights requires that police officers provide suspects an understandable description of their rights and that suspects must understand these warnings to waive them validly. What empirical evidence do we have that *Miranda's* procedural safeguards produce these conditions?

First, the *rights* of which suspects must be informed were clearly defined in *Miranda*, but the *warnings* were not. The *Miranda* decision included an appendix wherein the Court offered an example of the warnings that were suggested, but police departments were free to devise their own warnings. A recent study examined 560 *Miranda* warning forms used by police throughout the U.S. (Rogers, Harrison, Shuman, Sewell, & Hazelwood, 2007). A host of variations in content and format were identified, and metric analysis of their wording revealed reading-level requirements ranging from third-grade level to the verbal complexity of postgraduate textbooks (see Kahn, Zapf, & Cooper, 2006, for similar results; also see Rogers, Hazelwood, Sewell, Harrison, & Shuman, 2008). Moreover, *Miranda* warning forms varied considerably in what they conveyed. For example, only 32% of the forms told suspects that legal counsel could be obtained without charge. Thus, many warning forms raise serious doubts about the knowing and intelligent waiver of rights by almost any suspect who is “informed” by them.

Second, studies have repeatedly shown that a substantial proportion of adults with mental disabilities, and “average” adolescents below age 16 have impaired understanding of *Miranda* warnings when they are exposed to them. Even adults and youth who understand them sometimes do not grasp their basic implications. Many of these studies have examined actual adult or juvenile defendants, using reliable procedures that allow the quality of an individual’s understanding to be scored according to specified criteria. For example, do people after warnings factually understand that “I don’t have to talk” and that “I can get an attorney to be here now and during any questioning by police?” To answer this question, respondents have been examined in the relatively benign circumstance of a testing session with a researcher rather than in the context of an accusatory, highly stressful interrogation using standardized *Miranda* warnings that have about an average sixth- to seventh-grade reading level. Thus, the results obtained in these studies represent people’s grasp of the *Miranda* warnings under relatively favorable circumstances. Under these conditions, average adults exhibit a reasonably good understanding of their rights (Grisso, 1980, 1981). But studies of adults with serious psychological disorders (Cooper & Zapf, 2008; Rogers, Harrison, Hazelwood, & Sewell, 2007) or with mental retardation (Clare & Gudjonsson, 1991; Everington & Fulero, 1999; Fulero & Everington, 1995; O’Connell, Garmoe, & Goldstein, 2005) have found substantial impairments in understanding of *Miranda* warnings compared to nonimpaired adult defendants.

Many studies have examined adolescents’ understanding of *Miranda* warnings, and the results have been very consistent (Abramovitch, Higgins-Biss, & Biss, 1993; Abramovitch, Peterson-Badali, & Rohan, 1995; Colwell et al., 2005; Goldstein, Condie, Kalbeitzer, Osman, & Geier, 2003; Grisso, 1980, 1981; Redlich, Silverman, & Steiner, 2003; Viljoen, Klaver, & Roesch, 2005; Viljoen & Roesch, 2005; Wall & Furlong, 1985). In one comprehensive study, 55% of 430 youth of ages 10–16 misunderstood one or more of the *Miranda* warnings (for example, “That means I can’t talk until they tell me to”). Across these studies, the understanding of adolescents ages 15–17 with near-average levels of verbal intelligence tends not to have been inferior to that of adults. But youth of that age with IQ scores below 85, and average youth below age 14, performed much poorer, often misunderstanding two or more of the warnings.

Some studies have shown that many defendants, especially adolescents, who seem to have an adequate factual understanding of *Miranda* warnings, do not grasp their relevance to the situation they are in (e.g., Grisso, 1980, 1981; Viljoen, Zapf, & Roesch, 2007). For example, one may factually understand that “I can have an attorney

before and during questioning” yet not know what an attorney is or what role an attorney would play. Others may understand the attorney’s role but disbelieve that it would apply in their own situation—as when youth cannot imagine that an adult would take their side against other adults, or when a person with paranoid tendencies believes that any attorney, even his own, would oppose him.

The ability to grasp the relevance of the warnings beyond having a mere factual understanding of what they say is sometimes referred to as having a “rational understanding” or “appreciation” of the warnings. Many states, however, require only a factual understanding of *Miranda* rights for a “knowing and intelligent” waiver (e.g., *People v. Daoud*, 2000). In those states that apply a strict factual understanding standard, youth who technically understand the warnings (e.g., “I can have an attorney to talk to” or “I can stay silent”) but harbor faulty beliefs that may distort the significance of these warnings (“An attorney will tell the court whatever I say” or “You have to tell the truth in court, so eventually I’ll have to talk if they want me to”) are considered capable of having made a valid waiver, even if they have no recognition of the meanings of the words or a distorted view of their implications.

Even among those with adequate understanding, suspects will vary in their capacities to “think” and “decide” about waiving their rights. Whether decision-making capacities are deemed relevant for a “voluntary, knowing, and intelligent” waiver will depend on courts’ interpretations of “intelligent” or “voluntary.” Several studies have thus examined the decision-making process of persons faced with hypothetical *Miranda* waiver decisions.

Studies of adolescents indicate that youth under age 15 on average perform differently from older adolescents and adults. They are more likely to believe that they should waive their rights and tell what they have done, partly because they are still young enough to believe that they should never disobey authority. Studies have also shown that they are more likely to decide about waiver on the basis of the potential for immediate negative consequences—for example, whether they will be permitted to go home if they waive their rights—rather than considering the longer-range consequences associated with penalties for a delinquency adjudication (Grisso, 1981; Grisso et al., 2003). Young adolescents presented with hypothetical waiver decisions are less likely than older adolescents to engage in reasoning that involves adjustment of their decisions based on the amount of evidence against them or the seriousness of the allegations (Abramovitch, Peterson-Badali, & Rohan, 1995). These results regarding the likelihood of immature decision-making processes are consistent with research on the development of psychosocial abilities of young adolescents in everyday circumstances (Steinberg & Cauffman, 1996) and other

legal contexts (Grisso & Schwartz, 2000; Owen-Kostelnik, Reppucci, & Meyer, 2006).

Other *Miranda* decision-making studies have examined the suggestibility of persons with disabilities (Clare & Gudjonsson, 1995; Everington & Fulero, 1999; O’Connell, Garmoe, & Goldstein, 2005) and adolescents (Goldstein et al., 2003; Redlich et al., 2003; Singh & Gudjonsson, 1992). Suggestibility refers to a predisposition to accept information communicated by others and to incorporate that information into one’s beliefs and memories. In general, these studies indicate that persons with mental retardation and adolescents in general are more susceptible to suggestion in the context of making hypothetical waiver decisions, and that greater suggestibility is related to poorer comprehension of the warnings. These results take on special significance in light of observational studies of police behavior when obtaining *Miranda* waiver decisions from adolescents (Feld, 2006a, 2006b) and adults (Leo, 1996b). As described elsewhere in this article, police officers often approach suspects with “friendly” suggestions regarding both the significance of the *Miranda* waiver procedure and their decision. In either case, results indicate that adults with disabilities and adolescents in general are prone to adjust their behaviors and decisions accordingly.

In a formal sense, whether one waives his or her rights voluntarily, knowingly, and intelligently does not have a direct bearing on the likelihood of false confessions (Kassin, 2005; White, 2001). The decision to waive one’s rights in a police interrogation does not necessarily lead to a confession, much less a false confession. Nevertheless, research cited earlier regarding the lack of attentiveness of persons with disabilities and adolescents to long-range consequences suggests an increased risk that they would also comply with requests for a confession—whether true or false—to obtain the presumed short-term reward (e.g., release to go home). In addition, some studies have found that poor comprehension of *Miranda* warnings is itself predictive of a propensity to give false confessions (Clare & Gudjonsson, 1995; Goldstein et al., 2003). Sometimes this stems from low intelligence or a desire to comply; at other times it appears to be related to a naïve belief that one’s actual innocence will eventually prevail—a belief that is not confined to adolescents or persons with disabilities (Kassin & Norwick, 2004).

Finally, many states require the presence of a parent or other interested adult when youth make decisions about their *Miranda* rights (Oberlander, Goldstein, & Goldstein, 2003). These rules are intended to offer youth assistance in thinking through the decision while recognizing that caretakers cannot themselves waive their children’s rights in delinquency or criminal investigations. Studies have shown, however, that the presence of parents at *Miranda* waiver events typically does not result in any advice at all or, when

it does, provides added pressure for the youth to waive rights and make a statement (Grisso & Ring, 1979). The presence of parents may be advisable, but it does not offer a remedy for the difficulties youth face in comprehending or responding to requests for a waiver of their rights.

In summary, research suggests that adults with mental disabilities, as well as adolescents, are particularly at risk when it comes to understanding the meaning of *Miranda* warnings. In addition, they often lack the capacity to weigh the consequences of rights waiver, and are more susceptible to waiving their rights as a matter of mere compliance with authority.

Overview of Confession Evidence in the Courts

American courts have long treated confession evidence with both respect and skepticism. Judicial respect for confessions emanates from the power of confession evidence and the critical role that confessions play in solving crimes. The U.S. Supreme Court has recognized that confession evidence is perhaps the most powerful evidence of guilt admissible in court (*Miranda v. Arizona*, 1966)—so powerful, in fact, that “the introduction of a confession makes the other aspects of a trial in court superfluous, and the real trial, for all practical purposes, occurs when the confession is obtained” (*Colorado v. Connelly*, 1986, p. 182 citing McCormick, 1972, p. 316).

Judicial skepticism of confession evidence stems from the historical fact that some law enforcement officers, aware that confession evidence can assure conviction, have abused their power in the interrogation room. As the U.S. Supreme Court stated in *Escobedo v. Illinois* (1964): “We have learned the lesson of history, ancient and modern, that a system of criminal law enforcement which comes to depend on the ‘confession’ will, in the long run, be less reliable and more subject to abuses than a system which depends on extrinsic evidence independently secured through skillful investigation” (pp. 488–489).

Judicial concern with juror over-reliance on confession evidence gave rise to a series of evolving rules designed to curb possible abuses in the interrogation room, exclude unreliable confessions from trial, and prevent wrongful convictions. These doctrines, which developed both in the common law of evidence and under the Constitution as interpreted by the U.S. Supreme Court, fell into two distinct sets of legal rules: corroboration rules and the voluntariness rules (Ayling, 1984; Leo, Drizin, Neufeld, Hal, & Vatner, 2006).

Corroboration Rules

The corroboration rule, which requires that confessions be corroborated by independent evidence, was the

American take on the English rule known as the *corpus delicti* rule. *Corpus delicti* literally means “body of the crime”—that is, the material substance upon which a crime has been committed” (Garner, 2004, p. 310). The rule was founded at common law in England in the wake of *Perry’s Case*, a seventeenth-century case in which a mother and two brothers were convicted and executed based upon a confession to a murder that was later discovered to be false when the supposed murder victim turned up alive (Leo et al., 2006). America’s version of *Perry’s Case* is the infamous 1819 case of Stephen and Jesse Boorn, two brothers who were convicted and sentenced to death in Manchester, Vermont for the murder of their brother-in-law Russell Colvin. Fortunately for the two men, both of whom had confessed to the killing under intense pressure from authorities, their lawyers located Colvin alive before their hangings took place (Warden, 2005).

In American homicide cases, in response to *Boorn*, the rule came to mean that no individual can be convicted of a murder without proof that a death occurred, namely the existence of a “dead body.” As the rule evolved in the courts over time, it was applied to all crimes and required that before a confession could be admitted to a jury, prosecutors had to prove: (1) that a death, injury, or loss had occurred and (2) that criminal agency was responsible for that death, injury, or loss (Leo et al., 2006). The rule was designed to serve three purposes: to prevent false confessions, to provide incentives to police to continue to investigate after obtaining a confession, and to safeguard against the tendency of juries to view confessions as dispositive of guilt regardless of the circumstances under which they were obtained (Ayling, 1984).

The *corpus delicti* rule does not require corroboration that the defendant committed the crime, nor does it demand any proof of the requisite mental state or any other elements of the crime. Moreover, the rule only requires corroboration of the fact that a crime occurred; it does not require that the facts contained in the confession be corroborated. Given the relative ease of establishing the *corpus delicti* in most criminal cases (e.g., producing a dead body in a homicide case and showing that death was not self-inflicted or the result of an accident), and the weight that most jurors attach to confession evidence, prosecutors can still obtain many convictions from unreliable confessions. The rule thus makes it easier in some cases for prosecutors to convict both the guilty and the innocent (Leo et al., 2006).

At the same time, in a certain class of cases, the *corpus delicti* rule may bar the admission of reliable confessions. Because the rule requires that prosecutors prove that there be death or injury resulting from a criminal act, prosecutors may have a hard time getting confessions admitted when

the evidence is unclear as to whether any injury had occurred (e.g., child molestation without physical evidence) or whether it resulted from an accident or natural causes as opposed to a criminal act (e.g., child death by smothering or Sudden Infant Death Syndrome; see Taylor, 2005).

For these reasons and others, the rule has been severely criticized. In *Smith v. United States* (1954), the U.S. Supreme Court criticized the *corpus delicti* rule for “serv[ing] an extremely limited function” (p. 153). The Court noted that the rule was originally designed to protect individuals who had confessed to crimes that never occurred but that it does little to protect against the far more frequent problem wherein a suspect confesses to a crime committed by someone else. In short, the rule did “nothing to ensure that a particular defendant was the perpetrator of a crime” (*State v. Mauchley*, 2003, p. 483).

In place of the *corpus delicti* rule, the Supreme Court, in two decisions released on the same day—*Smith* and *Oppen v. United States* (1954)—announced a new rule, dubbed the trustworthiness rule, which requires corroboration of the confession itself rather than the fact that a crime occurred. Under the trustworthiness rule, which was adopted by several states, the government may not introduce a confession unless it provides “substantial independent evidence which would tend to establish the trustworthiness of the confession” (*State v. Mauchley*, 2003, p. 48; citing *Oppen*).

In theory, the trustworthiness standard is a marked improvement on the *corpus delicti* rule in its ability to prevent false confessions from entering the stream of evidence at trial. In practice, however, the rule has not worked to screen out false confessions. Because investigators sometimes suggest and incorporate crime details into a suspect’s confession, whether deliberately or inadvertently, many false confessions appear highly credible to the secondhand observer. Without an electronic recording of the entire interrogation process, courts are thus left to decide a swearing contest between the suspect and the detective over the source of the details contained within the confession. Moreover, the quantum of corroboration in most jurisdictions that apply the trustworthiness doctrine is very low, allowing many unreliable confessions to go before the jury (Leo et al., 2006).

Rules Prohibiting Involuntary Confession

Until the late eighteenth century, out-of-court confessions were admissible as evidence even if they were the involuntary product of police coercion. In 1783, however, in *The King v. Warrickshall*, an English Court recognized the inherent lack of reliability of involuntary confessions and established the first exclusionary rule:

Confessions are received in evidence, or rejected as inadmissible, under a consideration whether they are or are not intitled [sic] to credit. A free and voluntary confession is deserving of the highest credit, because it is presumed to flow from the strongest sense of guilt ...but a confession forced from the mind by the flattery of hope, or by the torture of fear, comes in so questionable a shape...that no credit ought to be given it; and therefore it should be rejected (*King v. Warrickshall*, 1783, pp. 234–235).

The basis for excluding involuntary confessions in *Warrickshall* was a concern that confessions procured by torture or other forms of coercion must be prohibited because of the risk that such tactics could cause an innocent person to confess. In other words, involuntary confessions were to be prohibited because they were unreliable. Following *Warrickshall*, in the late 1800s, the U.S. Supreme Court adopted this reliability rationale for excluding involuntary confessions in a series of decisions (*Hopt v. Utah*, 1884; *Pierce v. United States*, 1896; *Sparf v. United States*, 1895; *Wilson v. United States*, 1896).

The Supreme Court adopted a second rationale for excluding involuntary confessions in 1897, in *Bram v. United States*. In *Bram*, the Court for the first time linked the voluntariness doctrine to the Fifth Amendment's provision that "no person shall be compelled in any criminal case to be a witness against himself." This privilege against self-incrimination was not rooted in a concern about the reliability of confessions. Rather, its origins were grounded in the rule of *nemo tenetur seipsum prodere* ("no one is bound to inform on himself"), a rule dating back to the English ecclesiastical courts which sought to protect individual free will from state intrusion (Leo et al., 2006). The rule of *nemo tenetur*, which was adopted in the colonies and incorporated into the Fifth Amendment, applied only to self-incriminating statements in court, and had never been applied to extrajudicial confessions. By mixing two unrelated voluntariness doctrines, *Bram* rewrote history and provoked considerable confusion by courts and academics alike (Wigmore, 1970). Still, it gave birth to a new basis for excluding involuntary confession evidence—the protection of individual free will.

A third basis for excluding involuntary confessions began to emerge in 1936, in the case of *Brown v. Mississippi*, to deter unfair and oppressive police practices. In *Brown*, three black tenant farmers who had been accused of murdering a white farmer were whipped, pummeled, and tortured until they provided detailed confessions. The Court unanimously reversed the convictions of all three defendants, holding that confessions procured by physical abuse and torture were involuntary. The Court established the Fourteenth Amendment's due process clause as the constitutional test for

assessing the admissibility of confessions in state cases. In addition to common law standards, trial judges would now have to apply a federal due process standard when evaluating the admissibility of confession evidence, looking to the "totality of the circumstances" to determine if the confession was 'made freely, voluntarily and without compulsion or inducement of any sort'" (*Haynes v. Washington*, 1963, quoting *Wilson v. United States*, 1896). As such, the Court proposed to consider personal characteristics of the individual suspect (e.g., age, intelligence, mental stability, and prior contact with law enforcement) as well as the conditions of detention and interrogation tactics that were used (e.g., threats, promises, and lies).

This deterrence rationale, implied in *Brown*, was made even more explicit in *Haley v. Ohio*, a case involving a 15-year-old black boy who was questioned throughout the night by teams of detectives, isolated for 3 days, and repeatedly denied access to his lawyer (*Haley v. Ohio*, 1948). While the majority held that the confession was obtained "by means which the law should not sanction" (pp. 600–601), Justice Frankfurter, in his concurrence, went a step further, stating that the confession must be held inadmissible "[t]o remove the inducement to resort to such methods this Court has repeatedly denied use of the fruits of illicit methods" (p. 607).

As these cases suggest, the Supreme Court relied on different and sometimes conflicting rationales for excluding involuntary confessions throughout the twentieth century (Kamisar, 1963; White, 1998). It was not always clear which of the three justifications the Court would rely on when evaluating the voluntariness of a confession. Nevertheless, the Court did appear to designate certain interrogation methods—including physical force, threats of harm or punishment, lengthy or incommunicado questioning, solitary confinement, denial of food or sleep, and promises of leniency—as presumptively coercive and therefore unconstitutional (White, 2001). The Court also considered the individual suspect's personal characteristics, such as age, intelligence, education, mental stability, and prior contact with law enforcement, in determining whether a confession was voluntary. The template of the due process voluntariness test thus involved a balancing of whether police interrogation pressures, interacting with a suspect's personal dispositions, were sufficient to render a confession involuntary (Schulhofer, 1981).

The "totality of the circumstances" test, while affording judges flexibility in practice, has offered little protection to suspects. Without bright lines for courts to follow, and without a complete and accurate record of what transpired during the interrogation process, the end result has been largely unfettered and unreviewable discretion by judges. In practice, when judges apply the test, "they exclude only the most egregiously obtained confessions and then only

haphazardly” (Feld, 1999, p. 118). The absence of a litmus test has also encouraged law enforcement officers to push the envelope with respect to the use of arguably coercive psychological interrogation techniques (Penney, 1998). Unlike its sweeping condemnation of *physical* abuse in *Brown v. Mississippi*, the Court’s overall attitude toward *psychological* interrogation techniques has been far less condemnatory. In particular, the Court’s attitudes toward the use of maximization and minimization (Kassin & McNall, 1991) and the false evidence ploy and other forms of deception (Kassin & Kiechel, 1996)—techniques that have frequently been linked to false confessions (Kassin & Gudjonsson, 2004)—has been largely permissive. A discussion of some of these cases follows.

Cases Addressing Interrogation Tactics: Maximization and Minimization

Today’s interrogators seek to manipulate a suspect into thinking that it is in his or her best interest to confess. To achieve this change in perceptions of subjective utilities, they use a variety of techniques, referred to broadly as “maximization” and “minimization” (Kassin & McNall, 1991). Maximization involves a cluster of tactics designed to convey the interrogator’s rock-solid belief that the suspect is guilty and that all denials will fail. Such tactics include making an accusation, overriding objections, and citing evidence, real or manufactured, to shift the suspect’s mental state from confident to hopeless. Toward this end, it is particularly common for interrogators to communicate as a means of inducement, implicitly or explicitly, a threat of harsher consequences in response to the suspect’s denials (Leo & Ofshe, 2001).

In contrast, minimization tactics are designed to provide the suspect with moral justification and face-saving excuses for having committed the crime in question. Using this approach, the interrogator offers sympathy and understanding; normalizes and minimizes the crime, often suggesting that he or she would have behaved similarly; and offers the suspect a choice of alternative explanations—for example, suggesting to the suspect that the murder was spontaneous, provoked, peer-pressured, or accidental rather than the work of a cold-blooded premeditated killer. As we will see later, research has shown that this tactic communicates by implication that leniency in punishment is forthcoming upon confession.

As the 1897 case of *Bram v. United States* demonstrates, minimization has been part of the arsenal of police interrogation tactics for over a century. In *Bram*, the authorities induced the defendant to confess based on the kind of unspoken promise that anchors the modern psychological interrogation: “Bram, I am satisfied that you killed the captain. But some of us here think you could not have done

the crime alone. If you had an accomplice, you should say so, and not have the blame of this horrible crime on your own shoulders” (*Bram v. United States*, 1897, p. 539). This statement contained no direct threats or promises; rather, it combined elements of maximization (the interrogator’s stated certainty in the suspect’s guilt) and minimization (the suggestion that he will be punished less severely if he confesses and names an accomplice). Using language that condemns the latter, the Supreme Court reversed *Bram*’s conviction, holding that a confession “must not be extracted by any sort of threats or violence, nor obtained by any direct or implied promises, however slight” (pp. 542–543).

Although a strict interpretation of *Bram* seemed to suggest a ban on minimization, courts throughout the twentieth century followed a practice of evading, contradicting, disregarding, and ultimately discarding *Bram* (Hirsch, 2005a). Briefly in the 1960s, it appeared that the Supreme Court was ready to revitalize *Bram* and to apply it broadly to the psychological interrogation techniques taught by such legendary police reformers as Chicago’s Fred Inbau and John Reid. Indeed, the landmark case of *Miranda v. Arizona* (1966), described earlier, cited *Bram* and condemned the Reid technique and other tactics that “are designed to put the subject in a psychological state where his story is but an elaboration of what the police purport to know already—that he is guilty” (p. 450). This newfound concern with the impact of psychological interrogation tactics, however, was short lived. In the immediate aftermath of *Miranda*, the Supreme Court adopted a more deferential attitude toward law enforcement in its confession jurisprudence. In particular, *Arizona v. Fulminante* (1991) in dicta may have sounded the death knell for *Bram*. Responding to a party’s invocation of *Bram*, the Court casually remarked that “under current precedent [*Bram*] does not state the standard for determining the voluntariness of a confession” (p. 286). However, White (1997) noted that “as *Fulminante*’s holding indicates, some promises may be sufficient in and of themselves to render a confession involuntary; other promises may or may not be permissible depending upon the circumstances” (p. 150).

Cases Addressing Interrogation Tactics: Trickery and Deception

The false evidence ploy is a controversial tactic occasionally used by police. Not all interrogation trainers approve of this practice (Gohara, 2006), the use of which has been implicated in the vast majority of documented police-induced false confessions (Kassin, 2005). In several pre-*Miranda* voluntariness cases, the U.S. Supreme Court recognized that deception can induce involuntary confessions, although the Court never held that such tactics would automatically invalidate a confession. In *Leyra v. Denno* (1954), for

example, Leyra asked to see a physician because he was suffering from sinus problems and police brought in a psychiatrist who posed as a general physician. The Supreme Court held that the “subtle and suggestive” questioning by the psychiatrist amounted to a continued interrogation of the suspect without his knowledge. This deception and other circumstances of the interrogation rendered Leyra’s confession involuntary. Similarly, in *Spano v. New York* (1959), the suspect considered one of the interrogating officers to be a friend. The Court held that the officer’s false statements, in which he suggested that the suspect’s actions might cost the officer his job, were a key factor in rendering the resulting confession involuntary. In *Miranda v. Arizona* (1966), the Supreme Court discussed the use of trickery and deception and noted that the deceptive tactics recommended in standard interrogation manuals fostered a coercive environment. Again, the Court did not specifically prohibit such tactics, choosing instead to offer suspects some relief from the coercive effect by empowering them with rights which could be used to bring interrogation to a halt. The criticism of deception may have fanned hopes that the Court would deal a more direct blow to this controversial tactic in future cases. But such hopes were quickly quashed.

Three years later, in *Frazier v. Cupp* (1969), the Supreme Court addressed interrogation trickery and issued a decision that to this day has been interpreted by police and the courts as a green light to deception. In *Frazier*, police used a standard false evidence ploy—telling Frazier that another man whom he and the victim had been seen with on the night of the crime had confessed to their involvement. The investigating detective also used minimization, suggesting to Frazier that he had started a fight with the victim because the victim made homosexual advances toward him. Despite the use of these deceptive tactics, the Court held that Frazier’s confession was voluntary. This ruling established that police deception by itself is not sufficient to render a confession involuntary. Rather, according to *Frazier*, deception is but one factor among many that a court should consider. Some state courts have distinguished between mere false assertions, which are permissible, and the fabrication of reports, tapes, and other evidence—which is not. In the Florida case of *State v. Cayward* (1989), the defendant’s confession was suppressed because police had typed up a phony crime laboratory report that placed Cayward’s DNA on the victim. However, the court’s concern was not that the manufactured evidence might prompt an innocent person to confess but that it might find its way into court as evidence. Similarly, New Jersey confessions were suppressed when produced by a fake, staged audiotape of an alleged eyewitness account (*State v. Patton*, 1993) and a fake crime lab report identifying the suspect’s DNA at the crime scene (*State v. Chirokovskic*, 2004). This is where the law remains today despite numerous cautionary notes

from academics and researchers on the use of deception (Gohara, 2006; Gudjonsson, 2003; Kassin, 2005; Kassin & Gudjonsson, 2004; Skolnick & Leo, 1992; but see Grano, 1994; Slobogin, 2007).

Practices in England

Interrogations and confession evidence are regulated in England and Wales by the Police and Criminal Evidence Act of 1984 (PACE; Home Office, 1985), which became effective in January 1986. The Act is supplemented by five Codes of Practice, referred to as Codes A (on stop and search), B (entry and searches of premises), C (detention and questioning of suspects), D (on identification parades), and E (tape recording of interviews). The Codes provide guidance to police officers concerning procedures and the appropriate treatment of suspects. Code C is particularly relevant to issues surrounding “fitness to be interviewed,” as it provides guidance “on practice for the detention, treatment and questioning of persons by police officers” (Home Office, 2003, p. 47).

The most important interview procedures set out in PACE and its Codes of Practice are that: Suspects who are detained at a police station must be informed of their legal rights; in any 24-h period the detainee must be allowed a continuous period of rest of at least 8 hours; detainees who are vulnerable in terms of their age or mental functioning should have access to a responsible adult (known as an ‘appropriate adult’), whose function is to give advice, further communication, and ensure that the interview is conducted properly and fairly; and all interviews shall be electronically recorded.

Compared to the approach typically taken in the U.S. (e.g., using the Reid technique), investigative interview practices in England are less confrontational. Williamson (2007) discussed in detail how psychological science has influenced the training of police officers and their interviewing practice, making it fairer and more transparent. Prior to 1992, investigators in Britain received no formal training and the chief purpose of interviewing suspects was to obtain confessions. Following some high-profile miscarriages of justice, such as the “Guildford Four” and “Birmingham Six,” the Association of Chief Police Officers for England and Wales (ACPO) published the first national training program for police officers interviewing both suspects and witnesses. This new approach was developed through a collaboration of police officers, psychologists, and lawyers. The mnemonic PEACE was used to describe the five distinct parts of the new interview approach (“Preparation and Planning,” “Engage and Explain,” “Account,” “Closure,” and “Evaluate”). The theory underlying this approach, particularly in cases of witnesses, victims, and cooperative suspects, 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). Recent analyses of police–suspect interviews in England have revealed that the confrontation-based tactics of maximization and minimization are in fact seldom used (Soukara, Bull, Vrij, Turner, & Cherryman, *in press*; Bull & Soukara, 2009).

POLICE-INDUCED FALSE CONFESSIONS

As described earlier, the process of interrogation is designed to overcome the anticipated resistance of individual suspects who are presumed guilty and to obtain legally admissible confessions. The single-minded objective, therefore, is to increase the anxiety and despair associated with denial and reduce the anxiety associated with confession. To achieve these goals, police employ a number of tactics that involve isolating the suspect and then employing both negative and positive incentives. On the negative side, interrogators confront the suspect with accusations of guilt, assertions that are made with certainty and often bolstered by evidence, real or manufactured, and a refusal to accept alibis and denials. On the positive side, interrogators 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 some core principles of psychology relevant to understanding the suspect's decision making in this situation; then we describe the problem of false confessions and the situational and dispositional factors that put innocent people at risk.

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 on the pages of legal history, and borrowing from social-psychological theories of influence, Kassin and Wrightsman (1985) proposed a taxonomy that distinguished among three types of false confession: voluntary, coerced-compliant, and coerced-internalized (see also Kassin, 1997; Wrightsman & Kassin, 1993). This classification scheme has provided a useful framework for the study of false confessions and has since been used, critiqued, extended, and refined by others (Gudjonsson, 2003; Inbau et al., 2001; McCann, 1998; Ofshe & Leo, 1997a, 1997b).

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. When "Black Dahlia" actress Elizabeth Short was murdered and her body mutilated in 1947, more than 50 men and women confessed. In the 1980s, Henry Lee Lucas in Texas falsely confessed to hundreds of unsolved murders, making him the most prolific serial confessor in history. In 2006, John Mark Karr volunteered a confession, replete with details, to the unsolved murder of young JonBenet Ramsey. There are a host of reasons why people have volunteered false confessions—such as a pathological desire for notoriety, especially in high-profile cases reported in the news media; a conscious or unconscious need for self-punishment to expiate feelings of guilt over prior transgressions; an inability to distinguish fact from fantasy due to a breakdown in reality monitoring, a common feature of major mental illness; and a desire to protect the actual perpetrator—the most prevalent reason for false admissions (Gudjonsson et al., 2004; Sigurdsson & Gudjonsson, 1996, 1997, 2001). Radelet, Bedau, and Putnam (1992) described one case in which an innocent man confessed to a murder to impress his girlfriend. Gudjonsson (2003) described another case in which a man confessed to murder because he was angry at police for a prior arrest and wanted to mislead them in an act of revenge.

Compliant False Confessions

In contrast to voluntary false confessions, compliant false confessions are those in which suspects are induced through interrogation to confess to a crime they did not commit. In these cases, the suspect acquiesces to the demand for a confession to escape a stressful situation, avoid punishment, or gain a promised or implied reward. Demonstrating the form of influence observed in classic studies of social influence (e.g., Asch, 1956; Milgram, 1974), this type of confession is an act of mere public compliance by a suspect who knows that he or she is innocent but bows to social pressure, often coming to believe that the short-term benefits of confession relative to denial outweigh the long-term costs. Based on a review of a number of cases, Gudjonsson (2003) identified some very specific incentives for this type of compliance—such as being allowed to sleep, eat, make a phone call, go home, or, in the case of drug addicts, 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, desperate, socially dependent, or phobic of being locked up in a police station. The pages of legal history are filled with stories of compliant false confessions. In the 1989 Central Park jogger case described earlier, five

teenagers confessed after lengthy interrogations. All immediately retracted their confessions but were convicted at trial and sent to prison—only to be exonerated 13 years later (*People of the State of New York v. Kharey Wise et al.*, 2002).

Internalized False Confessions

In the third type of false confession, innocent but malleable suspects, told that there is incontrovertible evidence of their involvement, come not only to capitulate in their behavior but also to believe that they may have committed the crime in question, sometimes confabulating false memories in the process. Gudjonsson and MacKeith (1982) argued 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. Noting that the innocent confessor's belief is seldom fully internalized, Ofshe and Leo (1997a) have suggested that the term “persuaded false confession” is a more accurate description of the phenomenon. The case of 14-year-old Michael Crowe, whose sister Stephanie was stabbed to death in her bedroom, illustrates this type of persuasion. After a series of interrogation sessions, during which time police presented Crowe with compelling false physical evidence of his guilt, he concluded that he was a killer, saying: “I’m not sure how I did it. All I know is I did it.” Eventually, he was convinced that he had a split personality—that “bad Michael” acted out of a jealous rage while “good Michael” blocked the incident from memory. The charges against Crowe were later dropped when a drifter in the neighborhood that night was found with Stephanie’s blood on his clothing (Drizin & Colgan, 2004).

Relevant Core Principles of Psychology

Earlier we reviewed the tactics of a modern American interrogation and the ways in which the U.S. Supreme Court has treated these tactics with respect to the voluntariness and admissibility of the confessions they elicit. As noted, the goal of interrogation is to alter a suspect’s decision making by increasing the anxiety associated with denial and reducing the anxiety associated with confession (for an excellent description of a suspect’s decision-making process in this situation, see Ofshe & Leo, 1997b).

Long before the first empirical studies of confessions were conducted, the core processes of relevance to this situation 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 perceptions of short-term than long-term consequences. Of

distal relevance to a psychological analysis of interrogation are the thousands of operant animal studies of reinforcement schedules, punishment, 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 have sometimes shaped suspects to confess to particular narrative accounts of crimes like they were rats in a Skinner box (see Herrnstein, 1970; Skinner, 1938).

More proximally relevant to an analysis of choice 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 that they think will maximize their well-being given the constraints they face, making the best of the situation they are in—what Herrnstein has called the “matching law” (Herrnstein, Rachlin, & Laibson, 1997). With respect to a suspect’s response to interrogation, studies on the discounting of rewards and costs show that people tend to be impulsive in their orientation, preferring outcomes that are immediate rather than delayed, with delayed outcomes depreciating over time in their subjective value (Rachlin, 2000). In particular, animals and humans clearly prefer delayed punishment to immediate aversive stimulation (Deluty, 1978; Navarick, 1982). These impulsive tendencies are especially evident in juvenile populations and among cigarette smokers, alcoholics, and other substance users (e.g., Baker, Johnson, & Bickel, 2003; Bickel & Marsch, 2001; Bickel, Odum, & Madden, 1999; Kollins, 2003; Reynolds, Richards, Horn, & Karraker, 2004).

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 direct relevance to an analysis of interrogation are the extensive literatures on attitudes and persuasion (Petty & Cacioppo, 1986), informational and normative influences (e.g., Asch, 1956; Sherif, 1936), the use of sequential request strategies, as in the foot-in-the-door effect (Cialdini, 2001), and the gradual escalation of commands, issued by figures of authority, to effectively obtain self- and other-defeating acts of obedience (Milgram, 1974). Conceptually, Latane’s (1981) social impact theory provides a predictive mathematical model that can account for the influence of police interrogators—who bring *power*, *proximity*, and *number* to bear on their exchange with suspects (for a range of social psychological perspectives on interrogation, see Bem, 1966; Davis & O’Donahue, 2004; Zimbardo, 1967).

A third set of core principles consists of the “seven sins of memory” that Schacter (2001) identified from cognitive and neuroscience research—a list that includes memory transience, misattribution effects, suggestibility, and bias.

When Kassin and Wrightsman (1985) first identified coerced-internalized or coerced-persuaded false confessions, they were puzzled. At the time, existing models of memory could not account for the phenomenon whereby innocent suspects would come to internalize responsibility for crimes they did not commit and confabulate memories about these nonevents. 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 a now extensive research literature on misinformation effects and the creation of illusory beliefs and memories (e.g., Loftus, 1997, 2005), experts can now better grasp the process by which people come to accept guilt for a crime they did not commit as well as the conditions under which this may occur (see Kassin, 2008).

Situational Risk Factors

Among the situational risk factors associated with false confessions, three will be singled out: interrogation time, the presentation of false evidence, and minimization. These factors are highlighted because of the consistency in which they appear in cases involving proven false confessions.

Physical Custody and Isolation

To ensure privacy and control, and to increase the stress associated with denial in an incommunicado setting, interrogators are trained to remove suspects from their familiar surroundings and question them in the police station—often in a special interrogation room. Consistent with guidelines articulated by Inbau et al. (2001), most interrogations are brief. Observational studies in the U.S. and Britain have consistently shown that the vast majority of interrogations last approximately from 30 minutes up to 2 hours (Baldwin, 1993; Irving, 1980; Leo, 1996b; Wald et al., 1967). In a recent self-report survey, 631 North American police investigators estimated from their experience that the mean length of a typical interrogation is 1.60 hours. Consistent with cautionary advice from Inbau et al. (2001) against exceeding 4 hours in a single session, these same respondents estimated on average that their longest interrogations lasted 4.21 hours (Kassin et al., 2007). Suggesting that time is a concern among practitioners, one former Reid technique investigator has defined interrogations that exceed 6 hours as “coercive” (Blair, 2005). In their study of 125 proven false confessions, Drizin and Leo (2004) thus found, in cases in which interrogation time was recorded, that 34% lasted 6–12 hours, that 39% lasted 12–24 hours, and that the mean was 16.3 hours.

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 needs for belonging, affiliation, and social support, especially in times of stress, are a fundamental human motive (Baumeister & Leary, 1996). People under stress seek desperately to affiliate with others for the psychological, physiological, and health benefits that social support provides (Rofe, 1984; Schachter, 1959; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Hence, prolonged isolation from significant others in this situation constitutes a form of deprivation that can heighten a suspect’s distress and incentive to remove himself or herself from the situation. Depending on the number of hours and conditions of interrogation, sleep deprivation may also become a source of concern. Controlled laboratory experiments have shown that sleep deprivation, which may accompany prolonged periods of isolation, can heighten susceptibility to influence and impair decision-making abilities in complex tasks. The range of effects is varied, with studies showing that sleep deprivation markedly impairs the ability to sustain attention, flexibility of thinking, and suggestibility in response to leading questions (Blagrove, 1996; for a review, see Harrison & Horne, 2000). This research literature is not all based in the laboratory. For example, performance decrements have been observed in medical interns (e.g., Veasey, Rosen, Barzansky, Rosen, & Owens, 2002; Weinger & Ancoli-Israel, 2002)—as when sleep deprivation increased the number of errors that resident surgeons made in a virtual reality surgery simulation (Taffinder, McManus, Gul, Russell, & Darzi, 1998). Also demonstrably affected are motorists (Lyznicki, Doege, Davis, & Williams, 1998) and F-117 fighter pilots (Caldwell, Caldwell, Brown, & Smith, 2004). Combining the results in a meta-analysis, Pilcher and Huffcut (1996) thus concluded that: “overall sleep deprivation strongly impairs human functioning.” The use of sleep deprivation in interrogation is hardly a novel idea. In *Psychology and Torture*, Suedfeld (1990) noted that sleep deprivation is historically one of the most potent methods used to soften up prisoners of war and extract confessions from them. Indeed, Amnesty International reports that most torture victims interviewed report having been deprived of sleep for 24 hours or more.

Presentations of False Evidence

Once suspects are isolated, interrogators, armed with a strong presumption of guilt, 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. Basic research shows that once people see an outcome as inevitable, cognitive and motivational forces conspire to

promote their acceptance, compliance with, and even approval of the outcome (Aronson, 1999). In the case of interrogation, 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 his or her guilt (e.g., a fingerprint, blood or hair sample, eyewitness identification, or failed polygraph)—even if that evidence does not exist. In the U.S., it is permissible for police to outright lie to suspects about the evidence (*Frazier v. Cupp*, 1969)—a tactic that is recommended in training (Inbau et al., 2001), and occasionally used (Kassin et al., 2007; Leo, 1996b).

Yet basic psychological research warns of the risk of this manipulation. Over the years, across a range of sub-disciplines, basic research has revealed that misinformation renders people vulnerable to manipulation. To cite but a few highly recognized classics in the field, experiments have shown that presentations of false information—via confederates, witnesses, counterfeit test results, bogus norms, false physiological feedback, and the like—can substantially alter subjects' visual judgments (Asch, 1956; Sherif, 1936), beliefs (Anderson, Lepper, & Ross, 1980), perceptions of other people (Tajfel, Billig, Bundy, & Flament, 1971), behaviors toward other people (Rosenthal & Jacobson, 1968), emotional states (Schachter & Singer, 1962), physical attraction (Valins, 1966), self-assessments (Crocker, Voelkl, Testa, & Major, 1991), memories for observed and experienced events (Loftus, 2005), and even certain medical outcomes, as seen in studies of the placebo effect (Brown, 1998; Price, Finnis, & Benedetti, 2008). Scientific evidence for human malleability in the face of misinformation is broad and pervasive.

The forensic literature on confessions reinforces and extends this classic point, indicating that presentations of false evidence can lead people to confess to crimes they did not commit. This literature is derived from two sources of information. First, studies of actual cases reveal that the false evidence ploy, which is not permitted in Great Britain and most other European nations, is found in numerous wrongful convictions in the U.S., including DNA exonerations, in which there were confessions in evidence (Drizin & Leo, 2004; Leo & Ofshe, 1998). That this tactic appears in proven false confession cases makes sense. In self-report studies, actual suspects state that the reason they confessed is that they perceived themselves to be trapped by the weight of evidence (Gudjonsson & Sigurdsson, 1999; Moston, Stephenson, & Williamson, 1992).

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 is often used to pressure suspects and can prompt false confessions. 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 the risk of polygraph-induced false confessions. In a laboratory demonstration that illustrates the point, Meyer and Youngjohn (1991) elicited false confessions to the theft of an experimenter's pencil from 17% of subjects told that they had failed a polygraph test on that question.

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 college students typing on a keyboard of causing the computer to crash by pressing a key they were instructed to avoid. Despite their innocence and initial denials, subjects were asked 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 to 94%.

Follow-up studies have replicated this effect to the extent that the charge was plausible (Horselenberg et al., 2006; Klaver, Lee, & Rose, 2008), even when the confession was said to bear a financial or other consequence (Horselenberg, Merckelbach, & Josephs, 2003; Redlich & Goodman, 2003), and even among informants who are pressured to report on a confession allegedly made by another person (Swanner, Beike, & Cole, *in press*). The effect has been particularly evident among stress-induced males (Forrest, Wadkins, & Miller, 2002) and children and juveniles who tend to be both more compliant and suggestible than adults (Candel, Merckelbach, Luyen, & Reyskens, 2005; Redlich & Goodman, 2003). Using a completely different 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.

One needs to be cautious in generalizing from laboratory experiments. Yet numerous false confession cases have featured the use and apparent influence of the false evidence ploy. In one illustrative case, in 1989, 17-year-old Marty Tankleff was accused of murdering his parents despite the complete absence of evidence against him. Tankleff vehemently denied the charges for several hours—until his interrogator told him that his hair was found within his mother's grasp, that a “humidity test” indicated he had showered (hence, the presence of only one spot of blood on his shoulder), and that his hospitalized father had emerged from his coma to say that Marty was his assailant—all of which were untrue (the father never

regained consciousness and died shortly thereafter). Following these lies, Tankleff became disoriented and confessed. Solely on the basis of that confession, Tankleff was convicted, only to have his conviction vacated and the charges dismissed 19 years later (Firstman & Salpeter, 2008; Lambert, 2008).

Minimization: Promises Implied But Not Spoken

In addition to thrusting the suspect into a state of despair by the processes of confrontation, interrogators are trained to minimize the crime through “theme development,” a process of providing moral justification or face-saving excuses, making confession seem like an expedient means of escape. Interrogators are thus trained to suggest to suspects that their actions were spontaneous, accidental, provoked, peer-pressured, drug-induced, or otherwise justifiable by external factors. In the Central Park jogger case, every boy gave a false confession that placed his cohorts at center stage and minimized his own involvement (e.g., 16-year-old Kharey Wise said he felt pressured by peers)—and each said afterward that he thought he would go home after confessing based on statements made by police.

Minimization tactics that imply leniency may well lead innocent people who feel trapped to confess. Two core areas of psychology compel this conclusion. The first concerns the principle of reinforcement. As noted earlier, generations of basic behavioral scientists, dating back to Thorndike (1911), and formalized by Skinner (1938), have found that people are highly responsive to reinforcement and the perceived consequences of their behavior. More recent studies of human decision making have added that people are particularly influenced by outcomes that are immediate rather than delayed, the latter depreciating over time in their subjective value (Rachlin, 2000). The second core principle concerns the cognitive psychology of pragmatic implication. Over the years, researchers have found that when people read text or hear speech, they tend to process information “between the lines” and recall not what was stated *per se*, but what was *pragmatically implied*. Hence, people who read that “The burglar goes to the house” often mistakenly recall later that the burglar actually broke into the house; those who hear that “The flimsy shelf weakened under the weight of the books” often mistakenly recall that the shelf actually broke (Chan & McDermott, 2006; Harris & Monaco, 1978; Hilton, 1995). These findings indicate that pragmatic inferences can change the meaning of a communication, leading listeners to infer something that is “neither explicitly stated nor necessarily implied” (Brewer, 1977).

Taken together, basic research showing that people are highly influenced by perceived reinforcements and that people process the pragmatic implications of a

communication suggests the possibility that suspects infer leniency in treatment from minimizing remarks that depict the crime as spontaneous, accidental, pressured by others, or otherwise excusable—even in the absence of an explicit promise. To test this hypothesis, Kassin and McNall (1991) had subjects read a transcript of an interrogation of a murder suspect (the text was taken from an actual New York City interrogation). The transcripts were edited to produce three versions in which the detective made a contingent explicit promise of leniency, used the technique of minimization by blaming the victim, or did not use either technique. Subjects read one version and then estimated the sentence that they thought would be imposed on the suspect. The result: As if explicit promises had been made, minimization lowered sentencing expectations compared to conditions in which no technique was used.

More recently, researchers have found that minimization can also lead innocent people to confess. Using the computer crash paradigm described earlier, Klaver, Lee, and Rose (2008) found that minimization remarks significantly increased the false confession rate when the accusation concerning the forbidden key press was plausible. Russano, Meissner, Kassin, and Narchet (2005) devised a newer laboratory paradigm to not only assess the behavioral effects of minimization but to assess the diagnosticity of the resulting confession (a technique has “diagnosticity” to the extent that it increases the ratio of true to false confessions). In their study, subjects were paired with a confederate for a problem-solving study and instructed to work alone on some problems and jointly on others. In the *guilty* condition, the confederate sought help on a problem that was supposed to be solved alone, inducing a violation of the experimental prohibition. In the *innocent* condition, the confederate did not make this request to induce the crime. The experimenter soon “discovered” a similarity in their solutions, separated the subject and confederate, and accused the subject of cheating. The experimenter tried to get the subject to sign an admission by overtly promising leniency (a deal in which research credit would be given in exchange for a return session without penalty), making minimizing remarks (“I’m sure you didn’t realize what a big deal it was”), using both tactics, or using no tactics. Overall, the confession rate was higher among guilty subjects than innocent, when leniency was promised than when it was not, and when minimization was used than when it was not. Importantly, diagnosticity—defined as the rate of true confessions to false confessions—was highest at 7.67 when no tactics were used (46% of guilty suspects confessed vs. only 6% of innocents) and minimization—just like an explicit offer of leniency—reduced diagnosticity to 4.50 by increasing not only the rate of true confessions (from 46 to 81%) but even more so the rate of false confessions (which tripled from 6 to 18%). In short,

minimization provides police with a loophole in the rules of evidence by serving as the implicit but functional equivalent to a promise of leniency (which itself renders a confession inadmissible). The net result is to put innocents at risk to make false confessions.

It is important to note that minimization and the risk it engenders is not a mere laboratory phenomenon. Analyzing more than 125 electronically recorded interrogations and transcripts, Ofshe and Leo (1997a, 1997b) found that police often use techniques that serve to communicate promises and threats through pragmatic implication. These investigators focused specifically on what they called *high-end inducements*—appeals that communicate to a suspect that he or she will receive less punishment, a lower prison sentence, or some form of prosecutorial or judicial leniency upon confession and/or a higher charge or longer prison sentence in the absence of confession. In some homicide cases, for example, interrogators suggested that if the suspect admits to the killing it would be framed as unintentional, as an accident, or as an act of justifiable self-defense—not as premeditated cold-blooded murder, the portrayal that would follow from continued denial. This is a variant of the “maximization”/“minimization” technique described by Kassin and McNall (1991), which communicates through pragmatic implication that the suspect will receive more lenient treatment if he or she confesses but harsher punishment if he or she does not.

Dispositional Risk Factors

In any discussion of dispositional risk factors for false confession, the two most commonly cited concerns are a suspect’s age (i.e., juvenile status) and mental impairment (i.e., mental illness, mental retardation). These common citations are because of the staggering overrepresentation of these groups in the population of proven false confessions. For example, of the first 200 DNA exonerations in the U.S., 35% of the false confessors were 18 years or younger and/or had a developmental disability. In their sample of wrongful convictions, Gross, Jacoby, Matheson, Montgomery, and Patel (2005) found that 44% of the exonerated juveniles and 69% of exonerated persons with mental disabilities were wrongly convicted because of false confessions.

Adolescence and Immaturity

There is strong evidence that juveniles are at risk for involuntary and false confessions in the interrogation room (for reviews see Drizin & Colgan, 2004; Owens-Kostelnik, Reppucci, & Meyer, 2006; Redlich, 2007; Redlich & Drizin, 2007; Redlich, Silverman, Chen, & Steiner, 2004). Juveniles are over represented in the pool

of identified false confession cases: 35% of the proven false confessors in the Drizin and Leo (2004) sample were younger than age 18, and within this sample of juveniles, 55% were aged 15 or younger. Comparatively, of all persons arrested for murder and rape, only 8 and 16%, respectively, are juveniles (Snyder, 2006). Numerous high-profile cases, such as the Central Park Jogger case (Kassin, 2002), have demonstrated the risks of combining young age, and the attributes that are associated with it (e.g., suggestibility, heightened obedience to authority, and immature decision-making abilities), and the psychologically oriented interrogation tactics described earlier. Hence, Inbau et al. (2001) concede that minors are at special risk for false confession and advise caution when interrogating a juvenile. Referring to the presentation of fictitious evidence, for example, they note: “This technique should be avoided when interrogating a youthful suspect with low social maturity” (p. 429).

The field of developmental psychology was born over a century ago in the influential writings of James Baldwin, Charles Darwin, G. Stanley Hall, and William Stern (see Parke, Ornstein, Rieser, & Zahn-Waxler, 1994). Since that time, basic research has shown that children and adolescents are cognitively and psychosocially less mature than adults—and that this immaturity manifests in impulsive decision making, decreased ability to consider long-term consequences, engagement in risky behaviors, and increased susceptibility to negative influences. Specifically, this body of research indicates that early adolescence marks the onset of puberty, heightening emotional arousability, sensation seeking, and reward orientation; that mid-adolescence is a period of increased vulnerability to risk-taking and problems in affect and behavior; and that late adolescence is a period in which the frontal lobes continue to mature, facilitating regulatory competence and executive functioning (for reviews, see Steinberg, 2005; Steinberg & Morris, 2001). Recent neurological research on brain development dovetails with findings from behavioral studies. Specifically, these studies have shown continued maturation during adolescence in the limbic system (emotion regulation) and in the prefrontal cortex (planning and self-control), with gray matter thinning and white matter increasing (Steinberg, 2007).

The developmental capabilities and limitations of adolescents are highly relevant to behavior in the interrogation room. In *Roper v. Simmons* (2005), Justice Kennedy cited three general differences between juveniles and adults in support of the Court’s reasoning for abolishing the death penalty for juveniles. First, he addressed the lessened maturity and responsibility of juveniles compared to adults with specific mention to the 18-year bright-line requirements for marriage without parental consent, jury duty, and voting. Second, Justice Kennedy noted that “juveniles are

more vulnerable or susceptible to negative influences and outside pressures, including peer pressure” (p. 15). Consistent with this portrait, Drizin and Leo (2004) found in their sample of false confessions that several involved two or more juveniles (out of 38 multiple false confession cases, half involved juveniles). In recommending that police “play one [suspect] against the other,” Inbau et al. (2001) note that this tactic may be especially effective on young, first-time offenders (pp. 292–293). Third, Justice Kennedy recognized that juveniles’ personality or “character” is not as well developed as adults. In light of the volatility of adolescence, it is interesting that Inbau et al. (2001) also suggest “themes” for confession that exploit a juvenile’s restless energy, boredom, low resistance to temptation, and lack of supervision.

Drawing on basic principles of developmental psychology, there is now a wealth of forensically oriented research indicating that juveniles—suspects, defendants, and witnesses—have age-related limitations of relevance to the legal system in comparison to adults. For example, individuals younger than 16 years generally have impairments in adjudicative competence (e.g., the ability to help in one’s own defense) and comprehension of legal terms (Grisso et al., 2003; Saywitz, Nathanson, & Snyder, 1993). In a subset of studies particularly germane to interrogations, several researchers employing a range of methodologies have shown that the risk of false confession is heightened during childhood and adolescence relative to adulthood. Of particular note, as described earlier, juveniles are more likely than adults to exhibit deficits in their understanding and appreciation of the *Miranda* rights that were explicitly put into place to protect people subject to “inherently coercive” interrogations (see Grisso, 1981; Redlich et al., 2003).

In the first set of studies, laboratory-based experiments have examined juveniles’ responses in mock crimes and interrogations. Using the Kassin and Kiechel (1996) computer crash paradigm, Redlich and Goodman (2003) found that juveniles aged 12- and 13-years-old, and 15- and 16-years-old, were more likely to confess than young adults (aged 18–26 years), especially when confronted with false evidence of their culpability. In fact, a majority of the younger participants, in contrast to adults, complied with the request to sign a false confession without uttering a word. In another laboratory experiment, researchers examined the effect of positive and negative reinforcement on children aged 5 through 8 years (Billings et al., 2007). Reinforcement strongly affected children’s likelihood of making false statements: Of those in the reinforcement condition, 52% made false admissions of guilty knowledge and 30% made false admissions of having witnessed the crime (within a span of 3.5 minutes!). In contrast, of children in the control condition, only 36 and 10% made

false guilty knowledge and admissions, respectively. These findings mirror the vast majority of studies on the interview-relevant abilities of child-victim/witnesses (e.g., Garven, Wood, & Malpass, 2000).

In a second set of studies, youths have made decisions in response to hypothetical scenarios. Goldstein et al. (2003) investigated male juvenile offenders’ self-reported likelihood of providing false confessions across different interrogation situations and found that younger age significantly predicted false confessions (25% surmised that they would definitely confess despite innocence to at least one of the situations). Similarly, Grisso et al. (2003) examined juveniles’ and young adults’ responses to a hypothetical mock-interrogation situation—specifically, whether they would confess to police, remain silent, or deny the offense. Compared to individuals aged 16 and older, those between 11 and 15 were significantly more likely to report that they would confess.

In a third set of studies, juveniles have been asked to self-report on actual interrogation experiences. In a sample of 114 justice-involved juveniles, Viljoen, Klaver, and Roesch (2005) found that suspects who were 15-years old and younger, compared to those who were 16- and 17-years old, were significantly more likely to waive their right to counsel and to confess. Overall, only 11 (less than 10%) said they had asked for an attorney during police questioning (see also Redlich et al., 2004) and 9 (6%) said they had at some point falsely confessed. A survey of over 10,000 Icelandic students aged 16–24 years similarly revealed that of those with interrogation experiences, 7% claimed to have falsely confessed, with the rates being higher among those with more than one interrogation experience (Gudjonsson, Sigurdsson, Asgeirsdottir, & Sigfusdottir, 2006). In a massive and more recent effort, more than 23,000 juveniles from grades 8, 9, and 10 (average age of 15.5 years) were surveyed from seven countries—Iceland, Norway, Finland, Latvia, Lithuania, Russia, and Bulgaria. Overall, 11.5% (2,726) reported having been interrogated by police. Within this group, 14% reported having given a false confession (Gudjonsson, Sigurdsson, Asgeirsdottir, & Sigfusdottir, *in press*).

Cognitive and Intellectual Disabilities

Much of what is true of juveniles is similarly true for persons with intellectual disabilities—another group that is over-represented in false confession cases (see Gudjonsson, 2003; Gudjonsson & MacKeith, 1994). Hence, in *Atkins v. Virginia* (2002), the U.S. Supreme Court explicitly cited the possibility of false confession as a rationale underlying their decision to exclude this group categorically from capital punishment. The case of Earl Washington is illustrative of the problem. Reported to have an IQ ranging

from 57 to 69 and interrogated over the course of 2 days, Washington “confessed” to five crimes, one being the rape and murder of a woman (charges resulting from the other four confessions were dismissed because of inconsistencies). Although he could not provide even basic details (e.g., that the victim was raped or her race) and although much of his statement was inconsistent with the evidence, Washington—who was easily led by suggestive questions and deferred to authority figures—was convicted, sentenced to death, and incarcerated for 18 years before being exonerated (Hourihan, 1995).

Mental retardation represents a constellation of symptoms, disorders, and adaptive functioning. The condition is defined by an IQ score of 70 or below and a range of impairments, such as adapting to societal norms, communication, social and interpersonal skills, and self-direction (American Psychiatric Association, 1994). In training police recruits, Perske (2004) identifies from research a number of tendencies exhibited by people who are mentally retarded. Collectively suggesting a heightened susceptibility to influence, the list includes the tendencies to rely on authority figures for solutions to everyday problems; please persons in authority; seek out friends; feign competence; exhibit a short attention span; experience memory gaps; lack impulse control; and accept blame for negative outcomes.

Some researchers have provided evidence for the diminished capacity of persons with cognitive disabilities in studies pertaining to interrogation (Fulero & Everington, 2004). Across four studies of *Miranda* comprehension, findings are quite consistent in showing that persons with mental retardation have significant deficits in their understanding and appreciation of *Miranda* warnings (Cloud, Shepard, Barkoff, & Shur, 2002; Everington & Fulero, 1999; Fulero & Everington, 1995; O’Connell, Garmoe, & Goldstein, 2005). For example, O’Connell et al. (2005) found that 50% of people with mild mental retardation in their sample could not correctly paraphrase *any* of the five *Miranda* components (see also Everington & Fulero, 1999). In comparison, less than 1% of adults in the general population score similarly low (Grisso, 1996). Moreover, research on the capacity of persons with mental retardation to learn and retain the knowledge and skills necessary to be competent suspects and defendants demonstrates that a significant number cannot meet this threshold, even with education (Anderson & Hewitt, 2002).

Everington and Fulero (1999) also examined the suggestibility of persons with mental retardation. Using the Gudjonsson Suggestibility Scale (GSS; a measure of interrogative suggestibility), they found that people with mental retardation were more likely to yield to leading questions and change their answers in response to mild negative feedback (see also O’Connell et al., 2005).

Gudjonsson (1991) examined GSS scores among three groups: alleged false confessors, alleged true confessors, and suspects who resisted confession during questioning. He found the alleged false confessors to have the lowest IQ scores as well as the highest suggestibility scores compared to the other two groups (Gudjonsson & Clare, 1995). Finally, Clare and Gudjonsson (1995) examined perceptions of a videotaped suspect who provides a true and false confession during an interrogation and found that 38% of perceivers with intellectual disabilities, compared to only 5% of those without intellectual disabilities, believed the suspect would be allowed to go home while awaiting trial. Additionally, only 52% believed that the suspect should obtain legal advice if innocent, compared to 90% of others.

Personality and Psychopathology

In terms of susceptibility to false confession, it is important to consider other individual factors of relevance to a person’s decision to confess. Gudjonsson (2003) discusses a number of personal risk factors, including enduring personality traits (e.g., suggestibility, compliance) as well as psychopathology and personality disorders—categories within the DSM-IV Axis I and II diagnostic framework that are relevant to false confessions.

A number of large-scale studies of false confessions, carried out in Iceland, show the importance of antisocial personality traits and history of offending both among prison inmates (Sigurdsson & Gudjonsson, 2001) and community samples (Gudjonsson, Sigurdsson, Asgeirsdottir, & Sigfusdottir, 2006, 2007; Gudjonsson, Sigurdsson, Bragason, et al., 2004; Gudjonsson et al., 2004). There have also been cases in which the personality disorder was considered crucial to understanding the false confession (Gudjonsson, 2006; Gudjonsson & Grisso, 2008). One interpretation of this finding is that persons with antisocial personality disorder, or antisocial traits, are more likely to be involved in offending, more often interviewed by police, and prone to lie for short-term instrumental gain, and are less concerned about the consequences of their behavior. This increases their tendency to make false denials as well as false confessions depending on their need at the time.

Psychopathology seems to be linked to false confessions in that persons with mental illness are over-represented in these cases. Psychological disorder is often accompanied by faulty reality monitoring, distorted perception, impaired judgment, anxiety, mood disturbance, poor self-control, and feelings of guilt. Gudjonsson (2003) provided a number of examples of cases where false confessions were directly related to specific disorders. Following the release of the Birmingham Six in 1991, research conducted for the British Royal Commission on Criminal Justice found that about 7% of suspects detained at police stations had a

history of mental illness and that many more were in an abnormal mental state due to anxiety and mood disturbance (Gudjonsson, Clare, Rutter, & Pearse, 1993). Similar findings were found in a recent study among suspects at Icelandic police stations (Sigurdsson, Gudjonsson, Einarsson, & Gudjonsson, 2006). In the U.S., research has consistently shown that rates of serious mental illness in the criminal justice system are at least two to five times higher than rates in the general population (e.g., James & Glaze, 2006; Lamb & Weinberger, 1998). To further compound the problem, the majority (75–80%) of offenders with mental illness have co-occurring substance abuse or dependence disorders (Abram, Teplin, & McClelland, 2003), which is an additional risk factor for false confessions (see Sigurdsson & Gudjonsson, 2001).

There is currently little research available to show how different disorders (e.g., anxiety, depression, and schizophrenia) potentially impair the suspect's capacity to waive legal rights and navigate his or her way through a police interview (Redlich, 2004). However, there is recent evidence from two separate studies to suggest that depressed mood is linked to a susceptibility to provide false confession to police (Gudjonsson et al., 2006; Sigurdsson et al., 2006). Gudjonsson et al. (2007) also recently found that multiple exposures to unpleasant or traumatic life events were significantly associated with self-reported false confessions during interrogation. Rogers et al. (2007a) found that most mentally disordered offenders exhibited insufficient understanding of *Miranda*, particularly when the warnings required increased levels of reading comprehension. Finally, Redlich (2007) found that offenders with mental illness self-reported a 22% lifetime false confession rate—notably higher than the 12% found in samples of prison inmates without mental illness (Sigurdsson & Gudjonsson, 1996).

An important type of psychopathology in relation to false confessions is attention deficit hyperactivity disorder (ADHD), which consists of three primary symptoms: inattention, hyperactivity, and impulsivity (American Psychiatric Association, 1994). This condition is commonly found among offenders (Young, 2007). Moreover, research shows that people with ADHD cope during questioning by answering a disproportionate number of questions with “don't know” replies—which may lead police to be suspicious of their answers (Gudjonsson, Young, & Bramham, 2007). They may also exhibit high levels of compliance. Gudjonsson et al. (2008) found that the rate of self-reported false confessions was significantly higher among prisoners who were currently symptomatic for attention deficit hyperactivity disorder (ADHD) than among the other prisoners (41 and 18%, respectively). These findings highlight the potential vulnerability during questioning of people who are currently symptomatic for ADHD.

Protections for Vulnerable Suspects in England

When the police interview mentally disordered persons and juveniles in England and Wales, there are special legal provisions available to ensure that their statements to police are reliable and properly obtained—for example, in the presence of “appropriate adults.” The current legal provisions are detailed in the Codes of Practice (Home Office, 2003). Even when the police adhere to all the legal provisions, a judge may consider it unsafe and unfair to allow the statement to go before the jury. Here the crucial issue may be whether or not the defendant was “mentally fit” when interviewed. The term “fitness for interview” was first introduced formally in the current Codes of Practice, which became effective in 2003.

Fitness for interview is closely linked to the concept of “legal competencies,” which refers to an individual's physical, mental, and social vulnerabilities that may adversely affect his or her capacity to cope with the investigative and judicial process (Grisso, 1986). Historically, legal competence constructs relating to confession evidence have focused primarily on the functional deficits of juveniles (Drizin & Colgan, 2004), and adult defendants with mental retardation (Fulero & Everington, 2004) and mental illnesses (Melton, Petrila, Poitress, & Slobogin, 1997). Increasingly, the construct of legal competence in criminal cases is also being applied to defendants with “personality disorder” (Gudjonsson & Grisso, 2008). The introduction of “fitness to be interviewed” within the current Codes of Practice in England and Wales is a significant step toward protecting vulnerable suspect populations (Gudjonsson, 2005). Indeed, a similar framework has been introduced in New Zealand and Australia (Gall & Freckelton, 1999).

Innocence as a Risk Factor

On September 20, 2006, Jeffrey Mark Deskovic was released from a maximum-security prison in New York, where he spent 15 years for a murder he said he committed but did not. Why did he confess? “Believing in the criminal justice system and being fearful for myself, I told them what they wanted to hear,” Deskovic said. Certain that DNA testing on the semen would establish his innocence, he added: “I thought it was all going to be okay in the end” (Santos, 2006, p. A1).

On the basis of anecdotal and research evidence, Kassir (2005) suggested the ironic hypothesis that *innocence* itself may put *innocents* at risk. Specifically, it appears that people who stand falsely accused tend to believe that truth and justice will prevail and that their innocence will become transparent to investigators, juries, and others. As a result, they cooperate fully with police, often failing to

realize that they are suspects not witnesses, by waiving their rights to silence and a lawyer and speaking freely to defend themselves. Thus, although mock criminals vary their disclosures according to whether the interrogator seems informed about the evidence, innocents are uniformly forthcoming—regardless of how informed the interrogator seems (Hartwig, Granhag, Strömwall, & Kronkvist, 2006; Hartwig, Granhag, Strömwall, & Vrij, 2005).

Based on observations of live and videotaped interrogations, Leo (1996b) found that four out of five suspects waive their rights and submit to questioning—and that people who have no prior record of crime are the most likely to do so. In light of known recidivism rates, this result suggested that innocent people in particular are at risk to waive their rights. Kassin and Norwick (2004) tested this hypothesis in a controlled laboratory setting in which some subjects but not others committed a mock theft of \$100. Upon questioning, subjects who were innocent were more likely to sign a waiver than those who were guilty, 81 to 36%. Afterward, most innocent subjects said that they waived their rights precisely because they were innocent: “I did nothing wrong,” “I had nothing to hide.” The feeling of reassurance that accompanies innocence may be rooted in a generalized and perhaps motivated belief in a just world in which human beings get what they deserve and deserve what they get (Lerner, 1980). It may also stem from the “illusion of transparency,” a tendency for people to overestimate the extent to which their true thoughts, emotions, and other inner states can be seen by others (Gilovich, Savitsky, & Medvec, 1998; Miller & McFarland, 1987). Whatever the mechanism, it is clear that *Miranda* warnings may not adequately protect the citizens who need it most—those accused of crimes they did not commit (Kassin, 2005).

These findings suggest that people have a naïve faith in the power of innocence to set them free. This phenomenology was evident in the classic case of Peter Reilly, an 18-year-old who falsely confessed to the murder of his mother. When asked years later why he did not invoke his *Miranda* rights, Reilly said, “My state of mind was that I hadn’t done anything wrong and I felt that only a criminal really needed an attorney, and this was all going to come out in the wash” (Connery, 1996, p. 93). Innocence may lead innocents to forego other important safeguards as well. Consider the case of Kirk Bloodsworth, the first death row inmate to be exonerated by DNA. In 1985, based solely on eyewitness identifications, Bloodsworth was convicted for the rape and murder of a 9-year-old girl. He was exonerated by DNA 8 years later and ultimately vindicated when the true perpetrator was identified. The day of his arrest, Bloodsworth was warned that there would be cameras present and asked if he wanted to cover his head with a

blanket. He refused, saying he did nothing wrong and was not going to hide—even though potential witnesses might see him on TV (Junkin, 2004).

THE CONSEQUENCES OF CONFESSION

It is inevitable that some number of innocent people will be targeted for suspicion and subjected to excessively persuasive interrogation tactics, and many of them will naively and in opposition to their own self-interest waive their rights and confess. One might argue that this unfortunate chain of events is tolerable, not tragic, to the extent that the resulting false confessions are detected by authorities at some point and corrected. Essential to this presumed safety net is the belief that police, prosecutors, judges, and juries are capable of distinguishing true and false confessions.

The process begins with the police. Numerous false confession cases reveal that once a suspect confesses, police often close their investigation, deem the case solved, and overlook exculpatory evidence or other possible leads—even if the confession is internally inconsistent, contradicted by external evidence, or the product of coercive interrogation (Drizin & Leo, 2004; Leo & Ofshe, 1998). This trust in confessions may extend to prosecutors as well, many of whom express skepticism about police-induced false confessions, stubbornly refusing to admit to such an occurrence even after DNA evidence has unequivocally established the defendant’s innocence (Findley & Scott, 2006; Hirsch, 2005b; Kassin & Gudjonsson, 2004). Upon confession, prosecutors tend to charge suspects with the highest number and types of offenses, set bail higher, and are far less likely to initiate or accept a plea bargain to a reduced charge (Drizin & Leo, 2004; Leo & Ofshe, 1998; but see Redlich, *in press*).

Part of the problem is that confessions can taint other evidence. In one case, for example, Pennsylvania defendant Barry Laughman confessed to rape and murder, which was later contradicted by blood typing evidence. Clearly influenced by the confession, the state forensic chemist went on to concoct four “theories,” none grounded in science, to explain away the mismatch. Sixteen years later, Laughman was set free (<http://www.innocenceproject.org>). Recent empirical studies have demonstrated the problem as well. In one 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 either by no extraneous information, an instruction that the suspect had confessed (suggesting a match), or an instruction that the suspect was in custody at the time (suggesting an exclusion). The misinformation

produced a change in 17% of the original, previously correct judgments. In a second study, Hasel and Kassin (2009) staged a theft and took photographic identification decisions from a large number of eyewitnesses who were present. One week later, individual witnesses were told that the person they had identified denied guilt, or that he confessed, or that a specific other lineup member confessed. Influenced by this information, many witnesses went on to change their identification decisions, selecting the confessor with confidence, when given the opportunity to do so.

Not surprisingly, confessions are particularly potent in the courtroom. When a suspect in the U.S. retracts his or her confession, pleads not guilty, and goes to trial, a sequence of two decisions is set into motion. First, a judge determines whether the confession was voluntary and hence admissible as evidence. Then a jury, hearing the admissible confession, determines whether the defendant is guilty beyond a reasonable doubt. But can people distinguish between true and false confessions? And what effect does this evidence have within the context of a trial?

Research on the impact of confessions throughout the criminal justice system is unequivocal. Mock jury studies have shown that confessions have more impact than other potent forms of evidence (Kassin & Neumann, 1997) and that people do not fully discount confessions—even when they are judged to be coerced (Kassin & Wrightsman, 1980) and even when the confessions are presented secondhand by an informant who is motivated to lie (Neuschatz, Lawson, Swanner, Meissner, & Neuschatz, 2008). For example, Kassin and Sukel (1997) presented mock jurors with one of three versions of a murder trial transcript. 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 in pain and interrogated aggressively by a detective who waved his gun in a menacing manner. 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 in a condition in which subjects were specifically admonished to disregard confessions they found to be coerced. Similar results have recently been reported in mock jury studies involving defendants who are minors (Redlich, Ghetti, & Quas, 2008; Redlich, Quas, & Ghetti, 2008).

This point concerning the power of confession evidence is bolstered by recent survey evidence indicating that although laypeople understand that certain interrogation tactics are psychologically coercive, they do not believe

that these tactics elicit false confessions (Leo & Liu, 2009). Archival analyses of actual cases also reinforce this point. When proven false confessors pleaded not guilty and proceeded to trial, the jury conviction rates ranged from 73% (Leo & Ofshe, 1998) to 81% (Drizin & Leo, 2004). These figures led Drizin and Leo 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).

There are at least three reasons why people cannot easily identify as false the confessions of innocent suspects. First, generalized common sense leads people to trust confessions the way they trust other behaviors that counter self-interest. Over the years, and across a wide range of contexts, social psychologists have found that social perceivers fall prey to the fundamental attribution error—that is, they tend to make dispositional attributions for a person's actions, taking behavior at face value, while neglecting the role of situational factors (Jones, 1990; Ross, 1977). Gilbert and Malone (1995) offered several explanations for this bias, the most compelling of which is that people draw quick and relatively automatic dispositional inferences from behavior and then fail to adjust or correct for the presence of situational constraints. Common sense further compels the belief that people present themselves in ways that are self-serving and that confessions must therefore be particularly diagnostic of guilt. Indeed, most people reasonably believe that they would never confess to a crime they did not commit and have only rudimentary understanding of the predispositional and situational factors that would lead someone to do so (Henkel, Coffman, & Dailey, 2008).

A second reason is that people are typically not adept at deception detection. We saw earlier that neither lay people nor professionals distinguish truths from lies at high levels of accuracy. This problem extends to judgments of true and false confessions. To demonstrate, Kassin, Meissner, and Norwick (2005) videotaped male prison inmates providing true confessions to the crimes for which they were incarcerated and concocting false confessions to crimes selected by the experimenter that they did not commit. When college students and police investigators later judged these statements from videotapes or audiotapes, the results showed that neither group was particularly adept, exhibiting accuracy rates that ranged from 42 to 64%—typically not much better than chance performance. These findings suggest people cannot readily distinguish true and false confessions and that law enforcement experience does not improve performance. This latter result is not surprising, as many of the behavioral cues that typically form part of the basis for training (e.g., gaze aversion, postural cues, and

grooming gestures) are not statistically correlated with truth-telling or deception (DePaulo et al., 2003).

On the assumption that “I’d know a false confession if I saw one,” there is a third reason for concern: Police-induced false confessions often contain *content* cues presumed to be associated with truthfulness. In many documented false confessions, the statements ultimately presented in court contained not only an admission of guilt but vivid details about the crime, the scene, and the victim that became known to the innocent suspect through leading questions, photographs, visits to the crime scene, and other secondhand sources invisible to the naïve observer. To further complicate matters, many false confessors state not just what they allegedly did, and how they did it, but *why*—as they self-report on revenge, jealousy, provocation, financial desperation, peer pressure, and other prototypical motives for crime. Some of these statements even contain apologies and expressions of remorse. To the naïve spectator, such statements appear to be voluntary, textured with detail, and the product of personal experience. Uninformed, however, this spectator mistakes illusion for reality, not realizing that the taped confession is scripted by the police theory of the case, rehearsed during hours of unrecorded questioning, directed by the questioner, and ultimately enacted on paper, tape, or camera by the suspect (see Kassir, 2006).

RECOMMENDATIONS FOR REFORM

Confession is a potent form of evidence that triggers a chain of events from arrest, prosecution, and conviction, through post-conviction resistance to change in the face of exculpatory information. Recent DNA exonerations have shed light on the problem that innocent people, confident in the power of their innocence to prevail, sometimes confess to crimes they did not commit. Research has identified two sets of risks factors. The first pertains to the circumstances of interrogation, situational factors such as a lengthy custody and isolation, possibly accompanied by a deprivation of sleep and other need states; presentations of false evidence, a form of trickery that is designed to link the suspect to the crime and lead him or her to feel trapped by the evidence; and minimization tactics that lead the suspect and others to infer leniency even in the absence of an explicit promise. The second set of risk factors pertains to dispositional characteristics that render certain suspects highly vulnerable to influence and false confessions—namely, adolescence and immaturity; cognitive and intellectual impairments; and personality characteristics and mental illness.

In light of the wrongful convictions involving false confessions that have recently surfaced, as well as

advances in psychological research on interviewing, interrogations, and confessions, there are renewed calls for caution regarding confessions and the reform of interrogation practices not seen since the Wickersham Commission Report (1931) and U.S. Supreme Court opinion in *Miranda* (1966). Professionals from varying perspectives may differ in their perceptions of both the problems and the proposed solutions. Hence, it is our hope that the recommendations to follow will inspire a true collaborative effort among law enforcement professionals, district attorneys, defense lawyers, judges, social scientists, and policy makers to scrutinize the systemic factors that put innocent people at risk and devise effective safeguards.

Electronic Recording of Interrogations

Without equivocation, our most essential recommendation is to lift the veil of secrecy from the interrogation process in favor of the principle of transparency. 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*. Stated as a matter of requirement, such a policy evokes strong resistance in some pockets of the law enforcement community. Yet it has also drawn advocates from a wide and diverse range of professional, ideological, and political perspectives (e.g., American Bar Association, 2004; Boetig, Vinson, & Weidel, 2006; Cassell, 1996a; Drizin & Colgan, 2001; Geller, 1994; Gudjonsson, 2003; Leo, 1996c; Slobogin, 2003; Sullivan, 2004; The Justice Project, 2007).

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 has positively transformed the ways in which police interviews are conducted and evaluated. Over the years, the need for taping has pressed for action within the U.S. as well. In *Convicting the Innocent*, a classic study of wrongful convictions, Edwin Borchard (1932) expressed concern that police abuses during interrogations led to involuntary and unreliable confessions. His solution, utilizing the technology of the time, was to make “[phonographic records] [of interrogations] which shall alone be introducible in court” (pp. 370–371).

Throughout the twentieth century, other advocates for recording were less concerned with preventing false confessions and more concerned with increasing the accuracy of the justice system by eliminating the swearing contests between police officers and suspects over what occurred during the interrogation (Kamisar, 1977; Weisberg, 1961). Still others saw that recording interrogations held

tremendous benefits for law enforcement by discouraging note-taking and other practices that could inhibit suspects, helping police officers obtain voluntary confessions, nabbing accomplices, and protecting officers from false allegations of abuse (Geller, 1993; O'Hara, 1956). Despite these calls for recording, by the turn of the twentieth century only two states, by virtue of state Supreme Court decisions—Alaska (*Stephan v. State*, 1985) and Minnesota (*State v. Scales*, 1994)—required law enforcement officers to electronically record suspect interrogations. The pace of reform in this area, however, is picking up and once again a concern about false confessions seems to be the impetus. In the post-DNA age, and particularly in the past 5 years, as the number of wrongful convictions based on false confessions has continued to climb, concerns about the reliability of confession evidence have led to a renewed push for recording requirements (Drizin & Reich, 2004). As a result of statutes and court rulings, seven additional jurisdictions—Illinois, Maine, New Mexico, New Jersey, Wisconsin, North Carolina, and the District of Columbia—have joined Minnesota and Alaska, in requiring recordings of custodial interrogations in some circumstances (Robertson, 2007; Sullivan, 2004). In several other states, supreme courts have stopped short of requiring recording but either have issued strongly worded opinions endorsing recording—e.g., New Hampshire (*State v. Barnett*, 2002) and Iowa (*State v. Hajtic*, 2007)—or, in the case of Massachusetts, held that where law enforcement officers have no excuse for the failure to record interrogation, defendants are entitled to a strongly worded instruction admonishing jurors to treat unrecorded confessions with caution (*Commonwealth v. DiGiambattista*, 2004).

In addition to recent developments in state courts and legislatures, there is a growing movement among law enforcement agencies around the country to record interrogations voluntarily. Over the past 70 years, the idea has been anathema to many in law enforcement—including the FBI, which prohibits electronic recording, and John Reid & Associates, which used to vigorously oppose the practice of recording interrogations (Inbau et al., 2001; but see Buckley & Jayne's [2005] recent publication, *Electronic Recording of Interrogations*; for an historical review, see Drizin & Reich, 2004). Yet there are now signs that police opposition is thawing (e.g., Boetig et al., 2006). Several years ago, a National Institute of Justice study found that one-third of large police and sheriff's departments throughout the U.S. were already videotaping at least some interrogations or confessions and that their experiences with the practice were positive (Geller, 1993). A more recent survey of more than 465 law enforcement agencies in states that do not require electronic recording of interrogations has revealed that the practice is widespread. Without any legislative or judicial compulsion, police

departments in many states routinely record interviews and interrogations in major felony investigations. Without exception, they have declared strong support for the practice (Sullivan, 2004; Sullivan, Vail, & Anderson, 2008).

There are numerous advantages to a videotaping policy. To begin, the presence of a camera may deter interrogators from using the most egregious, psychologically coercive tactics—and deter frivolous defense claims of coercion where none existed. Second, a videotaped record provides trial judges (ruling on voluntariness) and juries (determining guilt) an *objective* and *accurate* record of the process by which a statement was taken—a common source of dispute that results from ordinary forgetting and self-serving distortions in memory. In a study that demonstrates the problem, Lamb, Orbach, Sternberg, Hershkowitz, and Horowitz (2000) compared interviewers' verbatim contemporaneous accounts of 20 forensic interviews with alleged child sex abuse victims with tape recordings of these same sessions. Results showed that more than half of the interviewers' utterances and one quarter of the details that the children provided did not appear in their verbatim notes. Even more troubling was that interviewers made frequent and serious source attribution errors—for example, often citing the children, not their own prompting questions, as the source of details. This latter danger was inadvertently realized by D.C. Detective James Trainum (2007) who—in an article entitled “I took a false confession – so don't tell me it doesn't happen!”—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” (see also Trainum, 2008). Similarly, Police Commander Neil Nelson, of St. Paul, Minnesota, said that he too once elicited a false confession, which he came to doubt by reviewing the interrogation tape: “You realize maybe you gave too much detail as you tried to encourage him and he just regurgitated it back” (Wills, 2005; quoted online by Neil Nelson & Associates; <http://www.neilnelson.com/pressroom.html>).

To further complicate matters of recollection, police interrogations are not prototypical social interactions but, rather, extraordinarily stressful events for those who stand accused. In a study that illustrates the risk to accurate retrieval, Morgan et al. (2004) randomly assigned trainees in a military survival school to undergo a realistic high-stress or low-stress mock interrogation. Twenty-four hours later, he found that those in the high-stress condition had

difficulty even identifying their interrogators in a lineup. In real criminal cases, questions constantly arise about whether rights were administered and waived, whether the suspect was cooperative or evasive, whether detectives physically intimidated the suspect, whether promises or threats were made or implied, and whether the details in a confession emanated from the police or suspect, are among the many issues that become resolvable (in Great Britain, as well, taping virtually eliminated the concern that police officers were attributing to suspects admissions that would later be disputed; see Roberts, 2007).

In recent years, Sullivan (2004, 2007) has tirelessly interviewed law enforcement officials from hundreds of police and sheriff's departments that have recorded custodial interrogations and found that they enthusiastically favored the practice. Among the collateral benefits they often cited were that recording permitted detectives to focus on the suspect rather than take copious notes, increased accountability, provided an instant replay of the suspect's statement that sometimes revealed incriminating comments that were initially overlooked, reduced the amount of time detectives spent in court defending their interrogation practices, and increased public trust in law enforcement. Countering the most common apprehensions, the respondents in these interview studies reported that videotaping interrogations did not prove costly or inhibit suspects from talking to police or incriminating themselves. Typical of this uniformly positive reaction, Detective Trainum (2007) notes: "When videotaping was first forced upon us by the D.C. City Council, we fought it tooth and nail. Now, in the words of a top commander, we would not do it any other way."

It is beyond the scope of this article to draft a model rule that would address such specific details as what conditions should activate a recording requirement, how the recordings should be preserved, whether exceptions to the rule should be made (e.g., if the equipment malfunctions, if the suspect refuses to make a recorded statement), and what consequences would follow from the failure to record (e.g., whether the suspect's statement would be excluded or admitted to the jury with a cautionary instruction). As a matter of policy, however, research does suggest that it is important not only that entire sessions be recorded, triggered by custodial detention, but that the camera adopt a neutral "equal focus" perspective that shows both the accused and his or her interrogators. In 20-plus years of research on illusory causation effects in attribution, Lassiter and his colleagues have taped mock interrogations from three different camera angles so that the suspect, the interrogator, or both were visible. 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 thus lead

jurors to underestimate the amount of pressure actually exerted by the "hidden" detective (Lassiter & Irvine, 1986; Lassiter, Slaw, Briggs, & Scanlan, 1992). Additional studies have confirmed that people are more attuned to the situational factors that elicit confessions whenever the interrogator is on camera than when the focus is solely on the suspect (Lassiter & Geers, 2004; Lassiter, Geers, Munhall, Handley, & Beers, 2001). Under these more balanced circumstances, juries make more informed attributions of voluntariness and guilt when they see not only the final confession but the conditions under which it was elicited (Lassiter, Geers, Handley, Weiland, & Munhall, 2002). Indeed, even the perceptions of experienced trial judges are influenced by variations in camera perspective (Lassiter, Diamond, Schmidt, & Elek, 2007).

Reform of Interrogation Practices

In light of recent events, the time is ripe for police, district attorneys, defense lawyers, judges, researchers, and policymakers to evaluate current methods of interrogation. All parties would agree that the surgical objective of interrogation is to secure confessions from perpetrators but not from innocent suspects. Hence, the process of interrogation should be structured in theory and in practice to produce outcomes that are accurate, as measured by the observed ratio of true to false confessions. Yet except for physical brutality or deprivation, threats of harm or punishment, promises of leniency or immunity, and flagrant violations of a suspect's constitutional rights, there are no clear criteria by which to regulate the process. Instead, American courts historically have taken a "totality of the circumstances" approach to voluntariness and admissibility. Because *Miranda* does not adequately safeguard the innocent, we believe that the time is right to revisit the factors that comprise those circumstances.

As illustrated by the Reid technique and other similar approaches, the modern American police interrogation is, by definition, a guilt-presumptive and confrontational process—aspects of which put innocent people at risk. There are two ways to approach questions of reform. One is to completely reconceptualize this model at a macro level and propose that the process be converted from "confrontational" to "investigative." Several years ago, after a number of high-profile false confessions, the British moved in this direction, transitioning police from a classic interrogation to a process of "investigative interviewing." The Police and Criminal Evidence (PACE) Act of 1984 sought to reduce the use of psychologically manipulative tactics. In a post-PACE study, Irving and McKenzie (1989) found that the use of psychologically manipulative tactics had significantly declined—without a corresponding drop in the frequency of confessions. The post-PACE confession rate

is also somewhat higher in the UK than in the U.S. (Gudjonsson, 2003). In 1993, the Royal Commission on Criminal Justice further reformed the practice of interrogation by proposing the PEACE model described earlier (“Preparation and Planning,” “Engage and Explain,” “Account,” “Closure,” and “Evaluate”), the purpose of which is fact finding rather than confession. Observational research suggests that such investigative interviews enable police to inculcate offenders—and youthful suspects as well (Hershkowitz, Horowitz, Lamb, Orbach, & Sternberg, 2004; Lamb, Orbach, Hershkowitz, Horowitz, & Abbott, 2007)—by obtaining from them useful, evidence-generating information about the crime (for reviews, see Bull & Soukara, 2009; Williamson, 2006).

Similar techniques have been taught and employed in the U.S. as well, where Nelson (2007) reports from experience that it is highly effective. Recent laboratory research has also proved promising in this regard. In one series of experiments, interviewers more effectively exposed deceptive mock criminals when they strategically withheld incriminating evidence than when they confronted the suspects with that evidence (Hartwig et al., 2005, 2006). In an experiment using the Russano et al. (2005) cheating paradigm described earlier, Rigoni and Meissner (2008) independently varied and compared accusatorial and inquisitorial methods and found that the latter produced more diagnostic outcomes—lowering the rate of false confessions without producing a corresponding decrease in the rate of true confessions. Although more systematic research is needed, it is clear that investigative interviewing offers a potentially effective macro alternative to the classic American interrogation. Indeed, New Zealand and Norway have recently adopted the PEACE approach to investigative interviewing as a matter of national policy.

A second approach to the question of reform is to address specific risk factors inherent within a confrontational framework for interrogation. On the basis of converging evidence from actual false confession cases, basic principles of psychology, and forensic research, the existing literature suggests that certain interrogation practices alone and in combination with each other pose a risk to the innocent—whether they are dispositionally vulnerable or not. Focused in this way, but stopping short of making specific recommendations, we propose that the following considerations serve as a starting point for collaborative discussion.

Custody and Interrogation Time

As noted earlier, the human needs for belonging, affiliation, and social support, especially in times of stress, are a fundamental human motive. Prolonged isolation from significant others thus constitutes a form of deprivation that

can heighten a suspect’s distress and increase his or her incentive to escape the situation. Excessive time in custody may also be accompanied by fatigue and feelings of helplessness and despair as well as the deprivation of sleep, food, and other biological needs. The vast majority of interrogations last from 30 minutes up to 2 hours (Baldwin, 1993; Irving, 1980; Kassin et al., 2007; Leo, 1996b; Wald et al., 1967). Inbau et al. (2001) cautioned against surpassing 4 hours, and Blair (2005) argued that interrogations exceeding 6 hours are “legally coercive.” Yet research shows that in proven false confession cases the interrogations had lasted for an average of 16.3 hours (Drizin & Leo, 2004). Following PACE in Great Britain, 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 from questioning for rest and meals. 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 needed—only with authorization from a supervisor of detectives.

Presentations of False Evidence

A second problem concerns the tactic of presenting false evidence, which is often depicted as incontrovertible, and which takes the form of outright lying to suspects—for example, about an eyewitness identification that was not actually made; an alibi who did not actually implicate the suspect; fingerprints, hair, or blood that was not actually found; or polygraph tests that they did not actually fail. In *Frazier v. Cupp* (1969), the U.S. Supreme Court reviewed a case in which police falsely told the defendant that his cousin (whom he said he was with), had confessed, which immediately prompted the defendant to confess. The Court sanctioned this type of deception—seeing it as relevant to its inquiry on voluntariness but not a reason to disqualify the resulting confession. Although some state courts have distinguished between mere false assertions, which are permissible, and the fabrication of reports, tapes, and other evidence, which are not, the Supreme Court has not revisited the issue.

From a convergence of three sources, there is strong support for the proposition that outright lies can put innocents at risk to confess by leading them to feel trapped by the inevitability of evidence against them. These three sources are: (1) the aggregation of actual false confession cases, many of which involved use of the false evidence ploy; (2) one hundred-plus years of basic psychology research, which proves without equivocation that misinformation can substantially alter people’s visual perceptions, beliefs, motivations, emotions, attitudes, memories, self-assessments, and even certain physiological outcomes, as seen in

studies of the placebo effect; and (3) numerous experiments, from different laboratories, demonstrating that presentations of false evidence increase the rate at which innocent research participants agree to confess to prohibited acts they did not commit. As noted earlier, scientific evidence for the malleability of people's perceptions, decisions, and behavior when confronted with misinformation is broad and pervasive. With regard to a specific variant of the problem, it is also worth noting that the National Research Council Committee to Review the Scientific Evidence on the Polygraph (2003) recently expressed concern over the risk of false confessions produced by telling suspects they had failed the polygraph (see also Lykken, 1998).

Over the years, legal scholars have debated the merits of trickery and deception in the interrogation room (e.g., Magid, 2001; Slobogin, 2007; Thomas, 2007) and some law enforcement professionals have argued that lying is sometimes a necessary evil, effective, and without risk to the innocent (Inbau et al., 2001). To this argument, two important points must be noted. First, direct observations and self-report surveys of American police suggest that the presentation of false evidence is a tactic that is occasionally used (e.g., Feld, 2006a, 2006b; Kassin et al., 2007; Leo, 1996b). Some interrogators no doubt rely on this ploy more than others do. Yet in a position paper on false confessions, the Wisconsin Criminal Justice Study Commission (2007) concluded that "Experienced interrogators appear to agree that false evidence ploys are relatively rare" (p. 6). Second, it is instructive that in Great Britain, where police have long been prohibited from deceiving suspects about the evidence, relying instead on the investigative interviewing tactics described earlier, there has been no evidence of a decline in confession rates (Clarke & Milne, 2001; Gudjonsson, 2003; Williamson, 2006).

In light of the demonstrated risks to the innocent, we believe that the false evidence ploy, which is designed to thrust suspects into a state of inevitability and despair, should be addressed. The strongest response would be an outright ban on the tactic, rendering all resulting confessions per se inadmissible—as they are if elicited by promises, threats, and physical violence (such a ban currently exists in England, Iceland, and Germany; suspects are differently protected in Spain and Italy, where defense counsel must be present for questioning). A second approach, representing a relatively weak response, would involve calling for no direct action, merely a change of attitude in light of scientific research that will lead the courts to weigh the false evidence ploy more heavily when judging voluntariness and reliability according to a "totality of the circumstances."

Representing a compromise between an outright ban and inaction, we urge police, prosecutors, and the courts, in light of past wrongful convictions and empirical research,

to heighten their sensitivity to the risks that false evidence poses to the innocent suspect. One way to achieve this compromise would be to curtail some variants of the false evidence ploy but not others—or in the case of some suspects but not others. As noted earlier, some state courts have distinguished between mere false assertions and the fabrication of reports, tapes, photographs, and other evidence, the latter being impermissible. This particular distinction seems arbitrary. False evidence puts innocents at risk to the extent that a suspect is vulnerable (e.g., by virtue of his or her youth, naiveté, intellectual deficiency, or acute emotional state) and to the extent that the alleged evidence it is presented as incontrovertible, sufficient as a basis for prosecution, and impossible to overcome. By this criterion, which the courts would have to apply on a case-by-case basis, a confession produced by telling an adult suspect that his cousin had confessed, the ploy used in *Frazier v. Cupp* (1969), might well be admissible. Yet a confession produced by telling a traumatized 14-year-old boy that his hair was found in his murdered sister's grasp, that her blood was found in his bedroom, and that he failed an infallible lie detector test—the multiple lies presented to false confessor Michael Crowe—would be excluded (White, 2001).

Minimization Tactics

A third area of concern involves the use of minimization techniques (often called "themes," "scenarios," or "inducements") that can communicate promises of leniency indirectly through pragmatic implication. While American federal constitutional law has long prohibited the use of explicit promises of leniency (*Bram v. United States*, 1897; *Leyra v. Denno*, 1954; *Lynnum v. Illinois*, 1963), uses of minimization are less clear. There is some legal support for the proposition that implicit promises of leniency are also prohibited in federal constitutional law (White, 1997), although a majority of states hold that a promise of leniency is only one factor to be considered in determining whether a confession is involuntary (White, 2003).

Multiple sources support the proposition that implicit promises can put innocents at risk to confess by leading them to perceive that the only way to lessen or escape punishment is by complying with the interrogator's demand for confession, especially when minimization is used on suspects who are also led to believe that their continued denial is futile and that prosecution is inevitable. These sources are: (1) the aggregation of actual false confession cases, the vast majority of which involved the use of minimization or explicit promises of leniency (Drizin & Leo, 2004; Leo & Ofshe, 1998; Ofshe & Leo, 1997a, 1997b; White, 2001); (2) basic psychological

research indicating, first, that people are highly responsive to reinforcement and make choices designed to maximize their outcomes (Hastie & Dawes, 2001), and second that people can infer certain consequences in the absence of explicit promises and threats by pragmatic implication (Chan & McDermott, 2006; Harris & Monaco, 1978; Hilton, 1995); and (3) experiments specifically demonstrating that minimization increases the rate at which research participants infer leniency in punishment and confess, even if they are innocent (Kassin & McNall, 1991; Klaver, Lee, & Rose, 2008; Russano et al., 2005).

In light of the demonstrated risks to the innocent, we believe that techniques of minimization, as embodied in the “themes” that interrogators are trained to develop, which communicate promises of leniency via pragmatic implication, should be scrutinized. Some law enforcement professionals have argued that minimization is a necessary interrogation technique (Inbau et al., 2001). As with the false evidence ploy, there are several possible approaches to the regulation of minimization techniques—ranging from the recommendation that no action be taken to an outright ban on minimization. Between these extreme positions one might argue that some uses of minimization but not others should be limited or modified.

Minimization techniques come in essentially three forms: those that minimize the *moral* consequences of confessing, those that minimize the *psychological* consequences of confessing, and those that minimize the *legal* consequences of confessing (Inbau et al., 2001; Ofshe & Leo, 1997a, 1997b). One possible compromise between the two extreme positions noted above would be to permit moral and psychological forms of minimization, but ban legal minimization that communicates promises of leniency via pragmatic implication. With this distinction in mind, interrogators would be permitted, for example, to tell a suspect that he or she will feel better after confession (psychological minimization) or that he or she is still a good person (moral minimization), but not that the legal consequences of his actions will be minimized if he confesses (e.g., as may be implied by self-defense and other themes). More research is thus needed to distinguish among the different tactics that interrogators are trained to use (e.g., the provocation, peer pressure, and accident scenarios), and the pragmatic inferences that these tactics lead suspects to draw concerning the consequences of confession.

Protection of Vulnerable Suspect Populations

There is a strong consensus among psychologists, legal scholars, and practitioners that juveniles and individuals with cognitive impairments or psychological disorders are particularly susceptible to false confession under pressure. Yet little action has been taken to modulate the methods by

which these vulnerable groups are questioned when placed into custody as crime suspects. More than 45 years ago, the 1962 President’s Panel on Mental Retardation questioned whether confessions from defendants with mental retardation should ever be admissible at trial (see Appelbaum & Appelbaum, 1994). In 1991, Fred Inbau wrote that “special protections must be afforded to juveniles and to all other persons of below-average intelligence, to minimize the risk of untruthful admissions due to their vulnerability to suggestive questioning” (1991, pp. 9–10). More recently, Inbau et al. (2001) advised against use of the false evidence ploy with youthful suspects or those with diminished mental capacity: “These suspects may not have the fortitude or confidence to challenge such evidence and, depending on the nature of the crime, may become confused as to their own possible involvement” (p. 429; also see Buckley, 2006).

It is uniformly clear to all parties that vulnerable suspect populations—namely, juveniles and people who are cognitively impaired or psychologically disordered—need to be protected in the interrogation room. In operational terms, we believe that there are two possible ways to protect these vulnerable populations. The first concerns the mandatory presence of an attorney. A least with regard to juveniles, a parent, guardian, or other interested adult is required in some states to protect young suspects who face interrogation. Yet research suggests that the presence of an interested adult does not increase the rate at which juveniles assert their constitutional rights because these adults, often passive, frequently urge their youths to cooperate with police—a tendency observed both in the U.S. (Grisso & Ring, 1979; Oberlander & Goldstein, 2001) and in the UK, where the law provides for access to an “appropriate adult” (Pearse & Gudjonsson, 1996). For this reason, juveniles—at least those under the age of 16 (at present, the research evidence is less clear when it comes to older adolescents)—should be accompanied and advised by a professional advocate, preferably an attorney, trained to serve in this role (see Gudjonsson, 2003).

As a second possible means of protection, law enforcement personnel who conduct interviews and interrogations should receive special training—not only on the limits of human lie detection, false confessions, and the perils of confirmation biases—but on the added risks to individuals who are young, immature, mentally retarded, psychologically disordered, or in other ways vulnerable to manipulation. In a survey of 332 Baltimore police officers, Meyer and Reppucci (2007) found that while respondents understood in general terms that adolescents lack maturity of judgment and are more malleable than adults, they did not by implication believe that juvenile suspects were at greater risk in the interrogation room. Hence, they reported using roughly the same Reid-like techniques with juveniles

as they do with adults (e.g., confrontation, repetition, refusal to accept denials, false evidence, minimization, and use of alternative questions). Interestingly, one-third of these respondents stated that police could benefit from special training with regard to the interrogation of juvenile suspects. In light of research described earlier, as well as Inbau et al.'s (2001) cautionary notes on the interrogation of minors and their heightened risk for false confession, we agree.

Summary and 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.” Today’s generation of post-conviction exonerations well illustrate the role that sheer good luck plays (e.g., as when DNA, long ago collected, was preserved; as when the true perpetrator finds a conscience and comes forward). With increased scientific attention to the problem of false confessions, and the reforms recommended in this article, we believe it possible to reduce the serendipitous nature of these discoveries and to increase both the diagnosticity of suspects’ statements and the ability of police, prosecutors, judges, and juries to make accurate decisions on the basis of these statements.

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REFERENCES

- Abram, K. M., Teplin, L. A., & McClelland, G. M. (2003). Comorbidity of severe psychiatric disorders and substance use disorders among women in jail. *American Journal of Psychiatry*, *160*, 1007–1010.
- Abramovitch, R., Higgins-Biss, K., & Biss, S. (1993). Young persons’ comprehension of waivers in criminal proceedings. *Canadian Journal of Criminology*, *35*, 309–322.
- Abramovitch, R., Peterson-Badali, M., & Rohan, M. (1995). Young people’s understanding and assertion of their rights to silence and legal counsel. *Canadian Journal of Criminology*, *37*, 1–18.
- American Bar Association. (2004). *Resolution 8A—Videotaping custodial interrogations*. Approved February 9, 2004.
- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders-IV*. Washington, DC: American Psychiatric Association.
- Anderson, C. A., Lepper, M. R., & Ross, L. (1980). Perseverance of social theories: The role of explanation in the persistence of discredited information. *Journal of Personality and Social Psychology*, *39*, 1037–1049.
- Anderson, S. D., & Hewitt, J. (2002). The effect of competency restoration training on defendants with mental retardation found not competent to proceed. *Law and Human Behavior*, *26*, 343–351.
- Appelbaum, K. L., & Appelbaum, P. S. (1994). Criminal justice-related competencies in defendants with mental retardation. *Journal of Psychiatry and Law*, *22*, 483–503.
- Arizona v. Fulminante, 499 U.S. 279 (1991).
- Aronson, E. (1999). *The social animal*. New York: Worth/Freeman.
- Asch, S. E. (1956). Studies of independence and conformity: A minority of one against a unanimous majority. *Psychological Monographs*, *70*, 416.
- Atkins v. Virginia, 536, U.S. 304 (2002).
- Ayling, C. J. (1984). Corroborating false confessions: An empirical analysis of legal safeguards against false confessions. *Wisconsin Law Review*, *1984*, 1121–1204.
- Baker, F., Johnson, M. W., & Bickel, W. K. (2003). Delay discounting differs between current and never-smokers across commodities, sign, and magnitudes. *Journal of Abnormal Psychology*, *112*, 382–392.
- Baldwin, J. (1993). Police interview techniques: Establishing truth or proof? *British Journal of Criminology*, *33*, 325–352.
- Baumeister, R. F., & Leary, M. R. (1996). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497–529.
- Bedau, H. A., & Radelet, M. L. (1987). Miscarriages of justice in potentially capital cases. *Stanford Law Review*, *40*, 21–179.
- Bem, D. J. (1966). Inducing belief in false confessions. *Journal of Personality and Social Psychology*, *3*, 707–710.
- Bickel, W. K., & Marsch, L. A. (2001). Toward a behavioral economic understanding of drug dependence: Delay discounting processes. *Addiction*, *96*, 73–86.
- Bickel, W. K., Odum, A. L., & Madden, G. L. (1999). Impulsivity and cigarette smoking: Delay discounting in current, never, and ex-smokers. *Psychopharmacology*, *146*, 447–454.
- Billings, F. J., Taylor, T., Burns, J., Corey, D. L., Garven, S., & Wood, J. M. (2007). Can reinforcement induce children to falsely incriminate themselves? *Law and Human Behavior*, *31*, 125–139.
- 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.
- Boetig, B. P., Vinson, D. M., & Weidel, B. R. (2006). Revealing incommunicado. *FBI Law Enforcement Bulletin*, *75*(12), 1–8.
- 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*. New Haven, CT: Yale University Press.
- Bram v. United States, 168 U.S. 532 (1897).
- Brewer, W. F. (1977). Memory for pragmatic implications of sentences. *Memory and Cognition*, *5*, 673–678.
- Brown v. Mississippi, 297 U.S. 278 (1936).
- Brown, W. A. (1998). The placebo effect. *Scientific American*, *278*, 90–95.
- Buckley, D. M., & Jayne, B. C. (2005). *Electronic recording of interrogations*. Eagle River, WI: Hahn Printing, Inc.
- Buckley, J. (2006). The Reid technique of interviewing and interrogation. In T. Williamson (Ed.), *Investigative interviewing: Rights, research, regulation* (pp. 190–206). Devon, UK: Willan.

- Bull, R., & Soukara, S. (2009). A set of studies of what really happens in police interviews with suspects. In G. D. Lassiter & C. A. Meissner (Eds.), *Interrogations and confessions: Research, practice, and policy*. Washington, DC: American Psychological Association.
- Caldwell, J. A., Caldwell, J. L., Brown, D. L., & Smith, J. K. (2004). The effects of 37 hours of continuous wakefulness on the physiological arousal, cognitive performance, self-reported mood, and simulator flight performance of F-117A pilots. *Military Psychology, 16*, 163–181.
- Candel, I., Merckelbach, H., Luyen, 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.
- Cassell, P. G. (1996a). Miranda's social costs: An empirical reassessment. *Northwestern University Law Review, 90*, 387–499.
- Cassell, P. G. (1996b). All benefits, no costs: The grand illusion of Miranda's defenders. *Northwestern University Law Review, 90*, 1084–1124.
- Cassell, P. G., & Hayman, B. S. (1996). Police interrogation in the 1990s: An empirical study of the effects of Miranda. *UCLA Law Review, 43*, 839–931.
- Chan, J. C. K., & McDermott, K. B. (2006). Remembering pragmatic inferences. *Applied Cognitive Psychology, 20*, 633–639.
- Cialdini, R. B. (2001). *Influence: Science and practice* (4th ed.). Needham Heights, MA: Allyn & Bacon.
- Clare, I., & Gudjonsson, G. H. (1991). Recall and understanding of the caution and rights in police detention among persons of average intellectual ability and persons with a mild mental handicap. *Issues in Criminological and Legal Psychology, 1*, 34–42.
- 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.
- Clarke, C., & Milne, R. (2001). *National evaluation of the PEACE investigative interviewing course. Police Research Award Scheme*. London: Home Office.
- Cloud, M., Shepard, G. B., Barkoff, A. N., & Shur, J. V. (2002). Words without meaning: The Constitution, confessions, and mentally retarded suspects. *University of Chicago Law Review, 69*, 495–624.
- Colorado v. Connelly, 479 U.S. 157 (1986).
- Colwell, L., Cruise, K., Guy, L., McCoy, W., Fernandez, K., & Ross, H. (2005). The influence of psychosocial maturity on male juvenile offenders' comprehension and understanding of the Miranda warning. *Journal of the American Academy of Psychiatry and Law, 33*, 444–454.
- Commonwealth v. DiGiambattista, 813 N.E.2d 516 (Mass. 2004).
- Connery, D. S. (Ed.). (1996). *Convicting the innocent*. Cambridge, MA: Brookline.
- Cooper, V. G., & Zapf, P. A. (2008). Psychiatric patients' comprehension of Miranda rights. *Law and Human Behavior, 32*, 390–405.
- Crocker, J., Voelkl, K., Testa, M., & Major, B. (1991). Social stigma: The affective consequences of attributional ambiguity. *Journal of Personality and Social Psychology, 60*, 218–228.
- Davis, D., & O'Donahue, W. (2004). The road to perdition: Extreme influence tactics in the interrogation room. In W. O'Donahue (Ed.), *Handbook of forensic psychology* (pp. 897–996). San Diego, CA: Academic Press.
- Deluty, M. Z. (1978). Self-control and impulsiveness involving aversive events. *Journal of Experimental Psychology: Animal Behavior Processes, 4*, 250–266.
- DePaulo, B. M., Lindsay, J. J., Malone, B. E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). Cues to deception. *Psychological Bulletin, 129*, 74–112.
- Dickerson v. United States, 530 U.S. 428 (2000).
- Donahue, J. (1998). Did *Miranda* diminish police effectiveness. *Stanford Law Review, 50*, 1147–1180.
- Doyle, J. (2005). *True witness: Cops, courts, science, and the battle against misidentification*. New York: Palgrave Macmillan.
- Drizin, S. A., & Colgan, B. A. (2001). Let the cameras roll: Mandatory videotaping of interrogations is the solution to Illinois' problem of false confessions. *Loyola University Chicago Law Journal, 32*, 337–424.
- Drizin, S. A., & Colgan, B. (2004). Tales from the juvenile confession front: A guide to how standard police interrogation tactics can produce coerced and false confessions from juvenile suspects. In G. D. Lassiter (Ed.), *Interrogations, confessions, and entrapment* (pp. 127–162). New York: Kluwer Academic/Plenum.
- Drizin, S. A., & Leo, R. A. (2004). The problem of false confessions in the post-DNA world. *North Carolina Law Review, 82*, 891–1007.
- Drizin, S. A., & Reich, M. J. (2004). Heeding the lessons of history: The need for mandatory recording of police interrogations to accurately assess the reliability and voluntariness of confessions. *Drake Law Review, 52*, 619–646.
- Dror, I. E., & Charlton, D. (2006). Why experts make errors. *Journal of Forensic Identification, 56*, 600–616.
- Egan, C. (2006, February 22). A murderer no more. *The Australian Newspaper*, p. 13.
- Escobedo v. Illinois, 378 U.S. 478 (1964).
- Everington, C., & Fulero, S. (1999). Competence to confess: Measuring understanding and suggestibility of defendants with mental retardation. *Mental Retardation, 37*, 212–220.
- Faigman, D. L., Kaye, D. H., Saks, M. J., & Sanders, J. (2002). *Science in the law: Forensic science issues*. St. Paul, MN: West.
- Feeney, F. (2000). Police clearances: A poor way to measure the impact of *Miranda* on the police. *Rutgers Law Review, 32*, 1–114.
- Feld, B. (1999). *Bad kids: Race and the transformation of the juvenile court*. New York: Oxford University Press.
- Feld, B. (2006a). Juveniles' competence to exercise Miranda rights: An empirical study of policy and practice. *Minnesota Law Review, 91*, 26–100.
- Feld, B. (2006b). Police interrogations of juveniles: An empirical study of policy and practice. *Journal of Criminal Law and Criminology, 97*, 219–316.
- Findley, K. A., & Scott, M. S. (2006). The multiple dimensions of tunnel vision in criminal cases. *Wisconsin Law Review, 2006*, 291–397.
- Firstman, R., & Salpeter, J. (2008). *A criminal injustice: A true crime, a false confession, and the fight to free Marty Tankleff*. New York: Ballantine Books.
- Fisher, R. P., & Geiselman, R. E. (1992). *Memory enhancing techniques for investigative interviewing: The cognitive interview*. Springfield, IL: Thomas.
- Forrest, K. D., Wadkins, T. A., & Miller, R. L. (2002). The role of preexisting stress on false confessions: An empirical study. *Journal of Credibility Assessment and Witness Psychology, 3*, 23–45.
- Frank, J., & Frank, B. (1957). *Not guilty*. New York: Doubleday.
- Frazier v. Cupp, 394 U.S. 731 (1969).
- Fulero, S., & Everington, C. (1995). Assessing competency to waive Miranda rights in defendants with mental retardation. *Law and Human Behavior, 19*, 533–545.
- Fulero, S., & Everington, C. (2004). Mental retardation, competency to waive Miranda rights, and false confessions. In G. D. Lassiter

- (Ed.), *Interrogations, confessions, and entrapment* (pp. 163–179). New York: Kluwer Academic/Plenum.
- Gall, J. A., & Freckelton, I. (1999). Fitness for interview: Current trends, views and an approach to the assessment procedure. *Journal of Clinical Forensic Medicine*, 6, 213–223.
- Garner, B. A. (Ed.). (2004). *Black's law dictionary* (8th ed.). Eagan, MN: West.
- Garrett, B. (2008). Judging innocence. *Columbia Law Review*, 108, 55–142.
- Garven, S., Wood, J. M., & Malpass, R. S. (2000). Allegations of wrongdoing: The effects of reinforcement on children's mundane and fantastic claims. *Journal of Applied Psychology*, 85, 38–49.
- Geller, W. A. (1993). *Videotaping interrogations and confessions: National Institute of Justice Research in Brief*. Washington, DC: U.S. Department of Justice.
- Geller, W. A. (1994, January). Videotaping interrogations and confessions. *FBI Law Enforcement Bulletin*.
- Gilbert, D. T., & Malone, P. S. (1995). The correspondence bias. *Psychological Bulletin*, 117, 21–38.
- Gilovich, T., Savitsky, K., & Medvec, V. H. (1998). The illusion of transparency: Biased assessments of others' ability to read one's emotional states. *Journal of Personality and Social Psychology*, 75, 332–346.
- Gohara, M. (2006). A lie for a lie: False confessions and the case for reconsidering the legality of deceptive interrogation techniques. *Fordham Urban Law Journal*, 33, 791–842.
- Goldstein, N., Condie, L., Kalbeitzler, R., Osman, D., & Geier, J. (2003). Juvenile offenders' Miranda rights comprehension and self-reported likelihood of false confessions. *Assessment*, 10, 359–369.
- Gordon, N. J., & Fleisher, W. L. (2006). *Effective interviewing and interrogation techniques* (2nd ed.). San Diego, CA: Academic Press.
- Grano, J. D. (1994). *Confessions, truth, and the law*. Ann Arbor, MI: University of Michigan Press.
- Grisso, T. (1980). Juveniles' capacities to waive Miranda rights: An empirical analysis. *California Law Review*, 68, 1134–1166.
- Grisso, T. (1981). *Juveniles' waiver of rights: Legal and psychological competence*. New York: Plenum.
- Grisso, T. (1986). *Evaluating competencies. Forensic assessments and instruments*. New York: Plenum.
- Grisso, T. (1996). Society's retributive response to juvenile violence: A developmental perspective. *Law and Human Behavior*, 20, 229–247.
- Grisso, T., & Ring, J. (1979). Parents' attitudes toward juveniles' rights in interrogation. *Criminal Justice and Behavior*, 6, 221–226.
- Grisso, T., & Schwartz, R. (Eds.). (2000). *Youth on trial: A developmental perspective on juvenile justice*. Chicago: University of Chicago Press.
- Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., et al. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior*, 27(4), 333–363.
- 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.
- Gudjonsson, G. H. (1991). The effects of intelligence and memory on group differences in suggestibility and compliance. *Personality and Individual Differences*, 5, 503–505.
- Gudjonsson, G. H. (1992). *The psychology of interrogations, confessions, and testimony*. London: Wiley.
- Gudjonsson, G. H. (2003). *The psychology of interrogations and confessions: A handbook*. Chichester, England: Wiley.
- Gudjonsson, G. H. (2005). Fitness to be interviewed. In J. Payne-James, R. W. Byard, T. S. Corey, & C. Henderson (Eds.), *Encyclopedia of forensic and legal medicine* (Vol. 2, pp. 169–174). London: Elsevier.
- Gudjonsson, G. H. (2006). Disputed confessions and miscarriages of justice in Britain: Expert psychological and psychiatric evidence in the court of appeal. *The Manitoba Law Journal*, 31, 489–521.
- Gudjonsson, G. H., Clare, I., Rutter, S., & Pearse, J. (1993). *Persons at risk during interviews in police custody: The identification of vulnerabilities*. London: HMSO.
- Gudjonsson, G. H., & Clare, I. C. H. (1995). The relationship between confabulation and intellectual ability, memory, interrogative suggestibility, and acquiescence. *Personality and Individual Differences*, 3, 333–338.
- Gudjonsson, G. H., & Grisso, T. (2008). Legal competencies in relation to confession evidence. In A. R. Felthous & H. Sass (Eds.), *International handbook on psychopathic disorders and the law* (Vol. 2, pp. 177–187). New York: Wiley.
- 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). Deventer, The Netherlands: Kluwer.
- Gudjonsson, G. H., & MacKeith, J. A. C. (1994). Learning disability and the Police and Criminal Evidence Act of 1984. Protection during investigative interviewing: A video-recorded false confession to double murder. *Journal of Forensic Psychiatry*, 5, 35–49.
- Gudjonsson, G. H., & Sigurdsson, J. F. (1999). The Gudjonsson Confession Questionnaire-Revised (GCQ-R). Factor structure and its relationship with personality. *Personality and Individual Differences*, 27, 953–968.
- Gudjonsson, G. H., Sigurdsson, J. F., Asgeirsdottir, B. B., & Sigfusdottir, I. D. (2006). Custodial interrogation, false confession, and individual differences: A national study among Icelandic youth. *Personality and Individual Differences*, 41, 49–59.
- Gudjonsson, G. H., Sigurdsson, J. F., Asgeirsdottir, B. B., & Sigfusdottir, I. D. (2007a). Custodial interrogation: What are the background factors associated with claimed false confessions? *The Journal of Forensic Psychiatry and Psychology*, 18, 266–275.
- Gudjonsson, G. H., Sigurdsson, J. F., Asgeirsdottir, B. B., & Sigfusdottir, I. D. (in press). 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*.
- Gudjonsson, G. H., Sigurdsson, J. F., Bragason, O., Einarsson, E., & Valdimarsdottir, E. B. (2004). Confessions and denials and the relationship with personality. *Legal and Criminological Psychology*, 9, 121–133.
- Gudjonsson, G. H., Sigurdsson, J. F., & Einarsson, E. (2004). The role of personality in relation to confessions and denials. *Psychology, Crime and Law*, 10, 125–135.
- Gudjonsson, G. H., Sigurdsson, J. F., Einarsson, E., Bragason, O. O., & Newton, A. K. (2008). Interrogative suggestibility, compliance and false confessions among prison inmates and their relationship with attention deficit hyperactivity disorder (ADHD) symptoms. *Psychological Medicine*, 38, 1037–1044.
- Gudjonsson, G. H., Young, S., & Bramham, J. (2007b). Interrogative suggestibility in adults diagnosed with attention-deficit hyperactivity disorder (ADHD). A potential vulnerability during police questioning. *Personality and Individual Differences*, 43, 737–745.
- Haley v. Ohio, 332 U.S. 596 (1948).

- 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., 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.
- Hartwig, M., Granhag, P. A., Strömwall, L., & Vrij, A. (2005). Detecting deception via strategic closure of evidence. *Law and Human Behavior*, *29*, 469–484.
- Hasel, L. E., & Kassin, S. M. (2009). On the presumption of evidentiary independence: Can confessions corrupt eyewitness identifications? *Psychological Science*, *20*, 122–126.
- Hastie, R., & Dawes, R. (2001). *Rational choice in an uncertain world: The psychology of judgment and decision-making*. Thousand Oaks, CA: Sage.
- Henkel, L. A., Coffman, K. A. J., & Dailey, E. M. (2008). A survey of people's attitudes and beliefs about false confessions. *Behavioral Sciences and the Law*, *26*, 555–584.
- 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*. New York: Russell Sage Foundation.
- Hershkowitz, I., Horowitz, D., Lamb, M. E., Orbach, Y., & Sternberg, K. J. (2004). Interviewing youthful suspects in alleged sex crimes: A descriptive analysis. *Child Abuse and Neglect*, *28*, 423–438.
- 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.
- Hirsch, A. (2005a). Threats, promises, and false confessions: Lessons of slavery. *Howard Law Journal*, *49*, 31–60.
- Hirsch, A. (2005b). The tragedy of false confessions and a common sense proposal (book review). *North Dakota Law Review*, *81*, 343–350.
- Home Office. (1985). *Police and Criminal Evidence Act 1984*. London: HMSO.
- Home Office. (2003). *Police and Criminal Evidence Act 1984. Codes of Practice A-E Revised Edition*. London: HMSO.
- Hopkins, E. J. (1931). *Our lawless police: A study of the unlawful enforcement of the law*. New York: Viking Press.
- Hopt v. Utah, 110 U.S. 574 (1884).
- Horselenberg, R., Merckelbach, H., & Josephs, S. (2003). Individual differences and false confessions: A conceptual replication of Kassin and Kiechel (1996). *Psychology, Crime and Law*, *9*, 1–18.
- 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.
- Hourihan, P. (1995). Earl Washington's confession: Mental retardation and the law of confessions. *Virginia Law Review*, *81*, 1473–1501.
- Haynes v. Washington*, 373 U.S. 503 (1963).
- In re Gault*, 387 U.S. 1 (1967).
- Inbau, F. E. (1991). Miranda's immunization of low intelligence offenders. *The Prosecutor: Journal of the National District Attorney's Association*, *24*(Spring), 9–10.
- Inbau, F. E., Reid, J. E., Buckley, J. P., & Jayne, B. C. (2001). *Criminal interrogation and confessions* (4th ed.). Gaithersburg, MD: Aspen.
- Inglis, T. (2004). *Truth power and lies: Irish society and the case of the Kerry babies*. Dublin: University College Dublin Press.
- Irving, B. (1980). *Police interrogation. A case study of current practice. Research Studies No 2*. London: HMSO.
- Irving, B., & McKenzie, I. K. (1989). *Police interrogation: The effects of the Police and Criminal Evidence Act*. London: Police Foundation G.B.
- James, D. J., & Glaze, L. E. (2006). *Mental health problems of prison and jail inmates*. Washington, DC: U.S. Dept of Justice, Office of Justice Programs, Bureau of Justice Statistics.
- Jones, E. E. (1990). *Interpersonal perception*. New York: Freeman.
- Junkin, T. (2004). *Bloodsworth: The true story of the first death row inmate exonerated by DNA*. Chapel Hill, NC: Algonquin Books.
- The Justice Project. (2007). *Electronic recording of custodial interrogations: A policy review*. Washington, DC: The Justice Project.
- Kahn, J. (2005, September 21). Deep flaws, and little justice, in China's court system. *The New York Times*.
- Kahn, R., Zapf, P., & Cooper, V. (2006). Readability of Miranda warnings and waivers: Implications for evaluating Miranda comprehension. *Law & Psychology Review*, *30*, 119–142.
- Kamisar, Y. (1963). What is an "involuntary" confession? Some comments on Inbau and Reid's criminal interrogation and confessions. *Rutgers Law Review*, *17*, 728–732.
- Kamisar, Y. (1977). Foreword: Brewer v. Williams—A hard look at a discomfiting record. *Georgetown Law Journal*, *66*, 209–243.
- Karlsen, C. F. (1989). *The devil in the shape of a woman: Witchcraft in colonial New England*. New York: Vintage.
- Kassin, S. M. (1997). The psychology of confession evidence. *American Psychologist*, *52*, 221–233.
- Kassin, S. M. (2002, November 1). False confessions and the jogger case. *New York Times*, p. A31.
- Kassin, S. M. (2005). On the psychology of confessions: Does innocence put innocents at risk? *American Psychologist*, *60*, 215–228.
- Kassin, S. M. (2006). A critical appraisal of modern police interrogations. In T. Williamson (Ed.), *Investigative interviewing: Rights, research, regulation* (pp. 207–228). Devon, UK: Willan.
- Kassin, S. M. (2008). False confessions: Causes, consequences, and implications for reform. *Current Directions in Psychological Science*, *17*(4), 249–253.
- 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., Leo, R. A., Meissner, C. A., Richman, K. D., Colwell, L. H., Leach, A.-M., et al. (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. M., & Neumann, K. (1997). On the power of confession evidence: An experimental test of the “fundamental difference” hypothesis. *Law and Human Behavior*, 21, 469–484.
- 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., & 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). Beverly Hills, CA: Sage.
- The King v. Warrickshall (1793), 168 Eng. Rep. 234, 234-35 (K.B. 1783).
- 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.
- Kollins, S. H. (2003). Delay discounting is associated with substance use in college students. *Addictive Behaviors*, 28, 1167–1173.
- Lamb, H. R., & Weinberger, L. E. (1998). Persons with severe mental illness in jails and prisons: A review. *Psychiatric Services*, 49, 483–492.
- Lamb, M. E., Orbach, Y., Hershkowitz, I., Horowitz, D., & Abbott, C. B. (2007). Does the type of prompt affect the accuracy of information provided by alleged victims of abuse in forensic interviews? *Applied Cognitive Psychology*, 21, 1117–1130.
- 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.
- Lambert, B. (2008, July 1). Freed after 17 years in prison, L.I. man will not face new trial. *The New York Times*, p. A1.
- Lassiter, G. D. (Ed.). (2004). *Interrogations, confessions, and entrapment*. New York: Kluwer Academic.
- 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.
- Lassiter, G. D., & Geers, A. L. (2004). Evaluation of confession evidence: Effects of presentation format. In G. D. Lassiter (Ed.), *Interrogations, confessions, and entrapment* (pp. 197–214). New York: Kluwer Academic.
- Lassiter, G. D., Geers, A. L., Handley, I. M., Weiland, P. E., & Munhall, P. J. (2002). Videotaped confessions and interrogations: A change in camera perspective alters verdicts in simulated trials. *Journal of Applied Psychology*, 87, 867–874.
- 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., & Irvine, A. A. (1986). Videotaped confessions: The impact of camera point of view on judgments of coercion. *Journal of Applied Social Psychology*, 16, 268–276.
- Lassiter, G. D., Slaw, R. D., Briggs, M. A., & Scanlan, C. R. (1992). The potential for bias in videotaped confessions. *Journal of Applied Social Psychology*, 22, 1838–1851.
- Latane, B. (1981). The psychology of social impact. *American Psychologist*, 36, 343–356.
- Leo, R. A. (1996a). Miranda’s revenge: Police interrogation as a confidence game. *Law and Society Review*, 30, 259–288.
- Leo, R. A. (1996b). Inside the interrogation room. *Journal of Criminal Law and Criminology*, 86, 266–303.
- Leo, R. A. (1996c). The impact of Miranda revisited. *The Journal of Criminal Law and Criminology*, 86, 621–692.
- Leo, R. A. (2004). The third degree and the origins of psychological police interrogation in the United States. In G. D. Lassiter (Ed.), *Interrogations, confessions, and entrapment* (pp. 37–84). New York: Kluwer Academic.
- 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. (2008). *Police interrogation and American justice*. Cambridge, MA: Harvard University Press.
- Leo, R. A., Drizin, S., Neufeld, P., Hall, B., & Vatner, A. (2006). Bringing reliability back in: False confessions and legal safeguards in the twenty-first century. *Wisconsin Law Review*, 2006, 479–539.
- Leo, R. A., & Liu, B. (2009). What do potential jurors know about police interrogation techniques and false confessions? *Behavioral Sciences and the Law*, 27(3), 381–399.
- 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.
- Leo, R. A., & Ofshe, R. J. (2001). The truth about false confessions and advocacy scholarship. *The Criminal Law Bulletin*, 37, 293–370.
- Lerner, M. J. (1980). *The belief in a just world*. New York: Plenum.
- Leyra v. Denno, 347 U.S. 556 (1954).
- Loftus, E. F. (1997). Creating false memories. *Scientific American*, 277, 70–75.
- Loftus, E. F. (2005). Planting misinformation in the human mind: A 30-year investigation of the malleability of memory. *Learning & Memory*, 12, 361–366.
- Lykken, D. T. (1998). *A tremor in the blood: Uses and abuses of the lie detector*. Reading, MA: Perseus Books.
- Lynnum v. Illinois, 372 U.S. 528 (1963).
- Lyznicki, J. M., Doege, T. C., Davis, R. M., & Williams, M. A. (1998). Sleepiness, driving, and motor vehicle crashes. *Journal of the American Medical Association*, 279, 1908–1913.
- Magid, L. (2001). Deceptive police interrogation practices: How far is too far? *Michigan Law Review*, 99, 1168.
- McCann, J. T. (1998). A conceptual framework for identifying various types of confessions. *Behavioral Sciences and the Law*, 16, 441–453.
- McCormick, C. T. (1972). *Handbook of the law of evidence* (2nd ed.). St. Paul, MN: West.
- Meissner, C. A., & Kassin, S. M. (2002). “He’s guilty!”: Investigator bias in judgments of truth and deception. *Law and Human Behavior*, 26, 469–480.
- Melton, G., Petrila, J., Poythress, N., & Slobogin, C. (1997). *Psychological evaluations for the courts* (2nd ed.). New York: Guilford.
- Meyer, J. R., & Reppucci, N. D. (2007). Police practices and perceptions regarding juvenile interrogations and interrogative suggestibility. *Behavioral Sciences and the Law*, 25, 757–780.
- Meyer, R. G., & Youngjohn, J. R. (1991). Effects of feedback and validity expectancy on response in a lie detector interview. *Forensic Reports*, 4, 235–244.
- Milgram, S. (1974). *Obedience to authority: An experimental view*. New York: Harper & Row.
- Miller, D. T., & McFarland, C. (1987). Pluralistic ignorance: When similarity is interpreted as dissimilarity. *Journal of Personality and Social Psychology*, 53, 298–305.
- Milne, R., & Bull, R. (1999). *Investigative interviewing: Psychology and practice*. Chichester, England: Wiley.
- Miranda v. Arizona, 384 U.S. 436 (1966).
- Missouri v. Seibert, 542 U.S. (2004).

- Morgan, C. A., Hazlett, G., Doran, A., Garrett, S., Hoyt, G., Thomas, P., et al. (2004). Accuracy of eyewitness memory for persons encountered during exposure to highly intense stress. *International Journal of Law and Psychiatry*, 27, 265–279.
- Moston, S., Stephenson, G. M., & Williamson, T. (1992). The effects of case characteristics on suspect behaviour during police questioning. *British Journal of Criminology*, 32, 23–39.
- Munsterberg, H. (1908). *On the witness stand*. Garden City, NY: Doubleday.
- 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 Research Council, Committee to Review the Scientific Evidence on the Polygraph, Division of Behavioral and Social Sciences and Education. (2003). *The polygraph and lie detection*. Washington, DC: National Academies Press.
- Navarick, D. J. (1982). Negative reinforcement and choice in humans. *Learning and Motivation*, 13, 361–377.
- Nelson, N. P. (2007, March). *Interviewing using the RIP technique*. Paper presented at “Off the Witness Stand, Using Psychology in the Practice of Justice,” John Jay College of Criminal Justice, New York City.
- 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.
- Oberlander, L., Goldstein, N., & Goldstein, A. (2003). Competence to confess. In I. Wiener & A. Goldstein (Eds.), *Handbook of psychology: Volume 22, forensic psychology* (pp. 335–357). Hoboken, NJ: Wiley.
- Oberlander, L. B., & Goldstein, N. E. (2001). A review and update on the practice of evaluating Miranda comprehension. *Behavioral Sciences and the Law*, 19, 453–471.
- 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. (1997a). The social psychology of police interrogation: The theory and classification of true and false confessions. *Studies in Law, Politics, and Society*, 16, 189–251.
- Ofshe, R. J., & Leo, R. A. (1997b). The decision to confess falsely: Rational choice and irrational action. *Denver University Law Review*, 74, 979–1122.
- O’Hara, C. (1956). *Fundamentals of criminal investigation*. Springfield, IL: Charles C. Thomas.
- Onishi, N. (2007, May 11). Pressed by police, even innocent confess in Japan. *The New York Times*.
- Opper v. United States, 348 U.S. 84 (1954).
- Otto, H. D. (2006). “Im namen des irrtums!” *Fehlurteile in mordprozessen*. München: F.A. Herbig.
- 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.
- Parke, R. D., Ornstein, P. A., Reiser, J. J., & Zahn-Waxler, C. (1994). *A century of developmental psychology*. Washington, DC: APA.
- Pearse, J., & Gudjonsson, G. H. (1996). Police interviewing techniques at two south London police stations. *Psychology, Crime and Law*, 3, 63–74.
- Penney, S. (1998). Theories of confession admissibility: A historical view. *American Journal of Criminal Law*, 25, 309–383.
- People of the State of New York v. Kharey Wise, Kevin Richardson, Antron McCray, Yusef Salaam, & Raymond Santana: Affirmation in Response to Motion to Vacate Judgment of Conviction (2002). Indictment No. 4762/89, December 5, 2002.
- People v. Daoud, 614 N.W.2d 152 (Mich. S. Ct., 2000).
- Perske, R. (2004). Understanding persons with intellectual disabilities in the criminal justice system: Indicators of progress? *Mental Retardation*, 42, 484–487.
- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York: Springer.
- Pierce v. United States, 160 U.S. 355 (1896).
- Pilcher, J. J., & Huffcut, A. (1996). Effects of sleep deprivation on performance: A meta-analysis. *Sleep*, 19, 318–326.
- Price, D. D., Finnis, D. G., & Benedetti, F. (2008). A comprehensive review of the placebo effect: Recent advances and current thought. *Annual Review of Psychology*, 59, 565–590.
- Rachlin, H. (2000). *The science of self-control*. Cambridge, MA: Harvard University Press.
- Radelet, M., Bedau, H., & Putnam, C. (1992). *In spite of innocence: Erroneous convictions in capital cases*. Boston: Northeastern University Press.
- Redlich, A. D. (2004). Mental illness, police interrogations, and the potential for false confession. *Psychiatric Services*, 55, 19–21.
- Redlich, A. D. (2007). Double jeopardy in the interrogation room: Young age and mental illness. *American Psychologist*, 62, 609–611.
- Redlich, A. D. (in press). False confessions and false guilty pleas. In G. D. Lassiter & C. A. Meissner (Eds.), *Interrogations and confessions: Current research, practice and policy*. Washington, DC: APA Books.
- Redlich, A. D., & Drizin, S. (2007). Police interrogation of youth. In C. L. Kessler & L. Kraus (Eds.), *The mental health needs of young offenders: Forging paths toward reintegration and rehabilitation* (pp. 61–78). Cambridge, England: Cambridge University Press.
- Redlich, A. D., Ghetti, S., & Quas, J. A. (2008a). Perceptions of children during a police interview: A comparison of suspects and alleged victims. *Journal of Applied Social Psychology*, 38, 705–735.
- 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., Quas, J. A., & Ghetti, S. (2008b). Perceptions of children during a police interview: Guilt, confessions, and interview fairness. *Psychology, Crime and Law*, 14, 201–223.
- Redlich, A. D., Silverman, M., Chen, J., & Steiner, H. (2004). The police interrogation of children and adolescents. In G. D. Lassiter (Ed.), *Interrogations, confessions, and entrapment* (pp. 107–125). New York: Kluwer Academic.
- 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.
- Reynolds, B., Richards, J. B., Horn, K., & Karraker, K. (2004). Delay discounting and probability discounting as related to cigarette smoking status in adults. *Behavioral Processes*, 65, 35–42.
- Rigoni, M. E., & Meissner, C. A. (2008). *Is it time for a revolution in the interrogation room? Empirically validating inquisitorial methods*. Paper presented at Meeting of the American Psychology-Law Society, Jacksonville, FL.
- Roberts, P. (2007). Law and criminal investigation. In T. Newburn, T. Williamson, & A. Wright (Eds.), *Handbook of criminal investigation* (pp. 92–145). Devon, UK: Willan.
- Robertson, G. D. (July 24, 2007 NC 01:44:29). NC lawmakers approve lineup, interrogation recording standards. *AP-Alerts*.
- Rofe, Y. (1984). Stress and affiliation: A utility theory. *Psychological Review*, 91, 235–250.
- Rogers, R., Harrison, K., Hazelwood, L., & Sewell, K. (2007a). Knowing and intelligent: A study of Miranda warnings in mentally disordered defendants. *Law and Human Behavior*, 31, 401–418.

- Rogers, R., Harrison, K., Shuman, D., Sewell, K., & Hazelwood, L. (2007b). 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.
- Roper v. Simmons, 543 U.S. 551 (2005).
- Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*. New York: Holt Rinehart & Winston.
- Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. *Advances in Experimental Social Psychology, 10*, 174–221.
- 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.
- Santos, F. (2006, September 21). DNA evidence frees a man imprisoned for half his life. *New York Times*, p. A1.
- Santtila, P., Alkiora, P., Ekholm, M., & 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.
- Saywitz, K., Nathanson, R., & Snyder, L. S. (1993). Credibility of child witnesses: The role of communicative competence. *Topics in Language Disorders, 13*, 59–78.
- Schachter, S. (1959). *The psychology of affiliation: Experimental studies of the sources of gregariousness*. Stanford, CA: Stanford University Press.
- Schachter, S., & Singer, J. (1962). Cognitive, social, and physiological determinants of emotional state. *Psychological Review, 69*, 379–399.
- Schacter, D. L. (2001). *The seven sins of memory: How the mind forgets and remembers*. Boston: Houghton Mifflin.
- Scheck, B., Neufeld, P., & Dwyer, J. (2000). *Actual innocence*. Garden City, NY: Doubleday.
- Schulhofer, S. (1981). Confessions and the court. *Michigan Law Review, 79*, 865–893.
- Schulhofer, S. J. (1996). Miranda's practical effect: Substantial benefits and vanishingly small social costs. *Northwestern University Law Review, 90*, 500–564.
- Sherif, M. (1936). *The psychology of social norms*. New York: Harper.
- Sherrer, H. (2005). Murdered woman's innocent boyfriend exonerated after bizarre "confession" is exposed as false. *Justice: Denied*, January 2005.
- Sigurdsson, J., & Gudjonsson, G. (1997). The criminal history of 'false confessors' and other prison inmates. *Journal of Forensic Psychiatry, 8*, 447–455.
- Sigurdsson, J. F., & Gudjonsson, G. H. (1996). The psychological characteristics of false confessors: A study among Icelandic prison inmates and juvenile offenders. *Personality and Individual Differences, 20*, 321–329.
- Sigurdsson, J. F., & Gudjonsson, G. H. (2001). False confessions: The relative importance of psychological, criminological and substance abuse variables. *Psychology, Crime and Law, 7*, 275–289.
- Sigurdsson, J. F., & Gudjonsson, G. H. (2004). Forensic psychology in Iceland: A survey of members of the Icelandic Psychological Society. *Scandinavian Journal of Psychology, 45*, 325–329.
- Sigurdsson, J. F., Gudjonsson, G. H., Einarsson, E., & 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.
- Simon, D. (1991). *Homicide: A year on the killing streets*. New York: Ivy Books.
- Singh, K., & Gudjonsson, G. (1992). Interrogative suggestibility among adolescent boys and its relationship to intelligence, memory, and cognitive set. *Journal of Adolescence, 15*, 155–161.
- Skinner, B. F. (1938). *The behavior of organisms*. New York: Appleton-Century-Crofts.
- Skolnick, J. H., & Leo, R. A. (1992). The ethics of deceptive interrogation. *Criminal Justice Ethics, 11*, 3–12.
- Slobogin, C. (2003). Toward taping. *Ohio State Journal of Criminal Law, 1*, 309–322.
- Slobogin, C. (2007). Lying and confessing. *Texas Tech Law Review, 39*, 1275–1292.
- Smith v. United States, 348 U.S. 147 (1954).
- Snyder, H. (2006). *Juvenile arrests 2004*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs.
- Soukara, S., Bull, R., Vrij, A., Turner, M., & Cherryman, C. (in press). A study of what really happens in police interviews with suspects. *Psychology, Crime and Law*.
- Spano v. New York, 360 U.S. 315 (1959).
- Sparf v. United States, 156 U.S. 51 (1895).
- State v. Barnett, 789 A.2d 629–633 (N.H. 2002).
- State v. Cayward, 552 So. 2d 921 (Fla. 1989).
- State v. Chirokovskic, 860 A.2d 986 (N.J. Super. 2004).
- State v. Hajtic, 724 N.W.2d 449,455 (Ia. 2006).
- State v. Mauchley, 67 P.3d 477 (Utah 2003).
- State v. Patton, 826 A.2d 783, N.J. Super. A.D. (2003).
- State v. Scales, 518 N.W.2d 587 (Minn. 1994).
- Stephan v. State, 711 P.2d 1156 (Alaska 1985).
- Steinberg, L. (2005). Cognitive and affective development in adolescence. *Trends in Cognitive Sciences, 9*, 69–74.
- Steinberg, L. (2007). Risk taking in adolescence: New perspectives from brain and behavioral science. *Current Directions in Psychological Science, 16*, 55–59.
- 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., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology, 52*, 83–110.
- Steingrimsdottir, G., Hreinsdottir, H., Gudjonsson, G. H., Sigurdsson, J. F., & Nielsen, T. (2007). False confessions and the relationship with offending behaviour and personality among Danish adolescents. *Legal and Criminological Psychology, 12*, 287–296.
- Suedfeld, P. (Ed.). (1990). *Psychology and torture*. Washington, DC: Hemisphere.
- Sullivan, T. (2007, April). Federal law enforcement agencies should record custodial interrogations. *The Champion*, 8–12.
- Sullivan, T. P. (2004). *Police experiences with recording custodial interrogations*. Chicago: Northwestern University Law School, Center on Wrongful Convictions.
- Sullivan, Y. P., Vail, A. W., & Anderson, H. W. (2008). The case for recording police interrogation. *Litigation, 34*(3), 1–8.
- Swanner, J. K., Beike, D. R., & Cole, A. T. (in press). Snitching, lies and computer crashes: An experimental investigation of secondary confessions. *Law and Human Behavior*.
- Taffinder, N. J., McManus, I. C., Gul, Y., Russell, R. C., & Darzi, A. (1998). Effect of sleep deprivation on surgeons' dexterity on laparoscopy simulator. *Lancet, 352*, 1191.
- Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behavior. *European Journal of Social Psychology, 1*, 149–178.
- Taylor, B. D. (2005). Evidence beyond confession: Abolish Arizona's corpus delicti rule. *Arizona Attorney, 41*, 22–28.
- Technical Working Group for Eyewitness Evidence. (1999). *Eyewitness evidence: A guide for law enforcement*. Washington, DC: U.S. Department of Justice, Office of Justice Programs.

- Thomas, G. C. (1996). Is Miranda a real-world failure? A plea for more (and better) empirical evidence. *UCLA Law Review*, *43*, 821.
- Thomas, G. C. (2007). Regulating police deception during interrogation. *Texas Tech Law Review*, *39*.
- 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*(20), 3–271.
- Thorndike, E. L. (1911). *Animal intelligence: Experimental studies*. New York: MacMillan.
- Trainum, J. (2007, September 20). 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. (2008, October 24). The case for videotaping interrogations: A suspect’s false confession to a murder opened an officer’s eyes. *The Los Angeles Times*.
- 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.
- Valins, S. (1966). Cognitive effects of false heart-rate feedback. *Journal of Personality and Social Psychology*, *4*, 400–408.
- Veasey, S., Rosen, R., Barzansky, B., Rosen, I., & Owens, J. (2002). Sleep loss and fatigue in residency training: A reappraisal. *Journal of the American Medical Association*, *288*, 1116–1124.
- Viljoen, J., 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*, 253–278.
- Viljoen, J., & 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*, 723–742.
- Viljoen, J., Zapf, P., & Roesch, R. (2007). Adjudicative competence and comprehension of Miranda rights in adolescent defendants: A comparison of legal standards. *Behavioral Sciences and the Law*, *25*, 1–19.
- Vrij, A. (2008). *Detecting lies and deceit: Pitfalls and opportunities*. Chichester, England: Wiley.
- 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. H. (1967). Interrogations in New Haven: The impact of *Miranda*. *The Yale Law Journal*, *76*, 1519–1648.
- Wall, S., & Furlong, J. (1985). Comprehension of Miranda rights by urban adolescents with law-related education. *Psychological Reports*, *56*, 359–372.
- Warden, R. (2005). *Wilkie Collins’s the dead alive: The novel, the case, and wrongful convictions*. Evanston, IL: Northwestern University Press.
- Weinger, M. B., & Ancoli-Israel, S. (2002). Sleep deprivation and clinical performance. *Journal of American Medical Association*, *287*, 955–957.
- Weisberg, B. (1961). Police interrogation of arrested persons: A skeptical view. In C. R. Sowl (Ed.), *Police power and individual freedom* (pp. 153–181). Chicago: Aldine.
- Wells, G. L., Malpass, R. S., Lindsay, R. C. L., Fisher, R. P., Turtle, J. W., & Fulero, S. M. (2000). From the lab to the police station: A successful application of eyewitness research. *American Psychologist*, *55*, 581–598.
- 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.
- White, W. S. (1997). False confessions and the constitution: Safeguards against untrustworthy confessions. *Harvard Civil Rights-Civil Liberties Law Review*, *32*, 105–157.
- White, W. S. (1998). What is an involuntary confession now? *Rutgers Law Review*, *200*, 1–2057.
- White, W. S. (2001). *Miranda’s waning protections: Police interrogation practices after Dickerson*. Ann Arbor, MI: University of Michigan Press.
- White, W. S. (2003). Confessions in capital cases. *University of Illinois Law Review*, *2003*, 979–1036.
- Wickersham Commission Report (1931). National Commission on Law Observance and Law Enforcement. (1931). *Report on lawlessness in law enforcement*. Washington, DC: U.S. Government Printing Office.
- Wiggins, E. C., & Wheaton, S. (2004). So what’s a concerned psychologist to do? Translating the research on interrogations, confessions and entrapment into policy. In G. D. Lassiter (Ed.), *Interrogations, confessions, and entrapment* (pp. 265–280). New York: Springer.
- Wigmore, J. H. (1970). *Evidence in trials at common law* (3rd ed.). Little, Brown: Boston.
- Williamson, T. (Ed.). (2006). *Investigative interviewing: Rights, research, regulation*. Devon, UK: Willan.
- Williamson, T. (2007). Psychology and criminal investigations. In T. Newburn, T. Williamson, & A. Wright (Eds.), *Handbook of criminal investigation* (pp. 68–91). Devon, UK: Willan.
- Wills, C. (2005, July 17). Taped interrogations can still be false. *Los Angeles Times* (online edition).
- Wilson v. United States, 162 U.S. 613 (1896).
- Wisconsin Criminal Justice Study Commission. (2007). *Position paper on false confessions*. Madison, WI. www.wcjsc.org/Position_Paper_on_False_Confessions.pdf
- Wrightsmann, L. S., & Kassin, S. M. (1993). *Confessions in the courtroom*. Newbury Park, CA: Sage.
- Young, S. (2007). Forensic aspects of ADHD. In M. Fitzgerald, M. Bellgrove, & M. Gill (Eds.), *Handbook of attention deficit hyperactive disorder*. Chichester, England: Wiley.
- Zimbardo, P. G. (1967). The psychology of police confessions. *Psychology Today*, *1*(17–20), 25–27.
- Zimring, F. E., & Hawkins, G. (1986). *Capital punishment and the American agenda*. Cambridge, England: Cambridge University Press.