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Coerced Confessions and the Jury: An Experimental Test of the "Harmless Error" Rule[1]

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Prompted by the U.S. Supreme Court's landmark decision in Arizona v. Fulminante *(1991), two studies evaluated the proposition that an erroneously admitted coerced confession can be considered "harmless error." Mock jurors read transcripts of a murder trial containing a confession that was (1) elicited in a high- or low-pressure interrogation, and (2) ruled admissible or inadmissible by the judge (no-confession control groups were also included). As prescribed by law, jurors saw the high-pressure confession as less voluntary, correctly recalled the judge's ruling, and reported that it had less influence on their decisions. On verdicts, however, the confession increased the conviction rate—even when it was seen as coerced, even when it was stricken from the record, and even when jurors said it had no influence. These results suggest that appellate courts should exercise caution in applying the harmless error rule to the admission of coerced confessions.*

In criminal justice, confession evidence is the most potent of weapons for the prosecution. It is also a recurring source of controversy. Whether a suspect's self-incriminating statement was voluntary or coerced, or whether a suspect was of sound mind are just two of the issues that trial judges and juries consider on a routine basis. To protect the integrity of the legal system, to guard against violations of due process, and to minimize the risk that innocent people confess to crimes they did not commit, the courts have erected guidelines for the admission of confession evidence. Although there is no simple "litmus test," a confession is typically excluded if it was elicited by physical violence or a threat of harm or punishment, promise of leniency, or without notifying the suspect of his or her Miranda rights (for reviews of case law, see Kamisar, LaFave, & Israel, 1994; Mueller & Kirkpatrick, 1995; Wigmore, 1970).

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To understand the psychology of confessions, three questions need to be addressed (see Kassin, in press). First, how do interrogators get suspects to confess—that is, what techniques of social influence do they use? Informed by recent developments in case law, the police use various methods, including feigned friendship, sympathy, the good cop-bad cop routine, appeals to God and religion, the use of informants, and even the presentation of false evidence (fake polygraph results or forensic tests; a staged eyewitness identification). Various manuals are available to advise police detectives on how to get confessions from reluctant suspects (Aubry & Caputo, 1965; O'Hara & O'Hara, 1981). The most popular is Inbau, Reid, and Buckley's (1986) *Criminal interrogation and confessions,* originally published in 1962, and now in its third edition (for descriptions of these techniques, see Gudjonsson, 1992; Kassin & McNall, 1991; Kassin & Wrightsman, 1985; Wrightsman & Kassin, 1993).

A second important set of questions is, what effects do these methods of persuasive interrogation have? Do they elicit confessions only from suspects who are guilty, or do innocent people sometimes confess to crimes they did not commit? There is no way to estimate the prevalence of such a problem, which has not been systematically examined. But there are many documented cases on record (Borchard, 1932; Bedau & Radelet, 1987; Gudjonsson, 1992; Rattner, 1988). Indeed, it is important to distinguish among three types of false confession (Kassin & Wrightsman, 1985): *voluntary* (statements made without external pressure), *coerced-compliant* (when suspect confess to escape an aversive interrogation, secure a promised benefit, or avoid a threatened harm), and *coerced-internalized* (when suspect actually come to believe that they are guilty of the crime). A recent study suggests that the presentation of false incriminating evidence—a common interrogation ploy—can lead people who are in a state of uncertainty to confess to an act they did not commit, to internalize the confession, and to confabulate details in memory consistent with that new belief (Kassin & Kiechel, 1996).

A third question pertaining to confession evidence is this: when a suspect is said to have confessed but then retracts the statement and goes to trial, can the jury discount the evidence, if warranted, in accordance with the law? Are jurors sufficiently sensitive to situational pressures that precede a confession? In cases that contain disputed confessions, the courts employ one of two procedures. In all instances, a preliminary hearing is held in which the judge determines the voluntariness and admissibility of the confession. In some states, confessions deemed voluntary are then admitted without special instruction. In other states, the jury is asked to make an independent judgment of voluntariness and to disregard statements found to be coerced (for a description of the procedures used, see Kamisar et al., 1994). But by what standard of proof should confessions be deemed voluntary? This question was a source of variability, with some states requiring voluntariness to be proven "beyond a reasonable doubt" and other states adopting the lesser standard, proof by a "preponderance of the evidence." In *Lego v. Twomy* (1972), the U.S. Supreme Court resolved the issue in favor of the lesser standard. Stating that "Our decision was not based in the slightest on the fear that juries might misjudge the accuracy of confessions" (p. 625), the Court affirmed its faith in the jury's ability and willingness to discount coerced confessions.

Over the years, many state and federal courts have had to rule on the voluntariness and admissibility of confession evidence. One rationale for excluding coerced confessions from the trial record was that although certain situations may increase the risk of false confessions, such information might unduly influence the jury. As such, convictions were routinely reversed whenever an appeals court found that a coerced confession was erroneously admitted at trial. In *Arizona v. Fulminante* (1991), however, the United States Supreme Court broke new ground. In that case, Oreste Fulminante had been convicted and sentenced to death for the murder of his 11-year-old stepdaughter. There was no evidence linking him to the murder. While in prison for an unrelated crime, however, he was befriended by Anthony Sarivola, a fellow inmate who was actually a paid FBI informant posing as an organized crime figure. Sarivola warned Fulminante that other prisoners would attack him because of a rumor that he was a child killer—and that he would protect him in exchange for "the truth." Fearing for his safety, Fulminante—who had a low IQ a slight physical stature, and difficulty coping with prison life—confessed. He later sought to suppress the statement, but the trial judge denied the motion and ruled that the confession was not coerced. On appeal, the Arizona Supreme Court disagreed and ordered a new trial. The U.S. Supreme Court also conceded that the confession as coerced and that its admission was "prejudicial error." By a 5-4 majority, however, the Court stated for the first time that in certain situations (as when a confession is cumulative or when there is sufficient corroborating evidence), a wrongly admitted confession may be subject to the "harmless error" rule. To determine whether such a confession is harmless beyond a reasonable doubt, an appellate court would thus review all the evidence and examine the error in the context of the trial as a whole. Essentially, the Court argued that "admission of an involuntary confession is a 'trial error' similar in both degree and kind to the erroneous admission of other types of evidence" (p. 1265).

Many legal scholars have criticized the *Fulminante* ruling on constitutional grounds (e.g., Ogletree, 1991), on the belief that it will encourage police to employ increasingly coercive methods of interrogation (Kamisar, 1995), and on the argument that appeals court judges are ill-equipped by intuition to gauge the strength of the prosecutor's case and the cumulative or "harmless" nature of the confession in dispute (Mueller & Kirkpatrick, 1995). In addition, it is important to note that this opinion, like others that preceded it (e.g., *Lego v. Twomy,* 1972), rests on a certain degree of faith in the jury. But is this faith justified? Can jurors correctly evaluate, let alone ignore in their decision making, testimony about a coerced confession? What about the curative impact of a judge's instruction to disregard—does it mitigate the effect of a confession that is introduced but then withdrawn? And does evidence of a confession, even if coerced, lead jurors to see other prosecutorial evidence as incriminating as well?

Research in other contexts suggests a negative answer to these questions. Many studies have shown that people often fall prey to the fundamental attribution error (Ross, 1977), or correspondence bias (Gilbert & Jones, 1986)—that is, they tend to accept the dispositional implications of another person's behavior without sufficiently accounting for the role of situational factors (for reviews, see Jones, 1990; Gilbert & Malone, 1995). As applied to juror decision-making, Kassin and

Wrightsman (1980) examined the impact on mock jurors of self-incriminating statements elicited by explicit promises and threats—conditions considered coercive by law. The results supported a limited version of the fundamental attribution error. When a defendant confessed after an explicit threat of harm or punishment, participants rejected the information. They saw the confession as involuntary and were not significantly influenced by it in their verdicts. When the defendant confessed following a promise of leniency, however, participants did not fully reject the information. Rather, they conceded that the confession was involuntary but used it to vote guilty. This pattern of results was thus consistent with research showing that people perceive a promise of reward as a weaker form of behavioral inducement than a threat of punishment (Wells, 1980; for further discussion, see Kassin & Wrightsman, 1985).

In *Fulminante,* the judge admitted the defendant's confession into evidence, thus sanctioning the jury's use of this information. At other times, however, a coerced confession may be divulged, only to elicit an objection from the opposing lawyer and an admonishment from the judge to disregard. As a result of preliminary hearings on the admissibility of disputed confessions, this situation should not arise with great frequency. It does occur on an occasional basis, however, and raises the interesting conceptual question of whether jurors are influenced by confession evidence when it is not sanctioned by the court, evidence that they are told to disregard.

Research suggests that people find it difficult to actively suppress a "forbidden" image or thought upon instruction (Wegner, Schneider, Carter, & White, 1987; Wegner, 1994) and that the impact of inadmissible evidence often persists, particularly when that evidence seems relevant to their verdict (Sue, Smith, & Caldwell, 1973; Wolf & Montgomery, 1977; Thompson, Fong, & Rosenhan, 1981; Carretta & Moreland, 1983; Wissler & Saks, 1985; Kassin, Williams, & Saunders, 1990; Pickel, 1995; Kassin & Sommers, in press; for a recent review, see Kassin & Studebaker, in press). Indeed, newly created beliefs often endure after the evidence on which they were based is discredited (Anderson, Lepper, & Ross, 1980; Johnson & Seifert, 1994; Ross, Lepper, & Hubbard, 1975; Schul & Burnstein, 1985)—in part because these beliefs lead perceivers to interpret subsequent information in ways that verify their initial impression (e.g., Darley & Gross, 1983). To summarize, the present research was designed to test the following three hypotheses: (1) confession evidence will boost the conviction rate, regardless of whether the confession is perceived as voluntary or coerced, (2) this prejudicial effect will not be curtailed by the judge's admonishment to disregard, and (3) the introduction of a confession would lead participants to assimilate the other prosecutorial evidence (i.e., to view that evidence as more incriminating).

EXPERIMENT 1

The foregoing propositions were tested within a mock juror paradigm. In two studies, mock jurors read a murder trial transcript involving a suspect who confessed in a high-pressure or low-pressure interrogation situation and in which the confes-

sion was ruled admissible or inadmissible by the judge. A no-confession control group, in which the defendant was said to have denied the allegations, was also included. Responding individually, our participants voted guilty or not guilty and then answered a series of case-related questions.

Method

Participants and Design

Eighty-five introductory psychology students participated in exchange for extra credit. Participants were randomly assigned to one of four confession groups produced by a 2 (high-pressure vs. low-pressure interrogation) × 2 (admissible vs. inadmissible) factorial design (n = 17 per cell). An additional 17 participants were randomly assigned to a no-confession control group. The experiment was run in small groups ranging in size from 8 to 12.

Procedure

Upon entering a laboratory courtroom, participants were told that they would receive a transcript of a criminal trial, which they should read carefully, after which they would be asked a series of questions. They received one of five transcripts, which took 20-25 minutes to read, after which they were given questionnaires to be filled out individually and without deliberation. Three questionnaires were used in the experimental conditions and two were used in the no-confession control group. All participants were then debriefed and thanked for their time.

Stimulus Transcript

Participants received one of five versions of a criminal trial transcript entitled *State v. Wilson.* The case, which was adapted from an actual trial, involved a man charged with the murder of his estranged wife and male neighbor. The district attorney charged that Wilson had killed his wife and neighbor in a fit of jealous rage after finding them together. The defendant claimed that he merely found the bodies when he returned to his former home to get personal checks and bank documents. Except for a confession, the state's evidence was circumstantial (e.g., the defendant and murderer were both 6 feet tall and left-handed), incomplete (e.g., there was no murder weapon), and ambiguous (e.g., before calling the police, Wilson fled the scene and phoned his attorney). The transcripts were 22 to 24 pages in length and consisted of opening statements, closing arguments, the examinations of five witnesses (a private investigator, police officer, coroner, the defendant, and a friend of the defendant's), and a brief judge's instruction on the charge of first-degree murder and the requirements of proof (i.e., presumption of innocence, burden of proof, and reasonable doubt).

Manipulation of Interrogation Pressure. To vary the degree of interrogation pressure brought to bear on the defendant, we had 120 pre-test participants read about a crime and 29 interrogation situations drawn from actual cases and from Inbau et al.'s (1986) manual. Participants rated each situation on a 4-point scale (1 = *the confession was completely voluntary,* and 4 = *the confession was completely coerced*). Results indicated that people perceived interrogation as highly coercive when the suspect was in physical discomfort and when the police officer flaunted his weapon in a threatening manner (*M*s = 3.3 & 3.1, respectively). These details were thus used to represent the high-pressure interrogation.

In the experimental conditions, the confession was presented in the testimonies of the defendant and police officer to whom he confessed. In the *high-pressure* condition, the defendant testified that "They drove me back to the police station, where Officer Heffling handcuffed me, took out his gun and started asking me questions about the murders. My arm really hurt from the handcuffs, but he wouldn't remove them. . . I told him that my right arm had just come out of a cast and was still very sore." He then reported that the detective, at one point, picked up his gun and "flung it around and waved it in the air. . . My arm hurt, and I was in shock from the events of the whole evening. By then the gun was pretty terrifying." When asked, "Did you feel he was trying to pressure you to confess?" the defendant replied, "Yes, he was angry and yelling." The police officer also testified about the interrogation and confession. He conceded that Wilson was under stress but rejected the suggestion that Wilson was under so much stress that he would confess to a crime he did not commit.

In the *low-pressure* condition, the defendant was said to have confessed immediately upon questioning. He was not handcuffed, verbally abused, or threatened with a weapon. In this situation, Wilson conceded that he uttered a confession but explained that "I was really upset and don't remember what it was. I was in a state of shock." As in the high-pressure condition, the police officer conceded that Wilson was under stress while in custody but rejected the suggestion that the stress triggered a false confession: "No I wouldn't say that. I mean he just blurted it out. Nobody twisted his arm."

In the *no-confession control* group, the defendant and police officer both testified that Wilson denied murdering his wife and neighbor during his interrogation.

Admissibility Manipulation. The admissibility status of the confession was also varied. In the *admissible* condition, the defense attorney objected to the police officer's testimony, but the judge overruled the objection and the officer was allowed to continue. The prosecuting attorney then reiterated the confession in his cross-examination of the defendant and in closing argument. In the *inadmissible* condition, the judge sustained the defendant's objection and ordered the confession disclosure stricken from the trial record. He then admonished the jury to "disregard the witness's last remark."[4]

[4]As is common practice, the judge did not explain the rationale for his inadmissibility ruling. In general, a confession may be excluded on the ground that it was coerced, that the suspect was not competent, or in the case of a voluntary confession (e.g., in the low-pressure condition), that the defendant was not apprised of his or her Miranda rights.

Dependent Measures

Playing the role of jurors, participants in all groups were asked to render a verdict (guilty or not guilty), rate their confidence in that judgment on a 10-point scale (1 = *not at all,* 10 = *very confident*), and answer a series of other case-related questions. Verdicts are a dual function of the perceived probability that the defendant committed the crime (probability-of-commission) and the standard of proof deemed necessary for conviction (reasonable doubt), so these variables were also independently assessed. All participants thus estimated the likelihood that the defendant committed the crime by circling a number from 0 to 100 (in multiples of five) and completed the sentence, "The defendant should be found guilty if there is at least a _____ % chance that he committed the crime."

A second questionnaire was used to examine the impact of the confession on perceptions of other evidence. Specifically, 13 items of evidence were listed (e.g., "the fact that he called his attorney before the police," "the fact that his fingerprints were on the bodies," "the fact that the murder weapon was not found," "the fact that there was no sign of a forced entry," "the fact that he still loved his wife"), and participants were asked to rate the extent to which each one led them to view the defendant as guilty or innocent. Participants in the experimental groups also rated "the fact that he confessed to a police officer" (all ratings were made on a 10-point scale, where 1 = *innocent,* 5 = *ambiguous,* 10 = *guilty*).

A third questionnaire was administered only in the confession groups. To assess perceptions of the interrogation, participants rated the amount of pressure that the police exerted on the defendant to confess. As required of juries in many states, they also judged whether the defendant confessed voluntarily and without coercion (yes or no) and rated their confidence in that judgment. As a check on the admissibility manipulation, these participants were also asked to recall if the defendant's confession was admitted into evidence (yes or no) and rate their confidence in that memory. Finally, to assess the self-reported influence of the confession, participants were asked whether this information influenced their verdict (yes or no) and rated their confidence in that assessment. All confidence ratings were made on a 10-point scale.

Results

Manipulation Checks

To assess the effectiveness of the pressure manipulation, participants in the experimental groups rated the degree of pressure that the police had exerted on the defendant to confess. As anticipated, a 2 (interrogation pressure) × 2 (admissibility ruling) factorial ANOVA revealed that pressure ratings were lower under low-pressure than in the high-pressure condition (Ms = 4.38 & 6.87, respectively), $F(1, 64) = 30.2$, $p < .001$. Indicating that participants also took their cue from the judge, pressure ratings were lower when the confession was ruled admissible than when it was inadmissible (Ms = 4.86 & 6.40, respectively), $F(1, 64) = 11.6$, $p <$

.01. Indeed, a significant pressure × admissibility interaction indicated that the police were seen as having exerted less pressure in the low-pressure-admissible cell (M = 2.97) than in all other situations (Ms = 5.79 in the low pressure-inadmissible group, 6.74 in the high pressure-admissible group, and 7.00 in the high pressure-inadmissible group), $F(1, 64) = 7.99, p < .01$.

To determine if participants in the experimental groups had read, understood, and recalled the judge's evidentiary ruling, they were asked if the defendant's confession had been allowed into evidence. Confirming the effectiveness of this manipulation, 82% of those in the admissible condition believed that the judge had allowed the confession into evidence, compared to only 12% in the inadmissible condition, $\chi^2(1, N = 68) = 34.0, p < .001$.

Judgments of Voluntariness

In cases involving disputed confessions, jurors in many states are required to make an explicit judgment of voluntariness. As such, experimental participants were asked to rule on whether or not the defendant had confessed voluntarily and rate their confidence in that judgment on a 10-point scale. Overall, 43% perceived the confession as voluntary (the specific rates were 76% in the low pressure-admissible group, 53% in the low pressure-inadmissible group, 29% in the high pressure-admissible group, and 12% in the high pressure-inadmissible group). To obtain a more sensitive measure and to test for main effects and interactions, a scalar variable was created by combining voluntariness judgments and confidence ratings. Specifically, positive confidence values were assigned to voluntary judgments and negative values to involuntary judgments. Scores could thus range from −10 (maximum confidence that the confession was coerced) to +10 (maximum confidence that the confession was voluntary).[5] The results were consistent with the ideal that jurors are responsive to the situational constraints of police interrogations. Paralleling the data found for pressure ratings (which were highly correlated with voluntariness-confidence scores, $r = -.75, p < .001$), the confession was judged significantly more voluntary under low pressure than under high pressure (Ms = 2.59 & −3.88, respectively; $F(1, 64) = 24.3, p < .001$) and when it was ruled admissible rather than inadmissible (Ms = +.74 & −2.03, respectively; $F(1, 64) = 4.44, p < .05$). The individual cell means are presented in Table I.

Self-Reported Influence

Participants were asked if the defendant's confession influenced their verdicts and rated their confidence in that assessment on a 10-point scale. Overall, 34% believed that the confession had an impact on their verdicts (the rates were 59% in the low pressure-admissible group, 24% in the low pressure-inadmissible group, 41% in the high pressure-admissible group, 12% in the high pressure-inadmissible

[5]This procedure is frequently employed in mock juror research to differentially weight individual judgments by self-ratings of confidence (see Kassin & Wrightsman, 1979).

Table I. Percentage of Jurors in Experiment 1 Who Judged the Confession to Be Voluntary and their Voluntariness–Confidence Scores

	Low pressure		High pressure	
	Admit	NA	Admit	NA
Voluntariness	76%	53%	29%	12%
V-C Scores	+4.06	+1.12	−2.59	−5.18

Table II. Percentage of Jurors in Experiment 1 Who Reported Being Influenced by the Confession and their Influence–Confidence Scores

	Low pressure		High pressure	
	Admit	NA	Admit	NA
Reported influence	59%	24%	41%	12%
Influence scores	+1.29	−4.65	−1.18	−6.82

group). As before, a scalar measure was created by combining self-reported influence and confidence ratings. Participants who said they were influenced by the confession were assigned positive confidence values; those who said they were not influenced by it were assigned negative values. Influence scores could thus range from −10 (maximum confidence that the confession did not influence their verdicts) to +10 (maximum confidence that the confession influenced their verdicts). Analyses of these scores provided support for the Supreme Court's faith in the jury. As shown in Table II, participants reported greater influence when the confession was ruled admissible rather than inadmissible (Ms = 5.39 & −5.94, respectively), $F(1, 60) = 58.3$, $p < .001$, and when the defendant was subjected to an interrogation that was low rather than high in pressure (Ms = 1.11 & −1.66, respectively), $F(1, 60) = 3.49$, $p < .10$. The two-way interaction was not significant ($F < 1$).

Verdict Measures

With participants making voluntariness judgments in the prescribed manner and reporting greater use of the confession within the low-pressure and admissible conditions, our data appear to reinforce a hypothetical-ideal view of the jury. The key question is, what impact does this evidence have on verdicts?

Overall, 18 participants voted guilty and 67 voted not guilty, yielding a conviction rate of only 22% (conviction rates were 29% in the low pressure-admissible group, 18% in the low pressure-inadmissible group, 24% in the high pressure-admissible group, 29% in the high pressure-inadmissible group, and only 6% in the no-confession group). Although these results suggest that verdicts were influenced by the confession, the differences between the experimental groups and no-confession control group were not quite statistically significant (all chi square p's > .05).

As before, a scalar variable was created by assigning positive confidence values to guilty verdicts and negative values to not-guilty verdicts (the mean level of confidence in verdicts was 5.90; confidence was not affected by the independent variables). Verdict scores thus ranged from −10 (maximum confidence in a not-guilty verdict) to +10 (maximum confidence in a guilty verdict). A two-way ANOVA on this measure revealed no significant main effects or interaction. However, combining all participants in the experimental groups revealed that all those presented with a confession were more likely, overall, to favor conviction than those in the control group who were not presented with a confession (Ms = −2.22 & −6.65, respectively), $t(83) = 2.91$, $p < .01$. In comparison to the control group, verdict scores were significantly higher in all confession groups—that is, regardless of whether it was elicited under high or low pressure and regardless of whether it was ruled admissible or inadmissible (all t-tests yielded p's < .05 or better; see Table III).

After rendering a verdict, participants estimated the likelihood that the defendant was guilty on a 0-100 point scale. Analyses of these estimates revealed that there were no significant effects (all F's < 1). Closely paralleling the verdict-confidence data, however, the confession had a significant and consistent impact, as participants in all experimental groups (overall $M = 64.5$, $N = 64$) estimated a higher probability of commission than did those in the no-confession control group ($M = 43.5$), $t(83) = 2.14$, $p < .01$. These data are presented in Table III. With regard to the standard of proof deemed as necessary for conviction, participants estimated that there should be at least a 91% chance that the defendant committed the crime in order to vote guilty. This quantification of "beyond a reasonable doubt" matches estimates obtained in previous research (Kagehiro, 1990). There were no significant effects on this measure (all F's (1, 64) < 1).

Perceptions of Other Evidence

We speculated that the presence of a confession might lead participants to assimilate other prosecutorial evidence in a way that would confirm the defendant's guilt—that after reading about a confession, they would view the remaining evidence as more incriminating. To test this hypothesis, participants rated the extent to which thirteen items of evidence implicated the defendant. A 2 (interrogation pressure) × 2 (admissibility ruling) × 13 (items of evidence) ANOVA with repeated measures on the last factor did not yield significant main effects for interrogation pressure

Table III. Percentage of Jurors in Experiment 1 Who Voted Guilty, their Verdict-Confidence Scores, and Probability-of-Commission (PC) Estimates

	Low pressure		High pressure		
	Admit	NA	Admit	NA	C
Guilty votes	29%	18%	24%	29%	06%
Verdict scores	−2.00a	−2.24a	−2.65a	−2.00a	−6.65b
PC estimates	67.00a	55.20a	62.90a	65.00a	43.50b

Note: Means not sharing a common subscript differ at $p < .05$ or more via Newman-Keuls test.

$F(12, 768) = 1.19$, or admissibility, $F(12, 768) < 1$, or their interaction, $F(12, 768) = 1.66$. In contrast to the assimilation hypothesis, participants in the four confession groups—compared to those in the control group—did not see the other evidence items as more incriminating (except for the presence of the defendant's fingerprints, Ms = 6.85 & 5.70, respectively; $t[83] = 2.68$, $p < .01$). Not surprisingly, however, experimental participants rated the confession as the most incriminating of the 14 items of evidence ($M = 7.59$, $M = 5.38$ for all other items combined).

EXPERIMENT 2

Our results challenge the Supreme Court's use of the harmless error rule in cases with coerced confessions improperly admitted at trial. On the one hand, participants made voluntariness judgments in a legally appropriate manner, as they saw the confession as less voluntary and said that it had less impact when it was elicited in a high-pressure interrogation and when it was stricken from the evidentiary record. Participants thus discriminated between a voluntary and coerced confession and understood the judge's ruling. On the other hand, the presence of a confession significantly increased probability-of-commission estimates. In short, participants were affected by the confession-even when they believed it was coerced, even when they knew it was inadmissible, and even when they said it had little influence.

The present results are suggestive but limited in an important way: although the confession had a significant impact on likelihood estimates and verdict-confidence scores, its effect on verdicts per se—practically speaking, the most important dependent measure—was not statistically significant. One possible reason for this weakened result is that the case against the defendant was weak, not ambiguous, and yielded only a 6% conviction rate in the no-confession control group. A second experiment was thus conducted to test the reliability and strength of our results, and to reexamine the harmless error proposition in a case that contained more corroborating evidence for the prosecution.

Method

Eighty students were randomly assigned to one of five groups produced by a 2 (interrogation pressure) × 2 (admissibility ruling) factorial design with a no-confession control group ($n = 16$ per cell). Based on the results of the first study, the transcript was revised to strengthen the state's case against the defendant and increase the baseline conviction rate. This version thus contained additional testimony from a witness who saw the defendant run from the house after the murder carrying something that "looked like a knife." The transcripts were 24 to 26 pages in length. To evaluate the impact of this revision, we pilot tested the new no-confession version with 12 new participants. The result: mean probability-of-commission estimates increased from .44 to .58. As in the first study, participants rendered a verdict, judged the voluntariness of the confession, and answered other case-related questions. In

addition, they rated the extent to which the new item of testimony implicated the defendant.

Results

As in the first experiment, both manipulations were effective. On ratings of how much pressure there was on the defendant to confess, a significant main effect revealed that ratings were lower under low pressure than in the high-pressure condition (Ms = 4.35 & 7.00, respectively), $F(1, 60) = 30.2$, $p < .001$. There was also a nonsignificant tendency for participants to think that the defendant was under less pressure when his confession was ruled admissible than inadmissible (Ms = 5.22 & 6.13, respectively), $F(1, 60) = 3.52$, $p < .10$.

To check on the admissibility manipulation, participants in the experimental groups were asked if the confession had been allowed into evidence. As it turned out, 54 out of 64 participants were correct in their recall of the judge's ruling. Specifically, 78% of those in the admissible groups believed that the judge had allowed the confession into evidence, compared to only 9% in the inadmissible condition, $\chi^2(1, N = 64) = 30.73$, $p < .001$.

Judgments of Voluntariness

Overall, 52% of all experimental participants saw the confession as voluntary (the within-cell rates were 87% in the low pressure-admissible group, 56% in the low pressure-inadmissible group, 43% in the high pressure-admissible group, and 18% in the high pressure-inadmissible group). As in the first study, a 2 (interrogation pressure) × 2 (admissibility ruling) ANOVA on voluntariness-confidence scores indicated that the confession was judged more voluntary under low pressure than under high pressure (Ms = 3.35 & −2.09, respectively), $F(1, 60) = 15.53$, $p < .001$, and when it was ruled admissible rather than inadmissible (Ms = 2.28 & −1.03, respectively), $F(1, 60) = 5.97$, $p < .05$. These data are summarized in Table IV.

Self-Reported Influence

As in the first experiment, experimental participants were asked if the confession had influenced their verdicts and how confident they were in that assessment. Overall, 48% of our participants said that the confession influenced their

Table IV. Percentage of Jurors in Experiment 2 Who Judged the Confession to Be Voluntary and their Voluntariness-Confidence Scores

	Low pressure		High pressure	
	Admit	NA	Admit	NA
Voluntariness	88%	56%	44%	19%
V-C Scores	+5.44	+1.38	−.75	−3.63

verdicts (the rates were 69% in the low pressure-admissible group, 50% in the low pressure-inadmissible group, 56% in the high pressure-admissible group, and 19% in the high pressure-inadmissible group).

An analysis of combined influence-confidence scores revealed that participants saw the confession as having greater impact when the interrogation was low rather than high in pressure, $F(1, 60) = 3.79, p < .05$, and when the confession was ruled admissible rather than inadmissible (Ms = 4.15 & −6.95, respectively), $F(1, 60) = 9.04, p < .005$. The two-way interaction was not significant. These data are presented in Table V.

Verdict Measures

Across conditions, the conviction rate was 45% (36 participants voted guilty, and 44 voted not guilty)—a significant increase over the 22% conviction rate obtained in the first experiment, χ^2 (1, $N = 165$) = 10.62, $p < .001$. The mean level of confidence was 5.69 on a 10-point scale, which was comparable to that obtained in the first study. By condition, the conviction rate was 63% in the low pressure-admissible group, 50% in the low pressure-inadmissible group, 50% in the high pressure-admissible group, 44% in the high pressure-inadmissible group, and 19% in the no-confession control condition. As presented in Table VI, participants in all confession groups voted guilty significantly more often than those in the no-confession control group (all chi square p's < .05).

Replicating the pattern of results of Experiment 1, analysis of variance on verdict-confidence scores showed no significant effects for interrogation pressure

Table V. Percentage of Jurors in Experiment 2 Who Reported Being Influenced by the Confession and their Influence–Confidence Scores

	Low pressure		High pressure	
	Admit	NA	Admit	NA
Reported influence	68%	50%	56%	19%
Influence scores	+3.81	−.06	+1.69	−6.38

Table VI. Percentage of Jurors in Experiment 2 Who Voted Guilty, their Verdict–Confidence Scores, and Probability-of-Commission (PC) Estimates

	Low pressure		High pressure		
	Admit	NA	Admit	NA	C
Guilty votes	63%a	50%a	50%a	44%a	19%b
Verdict scores	+3.88a	+.69a,b	+.88a,b	+.44a,b	−3.94b
PC estimates	86.40a	74.10a	75.30a	75.60a	60.50b

Note: Percentages not sharing a common subscript differ at $p < .05$ or more via χ^2 test of significance. Means not sharing a common subscript differ at $p < .05$ via Newman–Keuls test.

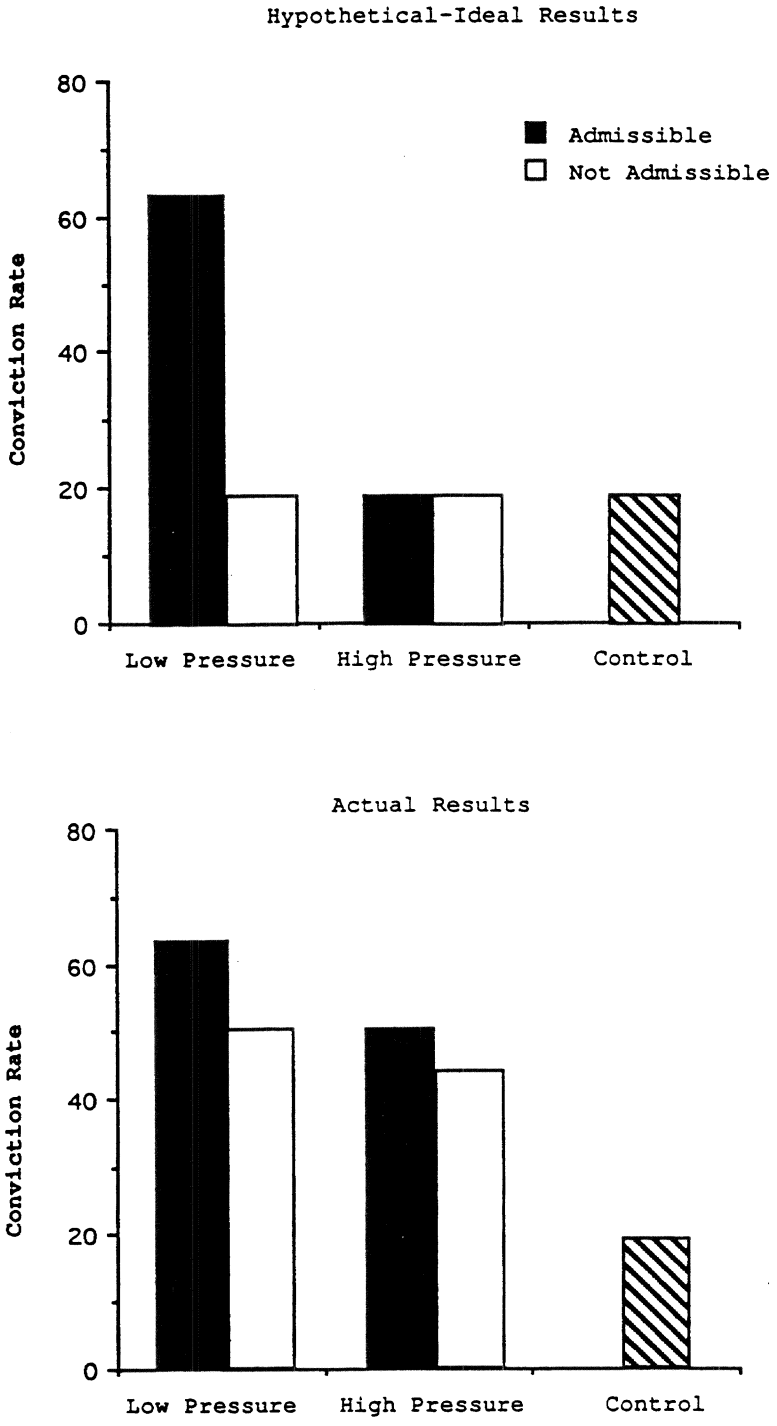

Fig. 1. Comparison of hypothetical-ideal results and actual verdicts in Experiment 2.

Discussion

The present research tested the hypothesis that an erroneously admitted confession may constitute harmless error. In the studies reported in this article, mock jurors did not sufficiently discount a defendant's confession in reaching a verdict—even when they saw the confession as coerced, even when the judge ruled the confession inadmissible, and even when participants said that it did not influence their decision-making. The mere presence of a confession was thus sufficient to turn acquittal into conviction, irrespective of the contexts in which it was elicited and presented.

The present results offer illusory support for the Court's harmless error analysis. Confronted with a confession elicited through high-pressure interrogation tactics, participants responded in a legally prescribed manner: they judged the statement involuntary and said that it did not affect their decision-making. Similarly, participants for whom the confession was ruled inadmissible were more likely to infer that the statement was involuntary and claim that it did not affect their decisions. The Court may derive support from these findings. On the all-important measure of verdicts, however, all groups presented with a confession were more likely to favor a guilty verdict—despite the high-pressure tactics and despite an instruction to disregard. Indeed, the conviction rate in the high pressure-inadmissible group of Experiment 2 was 44%, a sharp increase over the 19% conviction rate in the no-confession control group. This result was obtained even though a vast majority of participants in this group knew that the high-pressure confession was involuntary, correctly recalled that it had been stricken from the record, and said it had no impact on them.

Taken together, our findings suggest that confession evidence is inherently prejudicial, as participants did not clearly discount the information when it was logically and legally appropriate to do so. Is it impossible for an erroneously admitted false confession to constitute harmless error? No. It is important to realize that we presented confession evidence in the context of a generally weak case. Had the trial contained powerful eyewitnesses or forensic tests, the increased conviction rate in the no-confession control group may have created a ceiling effect. Indeed, this condition forms part of the basis for the Supreme Court's *Fulminante* ruling. It is equally important to realize, however, that judges must rely on mere intuition to gauge the strength of a prosecutor's case and the cumulative or "harmless" nature of the confession in dispute (Mueller & Kirkpatrick, 1995). In our research, the confession significantly affected verdict-confidence scores in two different versions of the trial with baseline (control group) conviction rates of 6% in Study 1 and 19% in Study 2.[6] Our results thus suggest that confession evidence has a profound, context-resistant impact on jurors and should be admitted only with extreme

[6]To further extend our findings, we tested 57 prospective jurors in a courthouse after they were dismissed from jury duty. They read a condensed version of the same case containing an admissible high- or low-pressure confession, or no confession at all. The baseline no-confession version of this transcript elicited a relatively high 32% conviction rate. Yet jurors were still more likely to vote guilty in the two confession conditions than in the no-confession control group (verdict-confidence scores were 1.89, 3.00, and –2.37, respectively), $F(2,54) = 2.72$, $p < .08$.

caution. At this point, additional research is needed to extend our findings to cases containing even more evidence favorable to the state.

Another important finding was that participants voted to convict even when the judge ruled that the confession was inadmissible and admonished the jury to disregard it in their decisions. Although there was no sign of the boomerang effect sometimes found in this research (e.g., Wolf & Montgomery, 1977), our result is consistent with numerous studies indicating that the persuasive impact of inadmissible testimony often persists despite judge's admonishment (Carretta & Moreland, 1983; Kassin et al., 1990; Pickel, 1995; Sue et al., 1973; Thompson et al., 1981; Wissler & Saks, 1985). It is also consistent with research in nonlegal settings which indicates that people find it difficult to suppress an image or thought upon instruction (Wegner, 1994; Wegner et al., 1987) and that newly formed beliefs often endure after the evidence on which they were based has been discredited (Anderson, Lepper, & Ross, 1980; Ross et al. 1975; Schul & Burnstein, 1985).

There are two possible qualifications of this result. One is related to the fact that our participants took part individually, not in groups. Kerwin and Shaffer (1994) recently found that mock jurors were more likely to comply with a judge's admonishment when they deliberated than when they did not. Yet other research has shown that jury verdicts are predictable by the pre-deliberation distribution of individual votes (Kalven & Zeisel, 1966; Kerr, 1981; Sandys & Dillehay, 1995) and that the biasing effects of pretrial publicity and other nonevidentiary factors are often exacerbated by the process of deliberation (Padawer-Singer & Barton, 1975; Carretta & Moreland, 1983; Kramer et al., 1990). Second, it is important to note that participants were affected by inadmissible evidence in a situation in which the confession was to be discounted because it was involuntary (i.e., in violation of the defendant's due process rights), not because it was invalid. Research indicates that jurors often do discount testimony once it has been discredited, or proven false (Schul & Manzury, 1990)—particularly when they are warned in advance and later reminded that such information is forthcoming (Schul, 1993). Similarly, it is possible that jurors would ignore an inadmissible confession as well when serious questions are raised about the *validity* of that evidence and when jurors are forewarned of the possibility (Kassin & Studebaker, in press).

At this point, further research is needed to evaluate the many issues raised by the presentation of confessions to the jury. For example, it is estimated that one third of large police and sheriff departments now videotape at least some criminal interrogations—a practice that is particularly common in homicide cases (Geller, 1993). Although there are good arguments for this procedure, it can also increase the potential for bias. In one study, Lassiter, Slaw, Briggs, and Scanlan (1992) taped a mock confession from three camera angles, such that either the suspect, interrogator, or both were visible. All participants heard the same exchange, yet those who watched the suspect saw the situation as less coercive than did those who focused on the interrogator.

A second issue is raised by the fact that police often do not tape all interactions with the suspect, only a post-interrogation "recap" that contains the final statement. Although this practice is common, showing a confession without the circumstances that led up to it may inflate judgments of voluntariness. Further re-

search is also needed to determine how people make such judgments when the situation is fully represented on tape. Over the years, the courts have identified various factors to be considered—such as personal characteristics of the suspect (e.g., age, education, intelligence, and emotional state), the methods of interrogation (e.g., promises, threats, feigned friendship, sympathy, the presentation of false evidence, appeals to God), and the circumstances of the setting (e.g., number of interrogators present, length of detention, and availability of food and sleep). It remains to be seen how such factors influence lay perceptions of voluntariness and coercion.

To summarize, the studies reported in this paper challenge the Supreme Court's application of the harmless error analysis to the admission of coerced confessions. Clearly, participants distinguished between a voluntary and coerced confession. Yet at the same time, the presence of any confession powerfully increased the conviction rate—even when it was seen as coerced, even when it was ruled inadmissible, and even when participants claimed that it did not affect their verdicts. In light of these results, and in view of the fear that *Fulminante* will trigger an increase in the number of criminal cases involving coercive interrogations, appellate courts should exercise extreme caution in applying the harmless error rule to erroneously admitted confessions.

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