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False Confessions: An Integrative Review of the Phenomenon

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ABSTRACT

Confessions are an important evidentiary part of the legal process, and false confessions have been notable contributors to wrongful convictions. However, academic research in the psychology and law field primarily relies on student or volunteer samples in staged exercises, methodological features that lack ecological validity for replicating police interrogation or the pressures distinctive to high stakes crime investigations. Here, we provide an integrative review of research and data on false confessions during police interrogations with distinctions of key concepts, relevant case law pertaining to confessions including several U.S. Supreme Court decisions, updating the typology of false confessions, the quantification of false confessions, risk factors for false confessions, interrogation risk factors for false confessions, validity threats to false confessions research, and recommended directions for informing courts and the law.

1 | Introduction

A confession can be powerful evidence contributing to a guilty outcome. The suspect embraces responsibility for conduct for which there may be significant consequences, particularly in serious offenses. Because the legal stakes of confessions are so consequential, confessions are a focus of dispute in the adversarial legal process. Pretrial suppression motions, trial arguments and post-conviction appeals aim to prove that a confession was coerced and should be excluded. In some instances, that focus is on whether an innocent person provided a false confession.

A confession is a statement in which one expresses that one has committed the actions of a crime, recognizing that it is legally wrong to have done so. The confession may contain self-serving information that reduces the perceived culpability of the offense, but the statement nevertheless takes ownership of the

crime as a sole actor or co-conspirator. A false confession occurs when a person confesses to a crime that one did not commit.

An admission is a statement in which a person reveals information that may contribute to a conclusion that one is guilty. But unlike a confession, the person who makes an admission does not admit to committing a criminal act. Rather, an admission presents an account of one's whereabouts, one's relationship to the victim, or other information that can raise others' suspicion of one's guilt. The statement may contribute to one's prosecution, and findings of guilt, even though the suspect did not actually confess to the legal wrongdoing charged. Police training may otherwise refer to this as a *nonexistent confession*, as a statement in which there is no acceptance of responsibility for committing the crime, but the suspect's statement may contain incriminating information, acknowledge opportunity, access, or motive for the crime, or contain unreasonable explanations for being in possession of incriminating evidence (Inbau et al. 2013).

[Correction added on 19 December 2024, after first online publication: Corresponding author details has been changed in this version.]

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Confirmed cases of false confessions inform appreciation of the sometimes-complex pathways to this outcome. The sociocultural context of the case investigation, personal and psychological qualities of the suspect, the nature of the interrogation itself, and the interactional dynamics between those features culminate in the false confession (Welner 2024; G. H. Gudjonsson 2018; Inbau et al. 2013; Kassin et al. 2010; Kassin 2012). For all of these reasons, false confessions are best appreciated as a phenomenon.

2 | Current Focus

Here, we provide an integrative review to synthesize research on false confessions during police interrogations. Systematic reviews and meta-analysis are particularly useful to organize knowledge in homogenous areas of research that employ similar measurement and analytical approaches. An integrative review, by comparison, is more inductive and allows for the review and coalescing information across fields. Since false confessions span understandings in the behavioral sciences, police science, and criminal justice, such cross-disciplinary approach is necessary. Integrative review is the ideal methodology to organize the evidence about false confessions because the method can clarify key concepts and definitions in the literature, examine how research in the field is conducted, and identify and analyze knowledge gaps (Souza, Silva, and Carvalho 2010; Whitemore and Knafel 2005).

This integrative review is organized into sections on relevant case law pertaining to confessions including several U.S. Supreme Court decisions, typologies of false confessions, quantification of false confessions, potential risk factors for false confessions and underlying research, interrogation risk factors for false confessions and underlying research, and validity threats to false confessions research.

3 | Case Law

False confessions have garnered important legal attention for nearly a century. The landmark case pertaining to false confessions, specifically the Due Process Clause of the 14th Amendment, is *Brown v. Mississippi* (1936). *Brown* involved three black defendants, Arthur Ellington, Ed Brown, and Henry Shields, who were arrested for the murder of Raymond Stewart, a white man. Shortly after the murder victim was found, Ellington was beaten by a lynch mob, a collective that included law enforcement officers, hanged from a tree, then repeatedly whipped, but still would not confess. Released but later returned to police custody, Ellington was again repeatedly whipped. In agonizing pain, Ellington confessed to end the abuse. Brown and Shields were also taken into custody and beaten with a buckled leather belt. Only when the content of their ensuing confession was satisfying to investigators did the beatings stop. Based entirely on their confessions, the defendants were convicted and sentenced to death. On appeal, the Mississippi Supreme Court affirmed their convictions.

In *Brown*, the U.S. Supreme Court unanimously reversed the convictions by ruling that confessions shown to be extorted by officers of the state by torture are void under the Due Process Clause of the 14th Amendment. Delivering the opinion of the Court, Chief Justice Hughes (1936, 297) cited verbiage from an earlier Mississippi Supreme Court ruling, *Fisher v. State*, in which the court reasoned, “Coercing the supposed state’s criminals into confessions and using such confessions so coerced from them against them in trials has been the curse of all countries. It was the chief inequity, the crowning infamy, of the Star Chamber and the Inquisition, and other similar institutions. The constitution recognized the evils that lay behind these practices and prohibited them in this country.” As a legal doctrine, *Brown* prohibited physical violence from the interrogation process.

Ashcraft v. Tennessee (1944) involved E. E. Ashcraft, who allegedly hired John Ware to murder Ashcraft’s wife Zelma Ashcraft on June 5, 1941. Ware was subsequently convicted of murder and sentenced to 99 years in prison. Ashcraft was convicted as an accessory after the fact and also sentenced to 99 years in prison. Both defendants appealed claiming their confessions were coerced by law enforcement. Ware alleged the confession was borne from fear that he would suffer from a lynch mob similar to what the defendants endured in *Brown*. Ashcraft claimed the confession was the result of the coercive features of interrogation. The Supreme Court of Tennessee held the confessions were freely and voluntarily made, and affirmed the convictions.

In *Ashcraft*, the U.S. Supreme Court held that Ashcraft’s interrogation constituted an inherently coercive environment, in that he had been held incommunicado for 36 h without sleep or rest, and had been interrogated by relays of investigators. Delivering the opinion of the Court, Justice Black advised, “We think a situation such as that here shown by uncontradicted evidence is so inherently coercive that its very existence is irreconcilable with the possession of mental freedom by a lone suspect against whom its full coercive force it brought to bear” (154). As a legal doctrine, *Ashcraft* prohibited inherent coercion from the interrogation process.

Leyra v. Denno (1954) involved the case of Camilo Leyra, who was accused of beating his elderly parents to death with a hammer. Police questioned Leyra for several 10-h periods, but also granted permission to attend the parents’ funeral as well as leave custody and go to a hotel to sleep. Upon returning to police custody, Leyra complained about suffering from acute sinus pain. Police brought a “physician” into the interrogation to provide “relief.” The physician was not a general medical practitioner, but a psychiatrist with specialization in hypnosis. The psychiatrist then extracted a confession from Leyra, who was convicted in part due to the confession. The New York State Court of Appeals reversed the conviction on the grounds that the confession was coerced. At a subsequent trial, the confession in question was not introduced, but other confessions made during the same time period were introduced and Leyra was convicted again.

The U.S. Supreme Court reversed the decision, reasoning that all of the confessions made during this time were part of a

continuous process characterized by intermittent, intensive police questioning. Justice Black (1954, 561) reasoned, “an already physically and emotionally exhausted suspect’s ability to resist interrogation was broken to almost trance-like submission by use of the arts of a highly skilled psychiatrist. Then the confession petitioner began making to the psychiatrist was filled in and perfected by additional statements given in rapid succession to a police officer, a trusted friend, and two state prosecutors.”

As a legal doctrine, *Leyra* prohibited psychological manipulation via professionals. In *Fikes v. Alabama* (1957), the Court held that the totality of circumstances—During an interrogation in which case an uneducated man was questioned for 10 days, kept in isolation, and denied visits from counsel or family—Violate the Due Process Clause of the 14th Amendment. Other cases produced a similar ruling (e.g., *Culombe v. Connecticut* [1961]). In his concurring opinion in *Fikes*, Justice Frankfurter also noted that mental and emotional coercion can achieve the same effect as physical coercion in producing confessions that are detrimental to the interests of justice.

Miranda v. Arizona (1966) represents four consolidated cases (*Miranda*, *Vignera v. New York*, *Westover v. United States*, and *California v. Stewart*). In *Miranda*, Justice Warren (1966, 436) observed that “The atmosphere and environment of incommunicado interrogation as it exists today is inherently intimidating and works to undermine the privilege against self-incrimination. Unless adequate preventive measures are taken to dispel the compulsion inherent in custodial surroundings, no statement obtained from the defendant can truly be the product of his free choices.” Those preventive measures are well-known as the *Miranda* advisement. Prior to interrogation, the person in custody must be clearly informed he has the right to remain silent and that anything he says can be used against him in court, must be clearly informed that he has the right to consult with a lawyer and to have a lawyer with him during the interrogation, and that if indigent, a lawyer will be provided. Interrogation must cease if the defendant invokes their *Miranda* rights, and the rights apply if the individual starts to answer questions but then decides against it. These warnings are “prerequisites to the admissibility of any statement, inculpatory or exculpatory, made by a defendant” (1966, 437).

Subsequent cases provided additional clarification about interrogation tactics as well as rights to counsel during the interrogation process. *Frazier v. Cupp* (1969) held that confessions are not inadmissible simply because police utilized deceptive practices during the interrogation. The *Frazier* doctrine renders moot allegations the police are not allowed to be deceptive during interrogations. Moreover, interrogations can produce differential reactions from suspects, and those typologies are examined next.

4 | Typologies of False Confessions

Rooted in conceptual (Kassin and Wrightsman 1985); empirical (Sigurdsson and Gudjonsson 1994; McCann 1998), and applied (Inbau et al. 2013) research, as well as well-documented

confirmed cases, there are five types of false confessions. Most of these do not involve false confessions that are false because of police misconduct.

A *coerced compliant false confession* occurs when a suspect confesses responsibility for a crime in order to stop the threats and/or violence within the interrogation (as seen in the landmark *Brown v. Mississippi* case). The coerced compliant confession enables an immediate end to the interrogation, which is so intolerable that the suspect discounts the outcome of legal consequences to save life, welfare, or to eliminate a threat deemed credible. Coerced compliant confessions are often followed very quickly by a retraction of the confession as soon as the suspect is liberated from the interrogation. Coerced compliant confessions are legally inadmissible, whether the suspect is guilty or innocent.

An *internalized false confession* is more a reflection of the suspect’s distinct qualities and the context of the interrogation than it is overt police misconduct. It is for this reason that internalized false confessions may not be readily appreciated until well into the disposition of justice. Internalized false confessions were originally known as coerced internalized confessions. However, the term “coerced” is a misnomer because the qualities of such false confessions do not leave the suspect feeling coerced. Rather, the suspect is persuaded by the interrogating officer of one’s guilt and eventually internalizes the idea of that guilt over the course of interrogation.

Internalized false confessions arise during interrogation of a suspect who is shocked by the crime, whose emotional trauma over the unexpected death of the known victim, and/or intoxication or unconsciousness at the time of the event. Each of these aspects contributes to distrust of one’s own memory. These factors coincide with an interrogation in which the suspect believes they are assisting the investigation and that the police are there to help. The suspect fails to recognize that the questioning detective believes the defendant to be guilty. The questioning officers, mistaken in their belief, provides various scenarios for the crime. During questioning, the suspect, unaware he or she is a suspect, does not appreciate that one is gradually adopting details and internalizing a false narrative based on these suggestions. By the end of the interrogation, the suspect has internalized a false story of one’s guilt, a narrative of what has transpired, and eventually issues a confession. Absent the elements of memory distrust and manipulated alliance, internalized confessions are not demonstrated to occur. Those who are suggestible or naïve to police procedure are more vulnerable to find themselves in situations in which officers prompt the suspect’s memory distrust.¹ The fact pattern of *Leyra* and its ruling highlights features of we now denote as internalized false confessions; Namely, a shocking killing of intimates; exploitation of memory distrust by hypnosis; and recreation of a narrative by trusted authorities.

A *leverage false confession* can result when different suspects and witnesses are interviewed in sequence and their statements are leveraged against one another. An officer can tell one suspect that another suspect has been interviewed, has admitted involvement, and has identified this suspect as a prime actor in the crime. That other interview may have occurred exactly as

officers represent, and all the more persuasive if the suspects were together at the scene or otherwise involved in illegal activity. The incriminating statement by a peer creates pressure within the interrogation for another suspect to then provide a statement that best exculpates one's self and incriminates another. Such a technique is responsible for collecting confessions in numerous multiple perpetrator cases. However, multiple undisputed false confessions have occurred when an innocent suspect confessed to seemingly less culpable actions because they believed the testimony against them by one of their peers (who admitted some role) was too powerful to overcome without an effort to portray one's self in a better light.

Police do not want to wrongly arrest multiple suspects any more than they would wish to arrest one innocent suspect. However, as admissions and confessions accumulate, history demonstrates that police can overlook that the confessions would not have occurred other than in response to leverage of those willing to incriminate themselves as minor actors. In that regard, what is a strength when suspects are guilty becomes an unforeseen handicap when they are innocent. Because police questioning in these cases may be demonstrably professional and elicit confession without misconduct, these false confessions may attract resistance to consider a false confession stemming from an otherwise unremarkable investigation.

A *protective false confession* results when someone confesses to protect the real perpetrator (McCann 1998). The false confession may arise during interrogation or may otherwise be volunteered, with the same underlying motivation. In research of those who self-reported false confessions, a false report to protect another perpetrator was the most common explanation for a false confession, well outpacing police influence (G. H. Gudjonsson 2021). Other self-report research shows that these false confessions most commonly shield a peer or friend (Sigurdsson and Gudjonsson 1996a, 1996b).

Protective false confession cases arise within organized crime and gangs, when lower-level soldiers take responsibility for crimes committed by more senior members who remain in the community to continue to lead the group. The confessing suspect may gain social credit within the gang. If that lower-level confessing suspect is a juvenile, and/or possesses a heretofore clean criminal record, the criminal penalties are typically more lenient than would have been for an adult perpetrator.

Factor analysis in a small study of Icelandic inmates who self-reported false confession showed differential associations with coerced compliant and coerced internalized false confessions compared to false confessions associated with protecting another person (Sigurdsson and Gudjonsson 1996a, 1996b). Coerced false confessions are more associated with self-assessed resistance during questioning, as well as perception of proof and external pressures. Drug intoxication loaded more for protective false confession than coerced compliant false confessions.

A *voluntary false confession* occurs when a suspect falsely claims responsibility for a crime for reasons that reflect entirely upon the suspect's serious psychopathology. This includes a pathological desire for notoriety or infamy especially in a high-profile case, pathological overidentification with a case or victim,

delusional beliefs about one's involvement in a crime, delusional guilt as it relates to a decedent, or to gain a short-term benefit from involvement in the justice system, for instance, access to jail custody for homeless individuals. Such individuals make themselves known to the police. In some instances, the confessing party may have a major mental illness that features delusional grandiosity that a false confession claim reflects. With these typologies in mind, we next review empirical estimates of false confessions.

5 | Quantification of False Confessions

Despite the legal and societal import of false confessions, the incidence, prevalence, or rate of false confessions are open empirical questions (G. H. Gudjonsson 2021; Cassell 2018; Leo and Liu 2009; Stewart, Woody, and Pulos 2018). The National Registry of Exonerations (2024) estimates that 455 of 3608 exonerations (or 13%) arose from false confessions. Drawing on several data sources, Cassell (1998) calculated that wrongful convictions from false confessions is a function of the number of convictions in the system, the error rate in the system, and the proportion or errors attributable to false confessions. Based on these parameters, Cassell estimated that about one in 30,000 convictions or 0.006% occurs due to false confessions.

In a response, Leo and Ofshe (1998b) argued that it is not feasible to estimate the prevalence of false confessions because police interrogations are not recorded, appropriate statistics are not kept, and most false confessions go unreported. There is also disagreement whether alleged cases of false confessions were actually false (Leo and Ofshe 1998a, 1998b; Cassell 1998, 1999). Unfortunately, as demonstrated in the literature, numerous false confessions are misclassified.

Important distinctions exist between false confessions, false admissions, false guilty pleas, and statements that falsely incriminate third parties. A suspect may make statements which are not confessions, are designed as alternatives to confessions, and are even intended to be exculpatory. That motivation to exculpate oneself is wholly different from that of a false confession, in which a person takes ownership of a crime and is aware of the legal consequences. A suspect may still make statements within a false confession to diminish blameworthiness and to portray oneself in a more favorable light. However, the suspect is still aware that one has confessed. Equating the causes of false statements with false confessions dissipates scientific validity because the causes of false confession are necessarily different. People make false statements to deny responsibility, but they do not confess to deny responsibility.

Some defendants may decide to plead guilty to a crime they did not commit. They may be offered a more favorable sentence or other considerations in exchange for a guilty plea and may choose such an option for fear of the consequences of trial, even if they are innocent. Such defendants are represented by counsel, discuss said arrangement with counsel, face none of the urgencies of the interrogation setting, and make their decisions with ample time to reflect on the preferred course of action. Police interrogation, however, is in no way involved in false

guilty pleas, which occur well after arrest. We are not aware of any empirical research that establishes that any of the factors implicated in false confessions have relevance to false guilty pleas.

False statements by third parties that erroneously incriminate do not reflect the suspect's act of taking ownership of a crime that one did not commit. This includes statements in which a third party falsely claims that they witnessed a person confess to a crime when that person insists that such an event never occurred. These may be miscarriages of justice but occur independent of an actual false confession. Therefore, they do not inform the phenomenon of false confession as do cases in which a person confessed but was undisputedly innocent.

These are critical distinctions because separate phenomena have been conflated in the literature. Drizin and Leo (2004) identified 125 putative cases of false confessions. However, these included numerous cases that were not false confessions but in fact false admission and false guilty pleas. The sample also erroneously included false attributions by a third party where the incriminating party faces no consequences to themselves and cases in which third parties claim a suspect confessed when the suspect insists they did not.

Still other cases are informed only by defense attorneys' advocacy briefs only, arguing a defendant is proven innocent when the facts and evidence may be more inconclusive or quite the contrary. Still other cases in the sample are informed only by media sources only (unreliable data). The sample even includes cases of individuals who insist they never confessed.

In order to better understand false confessions and why they happen when they do, samples must be gathered that reflect undisputed cases in which suspects confessed to a crime one did not commit, knowingly exposing one's self to legal consequences.

Among those listed cases as false confessions and not false admissions, false guilty pleas, and false attributions by a third party, and whose convictions have been reversed, there are a substantial number of cases for which prosecutors have reasonable belief that the charged perpetrator was guilty, but there is no longer sufficient evidence to demonstrate guilt beyond a reasonable doubt. The lingering dispute further whittles the pantheon of confirmed false confessions from which to draw data that informs causality, vulnerability, and contextual factors that lead to false confessions.

Because false confessions may contain true statements and vice versa, the analysis of a confession in a vacuum does not reliably resolve whether a confession that contains inaccuracies is the false confession of an innocent person or a false confession of a guilty person. No methodology for statement analysis has been empirically researched to demonstrate ecological validity or reliability.

Because a methodology for valid statement analysis does not yet exist, false confessions are identified retrospectively. The following are benchmarks by which false confessions would be no longer disputed, and establish a false confession from which

one can inform a court, governing body, or the scientific community (Welner 2024):

- Undisputable evidence that the alleged crime (e.g., sexual assault, arson, murder, assault) did not in fact happen.
- When evidence undisputedly establishes that there is no way the confessor could have committed the crime, such as the timing and location.
- When an alternative perpetrator's guilt is established beyond a reasonable doubt and there is no connection to the confessor as a collaborator taking on a different role.
- Scientific evidence (DNA of an identified, unrelated perpetrator, authenticated video recorded or other digitally validated evidence, or an alibi) undisputedly establishing the confessor's innocence.

Another line of research relies on inmate self-reports of false confessions.² Early comparative study of Icelandic prisoners and juvenile offenders reported false confession prevalence estimates of 0% and 12%, respectively (Sigurdsson and Gudjonsson 1996a, 1996b; G. H. Gudjonsson and Sigurdsson 1994). A more recent study (G. H. Gudjonsson 2021) of Scottish prisoners found that 33% reported to have given at least one false confession to police over their lifetime.

With no means of corroborating self-report, the validity of such research cannot reconcile whether inmates claim they have falsely confessed as many guilty parties in prison insist on their innocence. The "prevalence" numbers of such research likewise do not account for the uncertain representation of oppositional and antisocial personalities among study subjects and whether they would participate in self-report studies in any manner different from other exercises in which their sincerity is needed. The Scottish study, for example, found that 7.8% of the inmates reported having falsely confessed six or more times over the course of their lifetime.³

Nevertheless, the self-report studies do introduce some notable findings that future research can explore. Notably, the Scottish study (G. H. Gudjonsson 2021) involved non-violent offenses in all but approximately 15% of offenses. This is consistent with the general appreciation that within interrogation for major crimes, there is great pressure on a suspect to not confess. Almost no empirical study or discussion has focused on false confessions to misdemeanors. This study introduces not only the idea that such a phenomenon may not be so rare as major crimes but expands the rationale for why suspects confessed falsely. More than 62% of the subjects reported that the main reason they confessed falsely was to cover for someone else. Only 4% confessed to terminate the police contact, and only one person in the entire sample asserted that he had confessed falsely because he had been threatened. These data are very different from oft-published perspectives (e.g., Kassin et al. 2010) that attribute false confessions in police interrogation to some aspect of presumed police misconduct and interrogation malfeasance.

The question of how frequently false confessions to murder and other high stakes crimes during police interrogation occur, and why, is likely to be addressed in the coming years because of

laws that now require the recording of interrogations. Indeed, 96% of law enforcement organizations agree that interrogations should be recorded and 78% of agencies have a formal policy that requires recording of interrogations (Brimbal, Roche, and Martaindale 2024). With complete records of interrogations available, disposition data of interrogated and confessing suspects will be available from sufficient jurisdictions and in large enough numbers to inform elusive questions of incidence. Absent these data, assertions about the frequency of false confessions are speculative and without scientific foundation.

6 | Potential Risk Factors and Underlying Research

Several risk factors including youth, intellectual disability, compliance (the tendency to go along with leading questioning), suggestibility (the tendency to act in response to external suggestion), and mental illness are theorized to increase the likelihood that an individual will falsely confess. Gisli Gudjonsson, a former Icelandic police officer who became a forensic psychologist, first examined individual vulnerabilities contributing to false confessions. Empirically, G. H. Gudjonsson (1984) developed the Gudjonsson Suggestibility Scales (GSS) to gauge two qualities of suggestibility, the response to leading questions as well as response to negative feedback and the Gudjonsson Compliance Scales (GCS; G. H. Gudjonsson 1989), a self-report inventory of compliant personality features. These instruments were studied in samples of Icelandic inmates who claimed to have falsely confessed.

Elevated compliance and suggestibility were identified in cases of confirmed false confessions, illustrating the validity of these risk factors of individual vulnerability (G. H. Gudjonsson 2018). As a group, adolescents are more likely to be compliant and/or suggestible (G. H. Gudjonsson 2018), which justifies extra protections to juveniles during interrogation. Intellectual disability is overly represented among cases of false confessions (Cas-sell 1999). This population is additionally vulnerable because the intellectually disabled are more likely to be highly suggestible and/or compliant (Welner 2016). Those who are naïve to the criminal justice system are to be distinguished from others who may be intellectually limited and score poorly on neuropsychological and intelligence testing, but otherwise have savvy for the criminal justice system because of their personal experience and/or peer group (Welner 2024). Meta-analytic review of studies employing experimental or field data show that individuals with greater suggestibility and to a lesser extent compliance are more susceptible to falsely confess (Otgaaer et al. 2021).

Those with psychosis are not overly represented among confirmed false confessors. Reasons for this are unknown but may relate to the same reason why the highly intoxicated are not overly represented either. Police are not inclined to interrogate suspects who are in the throes of a psychotic episode, nor do they interrogate individuals who are highly intoxicated. Interrogation of such individuals is not recommended (Inbau et al. 2013). This is not to preclude those instances in which an opportunistic law enforcement officer questions a highly

impaired suspect and elicits a false confession. However, layers of accountability would be expected to identify such potentially false statements and subject them to closer scrutiny based on other case evidence.

Limited empirical evidence exists for other risk factors for false confessions. Self-report studies of offenders have sampled several groups selected from the United States and Iceland (Redlich, Summers, and Hoover 2010; G. H. Gudjonsson et al. 2006, 2016). For example, epidemiological data from Iceland found that younger age, males, conduct disorder, ADHD, and greater offending behavior were significantly associated with self-reported false confession (G. H. Gudjonsson et al. 2016). Of 434 such persons, 61% false confessed once, nearly 19% false confessed twice, 9.2% false confessed three to five times, and 11% false confessed six or more times.

The veracity of these self-report studies was not corroborated with external data, such as interrogation video, interrogation transcripts, or legal motions. Moreover, the prevalence of anti-social personality and conduct disorder among those groups—of which frequent lying is a diagnostic feature—diminishes the validity of findings from such research. However, the studies do reinforce the idea that, at least for minor charges for which consequences in the criminal justice system are few, false confessions may be a feature of one's history within the criminal justice system. These self-report studies have also demonstrated that voluntary false confessions are far more common than false confessions resulting from police interrogation. Moreover, the studies show that false confessions for major and violent crimes are rare, even among self-report populations, relative to property and other minor offenses (Redlich, Summers, and Hoover 2010).

Age is a complex variable for understanding false confession. The National Registry of Exonerations has assembled the largest pool of reported false confessions (in parentheses) by age: 14 (13), 15 (15), 16 (26), 17 (35), 18 (30), 19 (28), 20 (27), 21 (26), 22 (15), 23 (17), 24 (12), 25 (11), 26 (17), and 27 (10). These statistics fairly well track the age-crime curve, but also show false confessions are not disproportionately represented among youth. Research of the Grisso competency to stand trial instrument (Grisso et al. 2003) showed that those 15 and under had a statistically lower overall ability to understand the Miranda warnings than those 16 and older. The research also demonstrated that the abilities of older adolescents to understand Miranda were no different from the adults sampled. The vulnerability of youth relates not only to one's suggestibility and compliance, but naivete for the criminal justice system. Those who have well-established contact with the criminal justice system earlier in adolescence are less vulnerable to falsely confess because of that experience.

Further illustrating the uncertainty of age as a risk factor for false confession are the findings of a large study of Icelandic youth that showed that those ages 20 to 24 reported a history of a previous false confession at a higher percentage than did those ages 14 to 16 (Drake et al. 2017). The data in aggregate point not to adolescence per se as a risk factor for false confession, but the ongoing challenge of which subgroups of those below age 18 are at greater risk for false confession, and why.

Adolescent offenders who are not waived to criminal court face lower criminal penalties particularly when the offenders are younger adolescents. Thus, repeat offenders may maintain expectations of lesser consequences of false confessions. In such suspects, the calculus within a police interrogation would be affected by these expectations. One ethnographic study illustrated this point by directly exploring the beliefs of 37 Georgia juveniles ranging in age from 15 to 20 who had been arrested for armed robbery and felony murder (Redding and Fuller 2004). Using structured questions to obtain qualitative and quantitative data, the researchers found that 91% of the juveniles felt it unfair to sentence them as adults for their armed robbery or murder. Of the 37 interviewed, many characterized the juvenile court handling of them in the past as a “slap on the wrist.” The juveniles said they had offended previously in part because they perceived that the chances of getting caught and receiving a serious sanction were negligible.

Their numerous encounters with the justice system taught them that accountability was little more than the inconvenience of court proceedings. Youth who commit violent felonies are well-traveled in the justice system and believe, that because of their experiences, they will not be significantly punished.

There is no avoiding individualized assessment of a particular suspect for vulnerabilities to falsely confess or strengths to resist confession. The strengths also include acculturation among gangs or communities that discourage cooperation with police or other lawbreaking experiences that include revolving-door disposition by the criminal justice system and an appreciation of no legal consequences. Given the frequency in self-report studies of covering for someone else as a cause of false confession, the risk-benefit of taking responsibility for a peer’s crime, especially when the choice is rewarded, must be balanced against what one learns about expectation of punishment.

For instance, self-report research of community teenagers and young adults indicates that people with more extensive involvement in delinquent activities and more delinquent peers/associates are more likely to falsely confess (G. H. Gudjonsson et al. 2006; Gudjonsson, Gonzalez, and Young 2021). This data further supports the above data that the same criminal propensity/dispositional features that increase liability for antisocial behavior also potentially impact likelihood false confession for crimes that are committed with peers or are otherwise minor offenses.

Drawing on data from 1249 offenders with mental disorders selected from six U.S. sites, Redlich, Summers, and Hoover (2010) examined offender self-reports of whether the individual ever confessed or admitted to police to a crime they did not do. Minority status, more years of prior offending, and greater mental illness symptoms were significantly associated with reported false confessions. There was a notable proportion of the mentally ill offenders who reported false confession who truly believed at the time that they had committed the crime. The relatively high percentage among those with mental illness believed they could go home or terminate the questioning if they provided confessions or admissions.

Given the Redlich, Summers, and Hoover (2010) findings that those with frequent offenses are more represented among the confessors, in spite of mental illness generally being associated with less offending, the natural question raised in this study would be whether those with psychiatric illness were disproportionately mentally ill chemical abusers, who are over-represented in the criminal justice system. Mentally ill chemical abusers have distinct psychosocial burden that could contribute to false confessions to minor offenses and have the morbidity of eroded supports. However, the study did not query substance abuse, so this data remains an important missing piece.

While informative about mental illness potentially being a risk factor for some, the study conflates false confessions, in which a person knowingly takes responsibility and anticipates consequences, and false admissions, which can exist in cases where no confession is made. Moreover, the nature of psychiatric symptoms is undefined from the study. Therefore, one cannot ascertain whether it is pathological guilt that contributes to incriminating statements or attitudes or psychotic expression of grandiosity, referential thinking, or other explanations. Still, the research raises the prospect that symptoms of active mental illness and their impact on insight may contribute to false confessions to minor offenses.

7 | Interrogation Risk Factors and Underlying Research

Several environmental and interactional features of interrogations are theorized to increase the likelihood of false confessions. These include prolonged custody or interrogation length, isolation, minimization or maximization (of the legal consequences the suspect faces), lack of sleep, explicit or “implied” promises of leniency, false evidence ploys (in which the police lie about the strength, quantity, or quality of their evidence), and explicit or “implied” threats.

Explicit promises of leniency are demonstrated to contribute to false confessions. So, too, do explicit threats of violence, which are Constitutionally forbidden. Although there are several publications that assert that other of the above features represent risk factors of false confessions (e.g., Kassin et al. 2010), a number of these claims remains inadequately researched and without empirical foundation. Assertions about isolation and custody portray police-suspect communication as inherently coercive. However, these are diametrically counter to law enforcement procedure, interviewing norms, and case law. For example, the U.S. Supreme Court opined in *Culombe v. Connecticut* (1961, 579), “Often the place of questioning will have to be a police interrogation room because it is important to assure the proper atmosphere of privacy and non-distraction if questioning is to be made productive.” Isolation and custody are cardinal features of the interrogation structure.

The greatest limitation of research about interrogation risk factors for false confessions centers on the artifice of research designs. Catlin et al. (2024) recently meta-analyzed 29 studies that examined an accusatorial as opposed to information-

gathering purpose in the interrogation. Of these 29 studies, 23 used student research subjects, including some which involved students as the interrogators. In three studies, it was unclear who the research subjects were. One study used community members and two studies used a combination of research subjects. The studies used a computer manipulation, mock crime, or cheating as the crime.

Although none of these studies used real criminal suspects, real investigators, or real crimes, the authors concluded that accusatorial interrogations are significantly correlated with false confessions compared to information-gathering techniques and direct questioning. Moreover, their policy recommendation was to reform police policies related to interviewing and interrogation to prohibit the use of accusatorial practices, such as the Reid Technique interrogation approach.⁴

Research using *actual* police interrogation experiences indicates null associations for many of these putative risk factors. To illustrate, Cleary and Bull (2021) found very few interrogation factors are associated with a suspect making a full confession. Interrogation location at a police station and perceptions of whether the suspect is free to leave have no effect, undermining the notion that a restrictive and even accusatory milieu is driving confession behavior. Interrogation duration has no effect. Physical restraints or being in handcuffs have no association. The only significant effects are for black race (less likely to confess), waiver of Miranda (more likely to confess), perception the police have no evidence (less likely to confess), and pre-interrogation intention to confess (Cleary and Bull 2021). Suspects who go into an interrogation intending to confess have 3112% greater odds of confessing. Based on these findings, the interrogation process is superfluous to the suspect's motivation and behavior going into the interrogation. On that point, nearly 26% intended to confess even before they were interrogated, likewise undermining longtime presumptions among academics in this area that confession itself is counterintuitive (Kassin 2012). If a suspect believes confession is in one's best interest, such a rationale may be well founded if the suspect knows they are guilty.

The academic consideration of duration of confession as a risk factor for false confession stems from two sources: recommendations by the Reid training that interrogations not exceed 4 h (Kassin 2012), and a published collection of reputedly false confessions (Drizin and Leo 2004). The Reid training materials, however, teach that after 4 h of questioning in most interrogations (if a suspect has not provided any additional reason to suspect guilt and maintains denial), continued interrogation is a waste of time and investigator resources. A risk of false confession is not the basis of their caution. The same Reid training materials recognize that a suspect who has offered different versions of events, or otherwise has shown behavior that arouses police suspicion, may contribute to justifiably longer interrogation (Inbau et al. 2013).

Drizin and Leo (2004) used data associated with 47 cases of purportedly proven false confession. The authors asserted that most of the cases featured "interrogations" that lasted from 6 to 24 h. These assessments formed the basis of assertions that longer interrogations are a risk factor for false confessions.

However, the authors did not acknowledge that their tabulation of interrogation time actually added overall custodial time to time in interrogation. Thus, by Drizin and Leo's interpretation, a person who would have been in custody for 6 h before being interrogated for 1 h would be regarded to have been interrogated for 7 h.

Equating custodial time with actual interrogation time reflects a disconnect from the relevant experience of interrogation. Cleary's (2014, 278) study of juvenile suspects whose interrogations and intervening breaks were video monitored revealed the following. "Whereas a few youth paced the room or peered out of the holding room window, most youth simply sat in their chairs, rested their heads on the table, or slept when left alone. Two youth wept quietly and another exhibited extreme distress, sobbing loudly, striking his head against a wall and audibly chastising himself."

The dullness described in the study during the breaks in interrogation starkly demonstrates that the stress, urgency, and pressures of interrogation are not replicated in solitude. Actual interrogation and its stresses are not replicated in custodial down time. The authors of the Drizin and Leo (2004) case sample also reported they were unable to separate actual interrogation time from custodial time. For these fundamental reasons alone, the Drizin and Leo data do not inform the question of duration and risk of false confession.

Long custodial time is actually a common feature of the logistics of contemporary interrogation. Cleary and Bull's (2021) study of 249 inmates noted that 13% of the inmates had been detained for over 24 h before being interrogated. Separate from this measure, the study found that interrogations alone (independent of custodial time) ranged up to 12 h. This demonstrates that markedly longer interrogations are more common than outliers, even as most interrogations are much shorter. Further demonstrating that length of interrogation is artifactual relative to what happens during the interrogation, a study comparing self-reported true and false confessions among a population selected for mental illness (and therefore, its individual vulnerability) showed interrogations of 6 h or more to be as frequent among those who claimed true confessions as it did false confessions (Redlich, Kulish, and Steadman 2011).

Cases of false confessions in longer interrogation show that the longer such interrogations extended, the involved police became increasingly forceful and unorthodox in their techniques to the end of creating an intolerable environment or to cultivate an internalized and false guilty narrative. But as Inbau et al. (2013) note, if physical coercion is involved, even a 30-min interrogation may warrant a claim that the confession is false. Sometimes, more time is needed to secure a true confession. In some false confessions, however, the interrogating officer was so determined to get the confession that with time and frustration, he abandoned professionalism to do so.

Minimization refers to questioning officers playing down the seriousness of an offense. That minimization may be moral minimization or legal minimization. Moral minimization conveys empathy to the suspect, or an attitude of understanding for why someone committed a crime. Legal minimization

communicates that the crime committed will be less penalized and punishable. Moral minimization frames the suspect's acts as not actually repulsive and more relatable to others who might even have acted the same under some circumstances. Legal minimization implicates the sentencing outcomes and punishment expected for the crime. The Reid Institute teaches moral minimization as a technique, but specifically cautions against legal minimization, in order not to convey a promise of leniency. Legal minimization potentially relates to promises of leniency; moral minimization does not. No empirical research has ever demonstrated that moral minimization causes the innocent to falsely confess to a major crime.

Kassin and McNall (1991) contributed to the incorrect assertion that minimization causes false confession; however, that research did not probe any causal link between minimization and actual crime. Their research involved 75 college undergraduates who were randomly assigned to read a transcript of an actual murder interrogation that the researchers altered to their research aims. The undergraduates in the minimization group were then asked to fill out a questionnaire with their impressions on the interrogation and their sentencing expectations. Among the results, suspect denial or confession was not related to technique and suspects in the minimization group were regarded as less likely to confess. Moreover, innocent suspects were less likely to confess from minimization which the authors interpreted as meaning that minimization was an inducement not to confess.

Ultimately, minimization has not been demonstrated in any empirical research to move an innocent suspect from denial to confession to murder. Maximization, or the dramatizing of consequences for a crime, not been studied for causing false confession to major crimes. However, maximization has been associated with some confirmed false confessions when a detective threatens a suspect with the death penalty (Welner 2003).

False evidence ploys refer to police asserting to a suspect that they have evidence incriminating him in a case when they do not. The effect on a suspect is to engender the perception of proof.⁵ False evidence ploys are legally admissible because the operative thinking is that if suspects are innocent, they will not believe such an evidence ploy is legitimate and will not perceive such evidence as proof of their guilt. For example, the innocent suspect who is told that an eyewitness saw them at a murder scene will simply conclude that such an eyewitness is mistaken or lying, and continue to deny. A guilty suspect may conclude, on the other hand, that such "evidence" represents proof of guilt, and calculate how to account for what is told about the witness to limit culpability, even if the response is only an admission.

No study replicating the high stakes conditions of an interrogation for a major crime has researched the presentation of false evidence. However, data from cases of undisputed false confessions has demonstrated that false assertions that a suspect has failed a polygraph when they have not has caused suspects to falsely confess (Welner 2003). False claims of failed polygraph create a yet unquantified risk of false confessions.

Ironically, the polygraph is neither admissible as evidence of guilt nor is it even evidence of the crime. Yet, some suspects

mistakenly perceive that failing a polygraph reflects absolute proof of guilt and that they are lying about innocence. Those who believe that lying about such certain guilt would render them even more culpable in the eyes of the trier of fact may then be prompted to confess. Therein lies the importance of perception of proof. The impact of a reported failed polygraph on a suspect who then confesses falsely to a major crime also illustrates the importance of naivete. A naïve suspect will perceive the potency of polygraph evidence greater than will the more experienced suspect.

Many officers are reluctant to use false evidence ploys because they fear that a suspect will discern that they are lying, which will ruin the rapport so fundamental to successful interrogation (Inbau et al. 2013). When rapport breaks down, the suspect may refuse to continue, and detectives want to keep the suspect talking. In order to do so, officers work to ensure a suspect feels the officers are being straight with him. A false evidence ploy is risky for officers seeking to maintain a line of communication with a suspect.

However, some police feel more comfortable using false evidence ploys, and such ploys can be quite imaginative and even unique. The endpoint is the creation of a perception of proof. Suspects who confess because of persuasive false evidence may feel manipulated or deceived, and very much angered and embarrassed for having been tricked into a confession. That does not make them innocent. It is notable that cases in which false claims of polygraph failure preceded false confessions may also have featured memory distrust and other qualities of an internalized false confession. False evidence does make it easier for interrogating officers to fill the gaps of memory distrust with a false narrative. False evidence is therefore likely to be more of a risk with naïve populations and/or those with significant memory distrust at the time of interrogation.

Sleep deprivation refers to the active prevention of sleep that would otherwise take place were such prevention not to have taken place. Fatigue and exhaustion typically graduate to sleep, unless sleep is prevented by arousal or sleep deprivation. The cognitive effects of fatigue are well-studied. It is true that attention and concentration may be impaired, as well as judgment and cognitive flexibility (Killgore 2010). Less hours of sleep, the capacity for important personal choices and especially, and denial of responsibility in the face of severe liberty consequences has never been studied. Nevertheless, the arousal of threat overcomes fatigue as well. A person questioned in an investigation and confronting potential murder or other major crime charges experiences arousal for the urgency of the moment. The intensity of the moment evokes a fight or flight activated context. Therefore, lack of sleep is relevant only insofar as one accounts for the reactions of the suspect in the arousal of the interrogation experience.

8 | Validity Threats to False Confessions Research

Validity is the scientific principle of how well a measure or concept corresponds to a phenomenon. Many types of validity exist. *Face validity* is the most basic version and is equivalent to

a lay perspective or “the eye test” about whether something corresponds to its empirical manifestation. *Construct validity* is the extent to which some operationalization measures the construct that it purports to measure. *Content validity* is the degree to which an operationalization represents the construct about which generalizations can be made. *Criterion validity* is the relationship between a measure and other measures believed to be associated with it. *Ecological validity* is the degree to which scholarly research on a topic, especially the sample or participants, matches that topic in the real world.

8.1 | Ecological Validity

The most recurring validity problem associated with false confessions research stems from ecological validity. Most studies of false confessions and in police interrogation tactics rely on participants who are undergraduates selected via convenience samples from the instructor’s course(s) or from online participants (e.g., Blandon-Gitlin, Sperry, and Leo 2011; Catlin et al. 2024; Chojnacki, Cicchini, and White 2008; Leo and Liu 2009; Horselenberg et al. 2006; Kassin et al. 2017; Mindthoff et al. 2018; Russano et al. 2005; Shaw and Porter 2015; Strömwall, Hartwig, and Granhag 2006; van Bergen, Jelicic, and Merckelbach 2008). This is problematic because college students are neither police officers nor criminal defendants engaging in an interrogation with profound legal implications.

In the United States, most confession research relies on undergraduate participants and psychology laboratory settings. Not only do the participants in these studies bear no resemblance to law enforcement professionals or criminal suspects, but also the methodological features in studies that involve accusing innocent undergraduates of cheating on a test or crashing a computer (Kassin et al. 2017; Russano et al. 2005; van Bergen, Jelicic, and Merckelbach 2008) are incongruent with the urgencies and perils of criminal defendants, police officers, and their interactions in major crime investigations. Other studies that use undergraduates as mock suspects provide a movie ticket as compensation for their participation and provide an extra ticket if the student is able to convince the interrogator, who is a police trainee, that they were innocent (Hartwig, Anders Granhag, and Strömwall 2007).

These mock exercises do not recreate the unique and precarious tension of interrogation for a major or high stakes crime. Within such interrogation, even when the tenor is subdued, the interrogation dynamic between officer and suspect is inherently intense, owing to the consequence of the matter. Nor do the mock exercises recreate the unique inner experience of the suspect balancing pressures not to confess to a major crime with persuasion by the officer as to why he should. Moreover, in major crime cases in which a suspect denies and an officer aims to move the suspect to confess, a suspect likewise aims through various means to persuade the interrogator that he is innocent. Essentially, both officer and suspect aim to persuade each other.

Within a high stakes interrogation, the questioning officer may break to speak to colleagues or investigate claims made by the suspect. The approach to the suspect plays off the unique

dynamic between the two. In short, there are elective choices being made constantly by both officer and suspect that operate at a far more sophisticated level. The stakes for the suspect, of freedom and avoiding the consequences of being prosecuted for a high-stakes crime or going through a life changing experience of incarceration per se, are far more intense than scoring a movie ticket.

The interrogators rely upon experience and training in how they approach the situation; the suspect relies on personal qualities and interpersonal relatedness to influence officers to conclude he is not responsible. The latter point contributes to why guileless suspects like the intellectually disabled and naïve are more vulnerable to false confession in interrogation. Guile, especially among more antisocial characters for whom manipulateness is an adaptive feature, is a necessary skill to persuade authority of one’s innocence.

The researchers themselves acknowledge the obvious chasm between a laboratory exercise of volunteer “suspects” and designated authority “police.” Shaw and Porter (2015, 299), for example, acknowledge the research has nothing to do with actual interrogation or false confessions, “[U]nlike in a regular police interrogation, there were probably no perceived negative consequences of confessing to the criminal or noncriminal event in the present study. This leads to questions regarding the applicability of this study to real-world policing situations.”

Even research that utilized jurors to examine perceptions about false confessions is limited by the fact that most jurors self-reported that they have never actually served on a case (Blandon-Gitlin, Sperry, and Leo 2011). How, then, does a mock juror appreciate the pressures to make the right decision on guilt or innocence in a high-stake crime, balancing concern for liberty with assessment of what amount of evidence is a realistic expectation?

Ecological validity is a critical issue especially in the high-stakes world of police interrogations. It is not a trivial methodological concern that can be acknowledged, but then skirted in the same breath. Another study of mock suspect interrogation explicitly stated in the study abstract that the findings “are limited by the brevity and low-stakes nature of the task and the fact that no significant effects were obtained for our suspicion manipulation” (Kassin et al. 2017, 230). However, in the conclusion, the authors wrote (Kassin et al. 2017, 241), “Conducted in a police station and involving a collaboration of experienced law enforcement participants, this experiment contained a high level of ecological validity.” It cannot be both.

8.2 | Content Validity

Content validity is likewise a major handicap of a number of false confession studies. The aforementioned studies on minimization, assessing the perspectives of mock jurors about likelihood of conviction or whether a technique is comparatively coercive, do not inform whether coercion of a false confession is occurring. Another such example of content validity problems are surveys of peer social science academics (Kassin et al. 2018;

Alceste et al. 2021) about core principles relating to false confessions. The self-defined group of experts, which conspicuously excludes law enforcement professionals and people who actually conduct interrogations, criminal justice academics, and psychiatrists and clinicians who assess vulnerability, tout areas of their agreement as settled science. Establishing one's own boundaries for a like-minded cohort, however, does not reflect research that establishes the causal relationship between a given police interrogation technique and false confessions.

8.3 | Construct Validity

Construct validity problems also afflict even highly cited literature. Case reports that claim collections of false confessions (Drizin and Leo 2004) may coningle false guilty pleas to inform conclusions about interrogation. Such cases may reflect wrongful convictions, but the decision to plea occurs far from the interrogation room and an adversarial relationship with a police officer. Rather, one's own attorney or confederates, whom the accused may trust or even rely upon, advise the defendant before making his decision. Moreover, the decision to plead takes place after ample deliberation; interrogations force a suspect to make in the moment decisions without opportunity to reflect and gain perspective. False guilty pleas are not false confessions, and do not inform understanding of police interrogation.

Such case reports may also include false admissions. While these cases may result in miscarriages of justice, a suspect who makes an admission does so with the awareness that one is not confessing and believes that the admission will not result in arrest or conviction for the crime. For this reason, admissions do not account for understanding how police interrogation moves a suspect from denial into knowingly taking responsibility for a crime for which one recognizes carries significant personal and liberty consequences.

The same case reports may include case reports in which a suspect confesses and wrongly implicates others as co-conspirators. The person who confesses falsely in interrogation has falsely confessed. The person who is wrongly implicated but never confessed does not represent a false confession. In leveraged false confession cases, counting all of the wrongly convicted as false confessions, even those who do not confess, artificially inflates the incidence of the phenomenon. Nor are cases in which a witness, such as an informant, claims that a person confessed to them when the person did not.

To date, the most salient research data informing the causes of false confessions derives from undisputed false confessions. These are cases in which, for the reasons noted above, neither side of the adversarial legal system disputes innocence. Such cases are represented among rosters of wrongful convictions maintained by the Innocence Project, alongside cases of those exonerated whose innocence remains contested to this day. Those cases deemed exonerated include cases referred for retrial whose prosecutors elected not to bring charges, for reasons that included a lack of sufficient remaining evidence to a lack of resources to allocate to a reinvestigation and retrial. The

prosecutors may, notwithstanding their decisions about retrial, continue believe in the defendant's guilt.

A major challenge for content validity is research based on false confession cases in which the confessor was actually innocent. The above databases feature cases whose details are informed by defense advocacy briefs that argue one side of a narrative and ignore that another perspective is very much alive but silent and not represented. It does not help the cause of academic understanding to pretend such disputes do not remain for cases. Relying on one adversarial narrative does not allow for forensic science evidence validity, nor would it inform a valid understanding of what causes false confessions when a false confession may not have occurred in someone acquitted or not tried and subsequently exonerated. A tried person must be found guilty beyond a reasonable doubt, and if not, must be acquitted. That may or may not reflect undisputed innocence, but if innocence is disputed, that case is not valid for research purposes in this area.

Until research in false confessions concentrates in the cases of undisputed innocence, problems with content validity will contribute to misunderstandings of the causes of false confessions and its causes. Thirty valid cases of false confessions are tragedies of justice, but more is to be learned from valid cases than a sample that coningles presumed false confessions in order to maximize numbers and perceptions of the scope of the problem. For this reason, conclusions emerging from cases in which an alternative and unrelated perpetrator is confirmed, or the confessor's lack of potential involvement is confirmed by undisputable digital, physical (geolocation) or biological evidence (such as DNA) are informed by valid data. To date, no such collection has been assembled.

Data with little to no ecological and content validity continue to be leveraged to study false confessions. Even when there may be asserted broad support for an idea (Kassin et al. 2010), if such support derives from the simple repetition and re-animation of hopelessly defective methodology, those who do so knowingly mislead the legal and justice community. The behavioral sciences have an obligation to justice to gatekeep our own methodological rigor, not to persuade the justice system we are relevant when we are well-aware of the morbidity of underlying defects in ecological and content validity.

8.4 | Mischaracterization of Police Interview and Interrogation Procedures

Law enforcements officials interview citizens and suspects primarily for information gathering, welfare checks, or routine service functions. In many respects, police-citizen interviews are identical to other professional exchanges between a professional and member of the public, and diverse styles on the part of the officer reflect experience and one's mentorship.⁶ Training is useful as in any profession, but training in police relatedness to witnesses and suspects evolves over one's career, just as does the manner in which an attorney practices law or litigates in court. Police requests for information are routine as Justice Jackson (1943, 160) indicated in the landmark *Ashcraft* case, "Questioning is an indispensable instrumentality of justice."

Generally, the same level of technical professionalism and positive rapport also typifies police interrogations of persons suspected of crimes or defendants who have been taken into custody (David, Rawls, and Trainum 2018; Inbau et al. 2013). However, unlike an exchange between a service professional and a customer, the legal liability inherent to an interrogation between the police and a suspect is substantial. Police attempt to obtain accurate information that can facilitate their investigation; this information has significant negative consequences for a perpetrator and potentially, the suspect being questioned. As a result, the adversarial valence of a police interrogation relative to other interpersonal exchanges is unmatched.

Ecologically-valid research on criminal offenders' experience during police interviews brings this reality of the interrogation process to light. A significant proportion of murderers and sexual offenders perceive that police interviewers are calm, give them time to provide answers, are obliging, empathic, sympathetic, helpful, cooperative, and sometimes ingratiating, and show a positive attitude toward the offender that affirms them as a human being. Homicide and sexual offenders report that law enforcement officials also exhibit negative behaviors during interrogations including brusque, aggressive questioning, having a formal, cold, non-accessible demeanor, acting with nonchalance, indifference, or lack of emotion, showing a condemning attitude and being confrontational (Holmberg and Christianson 2002). Most police interrogations contain elements of good cop and bad cop.

Diverse interview styles during actual police interrogations cluster together along two dimensions: dominance and humanity. The latter approach is more likely to result in confessions. Among murderers and sexual offenders, those who perceive the interviewer had a humanitarian attitude toward them were greater than three times more likely to confess and admit their responsibility for their crime. Offenders who felt respected during their interrogation were nearly six times more likely to admit to their crimes (Holmberg and Christianson 2002).

8.5 | Omitted Variable Bias Pertaining to Techniques of Neutralization

True confessions can contain false information and vice versa. These considerations contribute to why false confessions are difficult to establish from deconstructing confessions in a vacuum.⁷ In an interrogation in which a suspect has a threatened liberty interest, lies are socially normative (Sporer and Schwandt 2007). As indicated by meta-analytic research (Hartwig and Bond 2011, 656), “convincing another that one is telling the truth entails similar tasks for deceptive and truthful communicators. Both share the motivation to create a credible impression and both will engage in deliberate efforts to create such an impression.”

Neutralization (Sykes and Matza 1957) refers to the defense mechanisms that morally enable people to engage in antisocial behavior, and by extension, indignantly absolve themselves of their behavior without experiencing from pangs of guilt. The principal neutralization technique is denial, whereby the

offender negates personal responsibility for one's crime and/or deflects blame onto others. Neutralization serves to reduce the offender's feelings of guilt, shame, and remorse and reduces the offender's vulnerability to informal and formal social control processes that result from legal transgressions.

Sykes and Matza articulated four other techniques: denial of injury (e.g., “the injury wasn't that bad”), denial of the victim (e.g., “I only killed other criminal offenders, not real people”), appeal to higher loyalties (e.g., “I did it for my family”), and condemnation of the condemner (e.g., “You can't judge me”). In the ensuing decades of research, neutralization theory has been refashioned as a conceptual framework to explain the processes by which criminal offenders make sense of their lives, their antisocial behavior, and their sense of self in responding to their criminal behavior (Maruna and Copes 2005).

Neutralization is the criminology umbrella for indignation, deflection, blame externalization, and denial as cardinal expressions by criminal offenders after they are contacted by police. Any communication between a suspect and law enforcement official is replete with opportunities to deceive, obfuscate, and rationalize, independent of any interview dynamics or interrogation processes. The current behavioral science perspective on deception is that low-level forms of deception are so commonplace, that it is often difficult to detect low-grade lies in criminal justice settings (King and Dunn 2010). Communication between a suspect and an interviewer contains a mixture of honest and accurate statements intermingled with dubious ones, reflecting how individuals behave in the wake of having done something wrong and being held responsible for that violation.

Unlike false confessions study which has very limited ecological validity, and showcases other publication that has limited construct and content validity as well, valid research methodology has explicitly examined neutralization theory among homicide offenders. A study of neutralization techniques among serial homicide offenders, for example, found that 67.5% of them exhibited denial of responsibility in the wake of their crimes. Murderers' denial of responsibility took many forms, such as denying their involvement without offering any exculpatory explanation, blaming someone else for their crimes, or steadfastly disputing the various forms of evidence that were inculpatory. Murderers' also commonly suggested that they simply could not remember perpetrating their crime, even though they could remember every detail prior to the crime and after the crime, just not during their crime. Some even suggested they were in a dream-like state or a fugue state where the details of the crime are cloudy and difficult to remember (James and Gossett 2018).

A study of offenders with federal convictions for identity theft, for example, found that nearly 60% of offenders exhibited one of the five techniques of neutralization and nearly one in four offenders displayed multiple techniques of neutralization. More than 10% of the offenders engaged in denial of responsibility (Copes, Vieraitis, and Jochum 2007).

Illustrating neutralization in a published case report (Pettigrew 2020), a multiple homicide offender produced very similar

linguistic gamesmanship with law enforcement interviewers to mitigate his responsibility. During the interview, the offender immediately offered several statements reflecting the denial of responsibility including that he could not remember the crime(s) for which he was charged, could not remember nor had any explanation for the incontrovertible evidence against him (e.g., murder victim was found in his home). The offender also neutralized his statements by suggesting that he could partially agree with information that was presented to him, or that he was “not consciously aware” of details that were discussed with him. These neutralization techniques to shielded him from the guilt and shame about his homicidal behavior and served to deceive those who were trying to gather information about his criminal conduct.

Owing to omitted variable bias regarding neutralization among criminal suspects, false confession research has grossly mischaracterized the Reid Technique of interviewing and interrogation. This is even more glaring because criminological research has explicitly shown the interconnections between neutralization theory and the Reid Technique. Because the Reid Technique relies in part on the development of themes to encourage the suspect to move from indignation and denial to acknowledgment of their criminal conduct, the techniques of neutralization can serve as a bridge to allow the suspect to tap into their internal rationalizations for committing the crime. As Copes, Vieraitis, and Jochum (2007, 450) observed, “Themes are the heart of interrogations in that they serve to psychologically excuse the suspect’s behaviors. By voicing excuses as to why the suspect’s behavior is acceptable, interrogators may be able to break down some of the existing mental, psychological, and physical barriers. Once the suspect realizes that interrogators understand and are sympathetic to the situation, there is a greater chance the suspect will discuss the crime or incident.”

8.6 | Omitted Variable Bias Pertaining to Homicide Offender Type

Numerous typologies of homicide offenders exist that document background, psychological, motivational, and crime-specific differences among murder defendants. Usually, these typologies vary based on victim characteristics specifically pertaining to the relationship of the homicide victim to the perpetrator. At times, homicide researchers indicate multiple motives for homicide offending. These motivational states provide variation that is also seen during suspect conversations with police. Maternal filicide, for instance, results from being overwhelmed, extended suicide, psychotic altruism, child abuse, retaliation (Liem and Koenraadt 2008a), or potentially a combination of any of these. Each of these motivational sources can produce a different interactional style and responsiveness to police questioning that reflects the degree of guilt the offender feels, relationship with the victim, suicidality, and their overall competence. These features are visceral and reflect the gravity felt by a parent who killed her child.

All of these characteristics contribute to highly emotional, non-linear responses to police questioning that have nothing to do

with interrogation technique, but instead reflect the dynamics and emotional responses of specific types of murder defendants.

Criminals perpetrate crimes for a variety of reasons, they have varying motives. The varying motives to murder also generate downstream effects for how a murder suspect will behave in the aftermath of the crime, whether contrite or defiant, suicidal or emotionally unaffected, forthright or conniving. These emotional and motivational states play out differently during the course of police interviews and interrogations. In some cases, accused murderers are overwrought with grief and guilt and acknowledge their guilt while begging for mercy. In other cases, accused murderers are impervious to law enforcement officials, lie profusely, and deny any involvement even in the face of overwhelming evidence of their guilt.

8.7 | Omitted Variable Bias Pertaining to Interpersonal Deception

Another relevant interrogation issue centers on the degree to which a suspect appears deceptive toward law enforcement, and the degree to which police observers can determine whether an individual is lying. This is particularly notable because deception research features a number of empirical studies of actual interrogated suspects, rather than mock simulations with volunteers and college students in mock and abbreviated exercises that cannot replicate interrogation.

Deception researchers have identified cues and behaviors that individuals display when being untruthful. DePaulo et al.’s (2003) meta-analysis found response length is shorter, fewer details are provided, and speech rate is reduced when an individual is deceptive. The liar blocks access to information by refusing to discuss certain topics or certain details of particular topics. Lies are often implausible, lack logical structure, and during the course of telling lies, the actor is ambivalent that their communication seems internally inconsistent and discrepant. The lying subject is less involved, engages in less verbal and vocal involvement, and is less expressive. Liars use fewer references to self, but greater references to others especially when deflecting blame. They have less vocal immediacy, or impressions of directness, reduce eye contact, increase gaze aversion, and employ greater vocal uncertainty, such as conveying uncertainty, insecurity, and unassertiveness.

Additional meta-analytic reviews (Sporer and Schwandt 2006, 2007) document verbal, paraverbal (how something is said), and nonverbal behaviors that are associated with lying. These include message duration, number of words, speech rate, filled pauses, unfilled pauses, vocal pitch, repetitions, response latency, speech errors, and others. These verbal, paraverbal, and nonverbal indicators have varying effects, and in some cases, diametric effects depending on the subject’s level of arousal, level of emotion or affect, their attempts to control a conversation, and memory and cognitive load.⁸

Meta-analytic studies produced differing associations between these behaviors and deception. Higher voice pitch, greater response latency, more speech errors, and reduced message

duration occur during deception (Sporer and Schwandt 2006). Liars articulate stories that make less sense. They are less plausible, have lower logical structure, reveal more discrepancies, and reflect ambivalence to what has been said. Liars are less engaging. They offer fewer illustrators (because they are extemporaneously creating the content), are less involved verbally, and have lower vocal involvement. They exhibit much lower verbal immediacy behaviors such as signaling warmth and a willingness to connect to their conversation partner. Their speech is more uncertain, less fluent, less fluid, and contains many more word and phrase repetitions and interruptions (DePaulo et al. 2003).

Overall, deceptive people are less realistic, less cooperative, less friendly, more fidgety, and employ more adversarial facial expressions and tones of voice. Hartwig and Bond's (2011) meta-analytic research indicates that the strongest deception indicators are ambivalence, where communication seems internally inconsistent or discrepant, lack of spontaneity, that is, statements seem rehearsed, and unrealistic statements where there is reduced logical structure, more superficial content, and increased vocal uncertainty.

One study (Vrij and Mann 2001) specifically examined deception during the interrogation of a murder suspect who confessed and was later convicted of murder. The study investigated numerous behavioral indicators traditionally found to be associated with deception. Multiple raters evaluated these behaviors before and during the confession. Before the confession, they found that while lying, the murderer showed more gaze aversion, had longer pauses, spoke more slowly, and produced more non-ah speech disturbances than when he was truthful. During the confession, the murderer continued to exhibit multiple empirical indicators of deception (e.g., slower speech, longer pauses, more speech disturbances) that were suggestive that he had to think hard while lying. These important results demonstrate that various suspect conversational and behavioral cues during a confession are indicative of that suspect actively lying to the police albeit very poorly, not the social construction of unsubstantiated interview effects (Horvath, Jayne, and Buckley 1994).

A related study employed a similar methodology among 16 criminal suspects, nine of whom were charged with theft, four charged with murder, two charged with arson, and one charged with attempted rape. Ten of the 16 offenders were well known to the police based on prior contacts (Mann, Vrij, and Bull 2002). Truthfulness and lying were determined based on corroborating or conflicting data from reliable witness statements and forensic evidence. When lying, suspects blinked less and paused longer during their speech. The study did not disaggregate deception by criminal charge and the majority of the suspects were charged with theft, so published findings do not distinguish what one might encounter in high stakes versus low stakes interrogation.

Thompson and Hartwig (2023) examined suspect deception among 52 sexual homicide interrogations from diverse settings in the United States. Compared to truthful homicide offenders during their interrogations, those who were deceptive provided fewer tactile details, spatial details, and motion details during

their interrogation. Relative to those in the general population who do not murder, homicide offenders have significantly higher psychopathology including conditions where diagnostic criteria include the frequent use of deception or lying and/or an interpersonal style characterized by dramatic, tempestuous, and erratic behavior (Abreu Minero et al. 2018; Fox and DeLisi 2019; Liem and Koenraadt 2008b).

9 | Conclusion

No one disputes that false confessions of the innocent, unless identified soon afterward, lead to miscarriages of justice. A recurrent problem in research that examines the interface between psychology and law, is that the participants, procedures, and methodologies of a classroom or laboratory setting bear no resemblance to actual criminal suspects, real police interrogators, and the interactional exchanges between those actors. In this regard, the scientific basis of false confessions research is handicapped by a lack of ecological validity and at times, a lack of content and construct validity. These evoke similar limitations in closely watched areas such as memory, false beliefs, and false memories (Blair et al. 2012; Brewin, Andrews, and Mickes 2020; Muschalla and Schonborn 2021).

On the issue of memory and attendant research, Brewin, Andrews, and Mickes (2020, 124) concluded, "There is a real danger that overenthusiastic championing of conclusions based on limited data, without proper regard for methodological caveats or issues of external validity, will be damaging both to our reputation as scientists and to potential recipients, such as legal professionals, who rely on us to guide them with restraint and impartiality."

Brown and Ashcraft show how far police interrogations have professionalized in recent decades. It is intellectually dishonest to compare the abuses and indignities of police practices from a century ago to professional interrogations of today where suspects are interviewed in controlled settings that minimize the abuses of suspects, even if the setting is spartan and altogether uncomfortable. Advocacy scholarship uses facsimile studies and the outlier tragedy of wrongful convictions to promote false equivalence of police interrogations to coercion implicates some of the most highly-cited and influential studies in the field.⁹

This examination of false confessions and its research base yields the following conclusions:

- Confessions to crimes arise more predictably from one's perception of proof of guilt, and to a lesser degree, external and internal pressures on the suspect.
- False confessions are established by undisputed case evidence rather than academic theory. To date, presumptions about suspects and interrogation are not scientific or reflective of forensic science assessment.
- False confessions are an endpoint of the convergence of suspect vulnerabilities, features of the interrogation, and/or the context in which the interrogation takes place. Assessment requires an accounting of each of these features within the boundaries of litigation.

- Causal factors demonstrated from undisputed false confessions contribute to reliable and valid forensic assessment. Research of interrogation in non-empirical, staged contexts does not replicate the conditions of interrogation. Assessment that is based on non-empirical research relies on theoretical presumption and may mislead the trier of fact.
- Assessment of disputed confessions requires an evaluation of contemporaneous sources of objective data informing the suspect moving from denial to acceptance of responsibility. Given the pressures of criminal litigation, this includes consideration of how a confession came to be retracted and how a motivated suspect's account of the interrogation remains consistent or, morphs to conform to a more legally advantageous narrative.
- The validity of confessions and related claims benefit from transparent data that accounts for the suspect's experience in custody as clearly as possible. This includes videotaping of the interrogation and custodial experience. It may additionally be aided by records of the earliest accounts of one's interrogation experience, either through notes of one's defense attorney or recordings of jail phone calls. Fidelity of the data contributes to the contemporaneous reconstruction of interrogation and the movement of the suspect from denial to confession. Moreover, the clarity of such data informs potential contamination and its sources, for either the suspect's statement or the suspect's account of the interrogation.

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Conflicts of Interest

The authors declare no conflicts of interest.

Endnotes

¹ According to G. H. Gudjonsson (2018, 67), "The coerced internalized false confession is the most phenomenological of the false confessions because of the transformation of the suspect' ownership of their role in the crime and the salience of memory distrust" (G. Gudjonsson 2017; G. H. Gudjonsson et al. 2014).

² Research designs where prisoners self-reported their confession experiences and complete the Gudjonsson Confession Questionnaire (GCQ; Sigurdsson and Gudjonsson 1994, 1996a, 1996b) served as the foundation for understanding why people confess. The GCQ has been revised (GCQ-R) to include 52 items rated on a seven-point Likert scale ranging from not at all (=1) to very much so (=7). The 52 items have been further distinguished to reflect: perception of proof (e.g., evidence that there is no point denying crime, police would prove involvement anyway), external pressure (e.g., influence of police or family, thinking one receives lenient punishment), and internal pressure (e.g., shame or guilt for the crime, calculus that it is in one's interest to confess). Prisoner data from the GCQ and subsequent inmate studies support perception of proof as the most commonly implicated antecedent to confession (Wachi et al. 2016; Deslauriers-Varin, Lussier, and St-Yves 2011; G. Gudjonsson, Petursson, and Petursson 1991).

³ Given that confessions are expected to have consequences, it's hard to envision that an inmate would have confessed so many times without aiming to be locked up, let alone would such a high percentage of respondents. Perhaps this statistic illustrates the folly of reliance on

self-report inmate research that invites inmates to claim wrongful conviction.

⁴ The Reid Technique is frequently maligned in the false confessions paradigm, but it is not pervasively used. A recent national survey of law enforcement (Brimbal, Roche, and Martaindale 2024) found that only 31.8% of agencies use Reid as their training modality. More than 78% of law enforcement agencies use instruction from a local police academy, nearly 27% use cognitive interviewing, and over 22% use some other method or training modality.

⁵ "Implied promises" and "implied threats" are nebulous terms dependent on the nuance of an interrogating officer's motivations, actions, and context and the sensitivity (or irrationality) of how that is interpreted by a suspect. The subtlety relevant to both interrogator and suspect would be impossible to account for without clear explanation of one's earlier actions and reactions, in the moment. "Implicit," given the ambiguity of the expression, allows for one to interpret virtually any interaction as a form of promise or a threat. Without definition, the error rate of what is meant or perceived as an implied promise or threat is all the more untenable. There is no methodology for the valid or reliable distinction of an "implied" promise or threat.

⁶ For example, the Reid Technique characterizes interviews as non-accusatory events where the purpose is to gather information. Interviews occur early in an investigation, may be conducted in several environments, are free flowing and generally unstructured, and involve the investigator taking notes (Inbau et al. 2013). In contrast, an interrogation is accusatory, which has been criticized empirically (Catlin et al. 2024) and conceptually (Hirsch 2014).

⁷ Some suspects who confess give incorrect details that are self-serving in order to diminish their blameworthiness, project responsibility, suggest the crime was unexpected or impulsive, portray events as accidental, project remorse and create a sympathetic narrative, suggest their mental state as intoxicated or mentally impaired, prevent further exploration of a suspect's yet undiscovered related or unrelated criminal acts, or create goodwill within the criminal justice system to influence the disposition of the case or its sentencing. In that regard, confession may prove to be advantageous to the suspect, especially if a deceased victim was the only other witness to the event. The account of the crime, absent a confession, may be far more disturbing than a defendant and lone witness' ability to convincingly airbrush its details (Welner 2024).

⁸ There is likely a related omitted variable bias pertaining to antisocial personality features. Higher scores on the interpersonal feature of psychopathy were associated with verbosity, inflated views about lying ability, and more speech hesitations suggesting cognitive load. Relative to criminal offenders who were not psychopathic, psychopaths also exhibited less nervousness and anxiety during interactions (Klaver, Lee, and Hart 2007).

⁹ Leo (1996, 282) observed 182 custodial interrogations and utilized expansive criteria to typify those interrogations as coercive, ones that he admitted would not be found to be coercive in court. "Although some may disagree with where or how I chose to draw the line between coercive and non-coercive interrogations, I believe that I erred on the side of ruling as "coercive" questioning methods that many contemporary trial and appellate courts would otherwise deem to be non-coercive and thus, my criteria for coercive tactics generally resolve any doubts in favor of the suspect, not the police." Even with these "questionable" criteria, only four of the 182 interrogations were deemed coercive.

References

- Abreu Minero, V., H. Dickson, E. Barker, S. Flynn, S. Ibrahim, and J. Shaw. 2018. "The Patterns of Homicide Offence Characteristics and Their Associations With Offender Psychopathology." *Journal of Investigative Psychology and Offender Profiling* 15, no. 3: 304–318. <https://doi.org/10.1002/jip.1514>.
- Alceste, F., T. J. Luke, A. D. Redlich, J. Hellgren, A. Amrom, and S. M. Kassir. 2021. "The Psychology of Confessions: A Comparison of Expert

- and Lay Opinions.” *Applied Cognitive Psychology* 35: 39–51. <https://doi.org/10.1002/acp.3735>.
- Blair, J. P., T. R. Levine, T. O. Reimer, and J. D. McCluskey. 2012. “The Gap Between Reality and Research: Another Look at Detecting Deception in Field Settings.” *Policing: An International Journal of Police Strategies & Management* 35, no. 4: 723–740. <https://doi.org/10.1108/13639511211275553>.
- Blandon-Gitlin, I., K. Sperry, and R. Leo. 2011. “Jurors Believe Interrogation Tactics Are Not Likely to Elicit False Confessions: Will Expert Witness Testimony Inform Them Otherwise?” *Psychology, Crime and Law* 17, no. 3: 239–260. <https://doi.org/10.1080/10683160903113699>.
- Brewin, C. R., B. Andrews, and L. Mickes. 2020. “Regaining Consensus on the Reliability of Memory.” *Current Directions in Psychological Science* 29, no. 2: 121–125. <https://doi.org/10.1177/0963721419898122>.
- Brimbal, L., S. P. Roche, and M. H. Martaindale. 2024. “Interviewing and Interrogation Practices and Beliefs, 20 Years Later: A National Self-Report Survey of American Police.” *Law and Human Behavior* 48, no. 4: 247–261. <https://doi.org/10.1037/lhb0000570>.
- Cassell, P. G. 1998. “Protecting the Innocent From False Confessions and Lost Confessions—And From Miranda.” *Journal of Criminal Law and Criminology* 88, no. 2: 497–556. <https://doi.org/10.2307/1144289>.
- Cassell, P. G. 1999. “The Guilty and the ‘Innocent’: An Examination of Alleged Cases of Wrongful Convictions From False Confessions.” *Harvard Journal of Law & Public Policy* 22, no. 2: 526–603.
- Cassell, P. G. 2018. “Overstating America’s Wrongful Conviction Rate? Reassessing the Conventional Wisdom About the Prevalence of Wrongful Convictions.” *Arizona Law Review* 60: 815–863.
- Catlin, M., D. Wilson, A. D. Redlich, et al. 2024. “Interview and Interrogation Methods and Their Effects on True and False Confessions: A Systematic Review Update and Extension.” *Campbell Systematic Reviews* 20, no. 4: e1441. <https://doi.org/10.1002/cl2.1441>.
- Chojnacki, D. E., M. D. Cicchini, and L. T. White. 2008. “An Empirical Basis for the Admission of Expert Testimony on False Confessions.” *Arizona State Law Journal* 40: 1–45.
- Cleary, H. 2014. “Police Interviewing and Interrogation of Juvenile Suspects: A Descriptive Examination of Actual Cases.” *Law and Human Behavior* 38, no. 3: 271–282. <https://doi.org/10.1037/lhb0000070>.
- Cleary, H., and R. Bull. 2021. “Contextual Factors Predict Self-Reported Confession Decision-Making: A Field Study of Suspects’ Actual Police Interrogation Experiences.” *Law and Human Behavior* 45, no. 4: 310–323. <https://doi.org/10.1037/lhb0000459>.
- Copes, H., L. Vieraitis, and J. M. Jochum. 2007. “Bridging the Gap Between Research and Practice: How Neutralization Theory Can Inform Reid Interrogations of Identity Thieves.” *Journal of Criminal Justice Education* 18, no. 3: 444–459. <https://doi.org/10.1080/10511250701705404>.
- David, G. C., A. W. Rawls, and J. Trainum. 2018. “Playing the Interrogation Game: Rapport, Coercion, and Confessions in Police Interrogations.” *Symbolic Interaction* 41, no. 1: 3–24. <https://doi.org/10.1002/ymb.317>.
- DePaulo, B. M., J. J. Lindsay, B. E. Malone, L. Muhlenbruck, K. Charlton, and H. Cooper. 2003. “Cues to Deception.” *Psychological Bulletin* 129, no. 1: 74–118. <https://doi.org/10.1037/0033-2909.129.1.74>.
- Deslauriers-Varin, N., P. Lussier, and M. St-Yves. 2011. “Confessing Their Crime: Factors Influencing the Offender’s Decision to Confess to the Police.” *Justice Quarterly* 28, no. 1: 113–145. <https://doi.org/10.1080/07418820903218966>.
- Drake, K. E., R. A. Gonzalez, J. F. Sigurdsson, I. D. Sigfusdottir, and G. H. Gudjonsson. 2017. “A National Study Into Temperament as a Critical Susceptibility Factor for Reported False Confessions Amongst Adolescents.” *Personality and Individual Differences* 111: 220–226. <https://doi.org/10.1016/j.paid.2017.02.022>.
- Drizin, S. A., and R. A. Leo. 2004. “The Problem of False Confessions in the Post-DNA World.” *North Carolina Law Review* 82: 891–1008.
- Fox, B., and M. DeLisi. 2019. “Psychopathic Killers: A Meta-Analytic Review of the Psychopathy-Homicide Nexus.” *Aggression and Violent Behavior* 44: 67–79. <https://doi.org/10.1016/j.avb.2018.11.005>.
- Grisso, T., L. Steinberg, J. Woolard, et al. 2003. “Juveniles’ Competence to Stand Trial: A Comparison of Adolescents’ and Adults’ Capacities as Trial Defendants.” *Law and Human Behavior* 27, no. 4: 333–363. <https://doi.org/10.1023/a:1024065015717>.
- Gudjonsson, G. 2017. “Memory Distrust Syndrome, Confabulation and False Confession.” *Cortex* 87: 156–165. <https://doi.org/10.1016/j.cortex.2016.06.013>.
- Gudjonsson, G., H. Petursson, and H. Petursson. 1991. “Custodial Interrogation: Why Do Suspects Confess and How Does It Relate to Their Crime, Attitude and Personality?” *Personality and Individual Differences* 12, no. 3: 295–306. [https://doi.org/10.1016/0191-8869\(91\)90116-s](https://doi.org/10.1016/0191-8869(91)90116-s).
- Gudjonsson, G. H. 1984. “A New Scale of Interrogative Suggestibility.” *Personality and Individual Differences* 5, no. 3: 303–314. [https://doi.org/10.1016/0191-8869\(84\)90069-2](https://doi.org/10.1016/0191-8869(84)90069-2).
- Gudjonsson, G. H. 1989. “Compliance in an Interrogative Situation: A New Scale.” *Personality and Individual Differences* 10, no. 5: 535–540. [https://doi.org/10.1016/0191-8869\(89\)90035-4](https://doi.org/10.1016/0191-8869(89)90035-4).
- Gudjonsson, G. H. 2018. *The Psychology of False Confessions: Forty Years of Science and Practice*. Hoboken, NJ: John Wiley & Sons.
- Gudjonsson, G. H. 2021. “The Science-Based Pathways to Understanding False Confessions to Wrongful Convictions.” *Frontiers in Psychology* 12: 633936. <https://doi.org/10.3389/fpsyg.2021.633936>.
- Gudjonsson, G. H., R. A. Gonzalez, and S. Young. 2021. “The Risk of Making False Confessions: The Role of Developmental Disorders, Conduct Disorder, Psychiatric Symptoms, and Compliance.” *Journal of Attention Disorders* 25, no. 5: 715–723. <https://doi.org/10.1177/1087054719833169>.
- Gudjonsson, G. H., and J. F. Sigurdsson. 1994. “How Frequently Do False Confessions Occur? An Empirical Study Among Prison Inmates.” *Psychology, Crime and Law* 1, no. 1: 21–26. <https://doi.org/10.1080/10683169408411933>.
- Gudjonsson, G. H., J. F. Sigurdsson, B. B. Asgeirsdottir, and I. D. Sigfusdottir. 2006. “Custodial Interrogation, False Confession and Individual Differences: A National Study Among Icelandic Youth.” *Personality and Individual Differences* 41, no. 1: 49–59. <https://doi.org/10.1016/j.paid.2005.12.012>.
- Gudjonsson, G. H., J. F. Sigurdsson, I. D. Sigfusdottir, B. B. Asgeirsdottir, R. A. González, and S. Young. 2016. “A National Epidemiological Study Investigating Risk Factors for Police Interrogation and False Confession Among Juveniles and Young Persons.” *Social Psychiatry and Psychiatric Epidemiology* 51, no. 3: 359–367. <https://doi.org/10.1007/s00127-015-1145-8>.
- Gudjonsson, G. H., J. F. Sigurdsson, A. S. Sigurdardottir, H. Steinthorsson, and V. M. Sigurdardottir. 2014. “The Role of Memory Distrust in Cases of Internalised False Confession.” *Applied Cognitive Psychology* 28, no. 3: 336–348. <https://doi.org/10.1002/acp.3002>.
- Hartwig, M., P. Anders Granhag, and L. A. Strömwall. 2007. “Guilty and Innocent Suspects’ Strategies During Police Interrogations.” *Psychology, Crime and Law* 13, no. 2: 213–227. <https://doi.org/10.1080/10683160600750264>.
- Hartwig, M., and C. F. Bond. 2011. “Why Do Lie-Catchers Fail? A Lens Model Meta-Analysis of Human Lie Judgments.” *Psychological Bulletin* 137, no. 4: 643–659. <https://doi.org/10.1037/a0023589>.
- Hirsch, A. 2014. “Going to the Source: The New Reid Method and False Confessions.” *Ohio State Journal of Criminal Law* 11: 803–826.

- Holmberg, U., and S. Å. Christianson. 2002. "Murderers' and Sexual Offenders' Experiences of Police Interviews and Their Inclination to Admit or Deny Crimes." *Behavioral Sciences & the Law* 20, no. 1–2: 31–45. <https://doi.org/10.1002/bsl.470>.
- Horselenberg, R., H. Merckelbach, T. Smeets, D. Franssens, G. J. Ygram Peters, and G. Zeles. 2006. "False Confessions in the Lab: Do Plausibility and Consequences Matter?" *Psychology, Crime and Law* 12, no. 1: 61–75. <https://doi.org/10.1080/1068310042000303076>.
- Horvath, F., B. Jayne, and J. Buckley. 1994. "Differentiation of Truthful and Deceptive Criminal Suspects in Behavior Analysis Interviews." *Journal of Forensic Sciences* 39, no. 3: 793–807. <https://doi.org/10.1520/jfs13657j>.
- Inbau, F. E., J. E. Reid, J. P. Buckley, and B. C. Jayne. 2013. *Criminal Interrogation and Confessions*. 5th ed. Burlington, MA: Jones & Bartlett Learning.
- James, V., and J. Gossett. 2018. "Of Monsters and Men: Exploring Serial Murderers' Discourses of Neutralization." *Deviant Behavior* 39, no. 9: 1120–1139. <https://doi.org/10.1080/01639625.2017.1409980>.
- Kassin, S. M. 2012. "Why Confessions Trump Innocence." *American Psychologist* 67, no. 6: 431–445. <https://doi.org/10.1037/a0028212>.
- Kassin, S. M., S. A. Drizin, T. Grisso, G. H. Gudjonsson, R. A. Leo, and A. D. Redlich. 2010. "Police-Induced Confessions: Risk Factors and Recommendations." *Law and Human Behavior* 34, no. 1: 3–38. <https://doi.org/10.1007/s10979-009-9188-6>.
- Kassin, S. M., J. Kukucka, V. Z. Lawson, and J. DeCarlo. 2017. "Police Reports of Mock Suspect Interrogations: A Test of Accuracy and Perception." *Law and Human Behavior* 41, no. 3: 230–243. <https://doi.org/10.1037/lhb0000225>.
- Kassin, S. M., and K. McNall. 1991. "Police Interrogations and Confessions: Communicating Promises and Threats by Pragmatic Implication." *Law and Human Behavior* 15, no. 3: 233–251. <https://doi.org/10.1007/bf01061711>.
- Kassin, S. M., A. D. Redlich, F. Alceste, and T. J. Luke. 2018. "On the General Acceptance of Confessions Research: Opinions of the Scientific Community." *American Psychologist* 73, no. 1: 63–80. <https://doi.org/10.1037/amp0000141>.
- Kassin, S. M., and L. S. Wrightsman. 1985. "Confession Evidence." In *The Psychology of Evidence and Trial Procedure*, edited by S. M. Kassin and L. S. Wrightsman, 67–94. Thousand Oaks, CA: SAGE.
- Killgore, W. D. S. 2010. "Effects of Sleep Deprivation on Cognition." *Progress in Brain Research* 185: 105–129. <https://doi.org/10.1016/b978-0-444-53702-7.00007-5>.
- King, W. R., and T. M. Dunn. 2010. "Detecting Deception in Field Settings: A Review and Critique of the Criminal Justice and Psychological Literature." *Policing: An International Journal of Police Strategies & Management* 33, no. 2: 302–320. <https://doi.org/10.1108/13639511011044902>.
- Klaver, J. R., Z. Lee, and S. D. Hart. 2007. "Psychopathy and Nonverbal Indicators of Deception in Offenders." *Law and Human Behavior* 31, no. 4: 337–351. <https://doi.org/10.1007/s10979-006-9063-7>.
- Leo, R. A. 1996. "Inside the Interrogation Room." *Journal of Criminal Law and Criminology* 86, no. 2: 266–303. <https://doi.org/10.2307/1144028>.
- Leo, R. A., and B. Liu. 2009. "What Do Potential Jurors Know About Police Interrogation Techniques and False Confessions?" *Behavioral Sciences & the Law* 27, no. 3: 381–399. <https://doi.org/10.1002/bsl.872>.
- Leo, R. A., and R. J. Ofshe. 1998a. "The Consequences of False Confessions: Deprivations of Liberty and Miscarriages of Justice in the Age of Psychological Coercion." *Journal of Criminal Law and Criminology* 88, no. 2: 429–496. <https://doi.org/10.2307/1144288>.
- Leo, R. A., and R. J. Ofshe. 1998b. "Using the Innocent to Scapegoat Miranda: Another Reply to Paul Cassell." *Journal of Criminal Law and Criminology* 88, no. 2: 557–578. <https://doi.org/10.2307/1144290>.
- Liem, M., and F. Koenraadt. 2008a. "Filicide: A Comparative Study of Maternal versus Paternal Child Homicide." *Criminal Behaviour and Mental Health* 18, no. 3: 166–176. <https://doi.org/10.1002/cbm.695>.
- Liem, M., and F. Koenraadt. 2008b. "Familicide: A Comparison With Spousal and Child Homicide by Mentally Disordered Perpetrators." *Criminal Behaviour and Mental Health* 18, no. 5: 306–318. <https://doi.org/10.1002/cbm.710>.
- Mann, S., A. Vrij, and R. Bull. 2002. "Suspects, Lies, and Videotape: An Analysis of Authentic High-Stake Liars." *Law and Human Behavior* 26, no. 3: 365–376. <https://doi.org/10.1023/a:1015332606792>.
- Maruna, S., and H. Copes. 2005. "What Have We Learned From Five Decades of Neutralization Research?" *Crime and Justice* 32: 221–320. <https://doi.org/10.1086/655355>.
- McCann, J. T. 1998. "Broadening the Typology of False Confessions." *American Psychologist*, 53, no. 3: 319–320. <https://doi.org/10.1037/h0092165>.
- Mindthoff, A., J. R. Evans, G. Perez, et al. 2018. "A Survey of Potential Jurors' Perceptions of Interrogations and Confessions." *Psychology, Public Policy, and Law* 24, no. 4: 430–448. <https://doi.org/10.1037/law0000182>.
- Muschalla, B., and F. Schönborn. 2021. "Induction of False Beliefs and False Memories in Laboratory Studies—A Systematic Review." *Clinical Psychology & Psychotherapy* 28, no. 5: 1194–1209. <https://doi.org/10.1002/cpp.2567>.
- National Registry of Exonerations. 2024. % Exonerations by Contributing Factor. <https://www.law.umich.edu/special/exoneration/Pages/ExonerationsContribFactorsByCrime.aspx>.
- Otgaar, H., J. M. Schell-Leugers, M. L. Howe, A. D. L. F. Vilar, S. T. Houben, and H. Merckelbach. 2021. "The Link Between Suggestibility, Compliance, and False Confessions: A Review Using Experimental and Field Studies." *Applied Cognitive Psychology* 35, no. 2: 445–455. <https://doi.org/10.1002/acp.3788>.
- Pettigrew, M. 2020. "Confessions of a Serial Killer: A Neutralisation Analysis." *Homicide Studies* 24, no. 1: 69–84. <https://doi.org/10.1177/1088767918793674>.
- Redding, R., and E. Fuller. 2004. "What Do Juvenile Offenders Know About Being Tried as Adults? Implications for Deterrence." *Juvenile and Family Court Journal* 55, no. 3: 35–44. <https://doi.org/10.1111/j.1755-6988.2004.tb00167.x>.
- Redlich, A. D., R. Kulish, and H. J. Steadman. 2011. "Comparing True and False Confessions Among Persons With Serious Mental Illness." *Psychology, Public Policy, and Law* 17, no. 3: 394–418. <https://doi.org/10.1037/a0022918>.
- Redlich, A. D., A. Summers, and S. Hoover. 2010. "Self-Reported False Confessions and False Guilty Pleas Among Offenders With Mental Illness." *Law and Human Behavior* 34, no. 1: 79–90. <https://doi.org/10.1007/s10979-009-9194-8>.
- Russano, M. B., C. A. Meissner, F. M. Narchet, and S. M. Kassin. 2005. "Investigating True and False Confessions Within a Novel Experimental Paradigm." *Psychological Science* 16, no. 6: 481–486. <https://doi.org/10.1111/j.0956-7976.2005.01560.x>.
- Shaw, J., and S. Porter. 2015. "Constructing Rich False Memories of Committing Crime." *Psychological Science* 26, no. 3: 291–301. <https://doi.org/10.1177/0956797614562862>.
- Sigurðsson, J. F., and G. H. Gudjonsson. 1994. "Alcohol and Drug Intoxication During Police Interrogation and the Reasons Why Suspects Confess to the Police." *Addiction* 89, no. 8: 985–997. <https://doi.org/10.1111/j.1360-0443.1994.tb03358.x>.
- Sigurðsson, J. F., and G. H. Gudjonsson. 1996a. "The Psychological Characteristics of 'False Confessors': A Study Among Icelandic Prison Inmates and Juvenile Offenders." *Personality and Individual Differences* 20, no. 3: 321–329. [https://doi.org/10.1016/0191-8869\(95\)00184-0](https://doi.org/10.1016/0191-8869(95)00184-0).

- Sigurdsson, J. F., and G. H. Gudjonsson. 1996b. "The Relationship Between Types of Claimed False Confession Made and the Reasons Why Suspects Confess to the Police According to the Gudjonsson Confession Questionnaire (GCQ)." *Legal and Criminological Psychology* 1, no. 2: 259–269. <https://doi.org/10.1111/j.2044-8333.1996.tb00324.x>.
- Souza, M. T. D., M. D. D. Silva, and R. D. Carvalho. 2010. "Integrative Review: What Is It? How to Do It?" *Einstein (São Paulo)* 8, no. 1: 102–106. <https://doi.org/10.1590/s1679-45082010rw1134>.
- Sporer, S. L., and B. Schwandt. 2006. "Paraverbal Indicators of Deception: A Meta-Analytic Synthesis." *Applied Cognitive Psychology* 20, no. 4: 421–446. <https://doi.org/10.1002/acp.1190>.
- Sporer, S. L., and B. Schwandt. 2007. "Moderators of Nonverbal Indicators of Deception: A Meta-Analytic Synthesis." *Psychology, Public Policy, and Law* 13, no. 1: 1–34. <https://doi.org/10.1037/1076-8971.13.1.1>.
- Stewart, J. M., W. D. Woody, and S. Pulos. 2018. "The Prevalence of False Confessions in Experimental Laboratory Simulations: A Meta-Analysis." *Behavioral Sciences & the Law* 36, no. 1: 12–31. <https://doi.org/10.1002/bsl.2327>.
- Strömwall, L. A., M. Hartwig, and P. A. Granhag. 2006. "To Act Truthfully: Nonverbal Behaviour and Strategies During a Police Interrogation." *Psychology, Crime and Law* 12, no. 2: 207–219. <https://doi.org/10.1080/10683160512331331328>.
- Sykes, G. M., and D. Matza. 1957. "Techniques of Neutralization: A Theory of Delinquency." *American Sociological Review* 22, no. 6: 664–670. <https://doi.org/10.2307/2089195>.
- Thompson, A. D., and M. Hartwig. 2023. "The Language of High-Stakes Truths and Lies: Linguistic Analysis of True and Deceptive Statements Made During Sexual Homicide Interrogations." *Legal and Criminological Psychology* 28, no. 1: 34–44. <https://doi.org/10.1111/lcrp.12214>.
- Van Bergen, S., M. Jelicic, and H. Merckelbach. 2008. "Interrogation Techniques and Memory Distrust." *Psychology, Crime and Law* 14, no. 5: 425–434. <https://doi.org/10.1080/10683160701822533>.
- Vrij, A., and S. Mann. 2001. "Telling and Detecting Lies in a High-Stake Situation: The Case of a Convicted Murderer." *Applied Cognitive Psychology* 15, no. 2: 187–203. [https://doi.org/10.1002/1099-0720\(200103/04\)15:2<187::aid-acp696>3.0.co;2-a](https://doi.org/10.1002/1099-0720(200103/04)15:2<187::aid-acp696>3.0.co;2-a).
- Wachi, T., K. Watanabe, K. Yokota, Y. Otsuka, and M. E. Lamb. 2016. "Japanese Suspect Interviews, Confessions, and Related Factors." *Journal of Police and Criminal Psychology* 31, no. 3: 217–227. <https://doi.org/10.1007/s11896-015-9179-0>.
- Welner, M. 2003. "False Confessions & DNA Exonerations: Research, and Realities." In *Presentation at Annual Conference, Nebraska Institute of Forensic Sciences, Lincoln, Nebraska*.
- Welner, M. 2016. "Forensic Psychiatry and Forensic Psychology: Mental Handicap and Learning Disability." In *Encyclopedia of Forensic and Legal Medicine*, edited by J. Payne-James and R. Byard, 2nd ed., Vol. 2, 634–658. Elsevier. <https://doi.org/10.1016/b978-0-12-800034-2.00189-0>.
- Welner, M. 2024. "The Assessment of Disputed Confessions." In *Encyclopedia of Forensic and Legal Medicine*, edited by J. Payne-James and R. Byard, 2nd ed., Vol. 2, 634–658. Elsevier. <https://doi.org/10.1016/b978-0-443-21441-7.00326-5>.
- Whittemore, R., and K. Knafl. 2005. "The Integrative Review: Updated Methodology." *Journal of Advanced Nursing* 52, no. 5: 546–553. <https://doi.org/10.1111/j.1365-2648.2005.03621.x>.

Cases Cited

- Ashcraft, 1944 *Ashcraft v. Tennessee*, 322 U.S. 143. 1944.
- Brown, 1936 *Brown v. Mississippi*, 297 U.S. 278. 1936.
- Columbe, 1961 *Culombe v. Connecticut*, 367 U.S. 568. 1961.
- Fikes, 1957 *Fikes v. Alabama*, 352 U.S. 191. 1957.

- Frazier, 1969 *Frazier v. Cupp*, 394 U.S. 731. 1969.
- Leyra, 1954 *Leyra v. Denno*, 347 U.S. 556. 1954.
- Miranda, 1966 *Miranda v. Arizona*, 384 U.S. 436. 1966.