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Confessions That Corrupt: Evidence From the DNA Exoneration Case Files

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Abstract

Basic psychology research suggests the possibility that confessions—a potent form of incrimination—may taint other evidence, thereby creating an appearance of corroboration. To determine if this laboratory-based phenomenon is supported in the high-stakes world of actual cases, we conducted an archival analysis of DNA exoneration cases from the Innocence Project case files. Results were consistent with the corruption hypothesis: Multiple evidence errors were significantly more likely to exist in false-confession cases than in eyewitness cases; in order of frequency, false confessions were accompanied by invalid or improper forensic science, eyewitness identifications, and snitches and informants; and in cases containing multiple errors, confessions were most likely to have been obtained first. We believe that these findings underestimate the problem and have important implications for the law concerning pretrial corroboration requirements and the principle of “harmless error” on appeal.

Keywords

legal confession, legal processes, social influences, social perception

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In the criminal justice system, confession evidence is so powerful that once a suspect is induced to confess, additional investigation often stops, and the suspect is almost invariably prosecuted and convicted. Although confessions from offenders help to solve crimes in an efficient manner, roughly 25% of all exoneration based on DNA evidence uncover false confessions—and this sample represents the mere tip of an iceberg (Gudjonsson & Pearse, 2011; Kassir et al., 2010; Kassir & Gudjonsson, 2004).

Research on the impact of confessions on decision makers is unequivocal. Mock-jury experiments have shown that confessions influence verdicts even when the confessions are seen as coerced (Kassir & Sukel, 1997), and this finding has recently been replicated in a study of experienced judges (Wallace & Kassir, in press). Confessions influence verdicts even when the confessor is said to have psychological illness or to have been under stress (Henkel, 2008), and even when the confession is reported secondhand by an informant motivated to lie (Neuschatz, Lawson, Swanner, Meissner, & Neuschatz, 2008).

One explanation of the power of confession is that generalized common sense leads people to trust confessions and use them to infer guilt (Henkel, Coffman, & Dailey, 2008; Leo & Liu, 2009; Levine, Kim, & Blair, 2010). But basic research suggests a second, more troubling mechanism by which confessions may exert influence: by tainting the perceptions of lay

and expert witnesses entrusted to provide independent other evidence. Over the years, a good deal of research has revealed that top-down influences inform human judgment. Classic studies showed that prior exposure to images of a face or a body, an animal or a human, or letters or numbers can bias what people see in an ambiguous figure (Bruner & Minturn, 1955; Bugelski & Alampay, 1961; Fisher, 1968; Leeper, 1935). Similarly, people detect more resemblance between an adult and a child when led to believe that the two are parent and offspring (Bressan & Dal Martello, 2002), and people hear more incrimination in degraded speech recordings when led to believe that the speaker was a criminal suspect (Lange, Thomas, Dana, & Dawes, in press). The presence of objective evidence may even exacerbate the effects of preexisting biases (Darley & Gross, 1983).

In a forensic context, recent experiments have suggested the similarly corruptive potential of confessions in influencing the judgments of experienced polygraph examiners (Elaad, Ginton, & Ben-Shakhar, 1994), latent-fingerprint experts (Dror, Charlton, & Peron, 2006), and eyewitnesses to a staged crime (Hasel & Kassir, 2009)—a set of findings that may

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well extend to other types of visual similarity judgments (Dror & Cole, 2010). But does this phenomenon, amply demonstrated in the laboratory, occur in the high-stakes venue of actual cases? One means of addressing this question is to compare the evidentiary errors made in wrongful-conviction cases involving a false confession with those made in wrongful-conviction cases without a confession in evidence. To test the hypothesis that confessions can corrupt other evidence, we conducted an archival analysis of DNA exoneration cases from the Innocence Project case files. Founded in 1992, the purpose of the Innocence Project is to assist prisoners who could be proven innocent through DNA testing. As of August 2011, the Innocence Project's Web site (<http://www.innocenceproject.org/>) indicated that 273 people in the United States, including 17 who served time on death row, had been exonerated in this way. On average, they had served 13 years in prison before their release.

Drawing from the Innocence Project's sample of wrongful convictions, approximately one quarter of which involved false confessions, we tested the corruptive-confessions hypothesis by asking three questions: (a) Are confession cases more likely than nonconfession cases to contain multiple other evidence "errors"? (b) What other types of errors are likely to appear in confession cases, and how prevalent are they? (c) In confession cases with multiple errors, which evidence was collected first—the confession or the other errors?

Method

At the time we first delved into the case files, in July of 2009, the Innocence Project had assisted in 241 DNA exonerations over a period of 17 years. This constituted the population on which our analysis at the time was based. Data concerning the types of evidence that contributed to conviction in each case were available from the Innocence Project Web site. Information concerning the temporal order of the items of evidence was gleaned from the actual case files, most of which include police reports, witness statements, trial testimony, and other court records. In coordination with the Innocence Project, Winston & Strawn LLP digitized this repository and made it available to us for this study.

Two independent coders counted whether different types of "contributing causes" were present or absent in each case, as listed by the Innocence Project. The coders then separately counted the frequency with which the cases specifically involved an erroneous eyewitness, bad forensic-science evidence, and an informant. In confession cases with multiple types of errors, the coders used the case documents to determine the order in which the confessions and other evidence were collected. Nonevidentiary contributing causes—notably, government misconduct and bad defense lawyering—were also noted by the Innocence Project, but because these factors were unrelated to our hypothesis concerning the nonindependence of evidence, we did not examine them. The coding did not require subjective judgment. If the Innocence Project

listed a mistaken eyewitness, a forensic-science error, or an informant as a contributing cause in a particular case, the coders listed it. Hence, there were no disagreements between the two coders.

Results

Overall, 59 of the 241 DNA exonerations (24.48%) contained false confessions as a contributing cause (in 46 cases, the person who was later exonerated had confessed; in 13 cases, that person was implicated in the confession of an alleged accomplice). In order of frequency, the other contributing causes were eyewitness misidentifications ($N = 180$, 74.69%), invalid or improper forensic-science evidence ($N = 124$, 51.45%), and government informants and snitches ($N = 30$, 12.45%).

If confessions have a tendency to corrupt other evidence, then false-confession cases should contain more additional errors than nonconfession cases. Out of the 240 cases for which we had data on contributing causes, 59 contained false confessions, and 181 did not. Overall, 131 of the 240 cases (54.58%) contained multiple types of errors. A comparison of the confession and nonconfession sets revealed that multiple types of errors were present in 46 of the 59 confession cases (77.97%) and in only 85 of the 181 nonconfession cases (46.96%); the difference in frequency between the two sets of cases was significant, Yates-corrected $\chi^2(1, N = 240) = 16.03$, $p < .0001$, Cramer's $V = .27$. Within the full set of confession cases, 45.76% were accompanied by one type of nonconfession error, and 32.21% were accompanied by two types of nonconfession errors. Only 22.03% contained no additional errors. In order of frequency, false confessions were most often accompanied by invalid or improper forensic science, eyewitness identification mistakes, and informants.

A gross comparison of the total number of errors in confession and nonconfession cases does not provide an appropriate test of the corruptive-confessions hypothesis. However, more specific comparisons showed that the 59 confession cases were more likely than the 181 nonconfession cases to contain invalid or improper forensic-science evidence (62.71% vs. 48.07%), $\chi^2(1, N = 240) = 3.82$, $p < .05$, Cramer's $V = .13$, and marginally more likely to contain an informant (18.64% vs. 10.50%), $\chi^2(1, N = 240) = 2.70$, $p < .10$, Cramer's $V = .11$. In contrast, the confession cases were less likely than the nonconfession cases to contain a mistaken eyewitness (28.81% vs. 90.05%), $\chi^2(1, N = 240) = 89.0$, $p < .0001$, Cramer's $V = .61$.

By far, the most common source of error in wrongful convictions is mistaken eyewitness identification—a phenomenon of considerable interest to psychologists. Are eyewitness identifications associated with other evidentiary errors as frequently as confessions are? To answer this question, we compared "pure" eyewitness cases ($n = 163$) and pure confession cases ($n = 42$) by excluding the 17 cases that contained both eyewitness identifications and confessions. We found that pure confession cases contained more additional types of errors ($M = 0.91$ per confession case; $M = 0.51$ per

Table 1. Percentage of False-Confession and Eyewitness-Misidentification Cases in Which Other Errors Were Involved

Case error	Forensic-science error	Informant error	No other errors
Confession ($n = 42$)	67	24	31
Eyewitness ($n = 163$)	45	6	52

Note: The cases in this analysis excluded those involving both false confessions and eyewitness misidentifications. Within each column, the percentages are significantly different, $p < .05$.

eyewitness case). More specifically, pure confession cases were significantly more likely than pure eyewitness cases to be accompanied by forensic-science errors (67% vs. 45%), $\chi^2(1, N = 205) = 6.04, p < .02$, Cramer's $V = .17$, and also more likely to be accompanied by informant errors (24% vs. 6%), $\chi^2(1, N = 205) = 11.2, p < .001$, Cramer's $V = .25$ (see Table 1).

Although confession cases overall were more likely than eyewitness cases to contain one or more other errors (77.97% vs. 53.89%), $\chi^2(1, N = 239) = 9.74, p < .001$, Cramer's $V = .21$, they were *less* likely to contain multiple types of errors than were the 124 cases containing forensic-science errors (94.55%), $\chi^2(1, N = 183) = 8.08, p < .005$, Cramer's $V = .23$, and the 30 cases containing informant errors (96.67%), $\chi^2(1, N = 89) = 3.93, p < .05$, Cramer's $V = .24$. Hence, we wondered whether the forensic-science and informant errors preceded or followed the confessions. We predicted that confessions taint other forms of evidence, rather than the other way around. To test this temporal-order hypothesis, two of the authors independently combed through the case files of the 46 cases in which there was a confession and one or more other errors (17 also contained an eyewitness error, 37 involved improper or invalid forensic science, and 11 involved an informant error). In each case, we indicated whether each item of evidence came first, second, or third in the sequence (no case contained all four kinds of errors). In 30 of these cases (65.22%), the confession was the first item of evidence collected; in 15 (32.61%), it was second; in 1 (2.17%), it was third.

Finally, we compared the temporal distributions of the four kinds of errors via a 4 (evidence type: confession, eyewitness, forensic science, informant) \times 3 (temporal order: first, second, third) test of significance. Temporal ordering differed

significantly across the evidence types, $\chi^2(6, N = 111) = 46.43, p < .0001$. Table 2 shows that false confessions and eyewitness errors were most likely to be obtained first (mean placements = 1.37 and 1.35, respectively), whereas forensic-science errors and informant errors were more likely to be obtained second or third (mean placements = 2.32 and 2.09, respectively). Specific comparisons confirmed that confessions were more likely to precede than to follow both forensic-science errors, $\chi^2(2, N = 83) = 38.58, p < .0001$, Cramer's $V = .68$, and informant errors, $\chi^2(2, N = 57) = 14.07, p < .001$, Cramer's $V = .49$.

Discussion

Confessions are highly incriminating, leading fact finders to infer guilt even when the confessions are retracted and alternative attributions are available. Basic research suggests that confessions may exert influence not only by tainting jurors' perceptions of the defendant, but also by corrupting lay and expert witnesses. Experiments have shown that a confession can bias professional polygraph examiners, fingerprint experts, and mock eyewitnesses. To determine if this phenomenon might also occur in actual cases, we compared wrongful convictions that did and did not contain a confession. Results were consistent with the corruption hypothesis: Multiple errors were more likely to exist in confession cases than in eyewitness cases; in order of frequency, confessions were accompanied by invalid or improper forensic science, eyewitness misidentifications, and informant errors; and in cases containing multiple errors, confessions were more likely to be obtained first rather than later in the investigation.

Confessions are not the only form of evidence persuasive enough to corrupt. Since the first wave of DNA exonerations, it has been clear that eyewitness mistakes constitute the most common problem (Wells, Memon, & Penrod, 2006; Wells et al., 1998). In our sample, it is striking that many cases contained not one but two or more mistaken witnesses. In some instances, multiple errors could have occurred independently, especially when the suspect physically resembled the perpetrator. In other instances, however, eyewitnesses may have influenced one another (Gabbert, Memon, & Allan, 2003; Shaw, Garven, & Wood, 1997; Skagerberg, 2007). To further complicate matters, eyewitnesses tainted by extrinsic information cannot accurately estimate the extent of that influence, which suggests that

Table 2. Temporal Order of the Evidence in the 46 Multiple-Error Cases Containing a Confession

Evidence type	Obtained first	Obtained second	Obtained third	Mean sequential position
Confession	30	15	1	1.37 _a
Eyewitness	12	4	1	1.35 _a
Informant	3	4	4	2.09 _b
Forensic science	1	23	13	2.32 _c

Note: Cell entries represent numbers of cases. Means not sharing a common subscript are significantly different, $p < .05$.

self-report cannot be used to diagnose corruption once it occurs (Charman & Wells, 2008).

It is interesting and disturbing that the most common means of corroboration for false confessions comes from bad forensic science—which was present in nearly two thirds of the confession cases we examined. As a result of scandalous improprieties in several crime laboratories and the frequency with which forensic-science errors had surfaced in wrongful convictions, the National Academy of Sciences (2009) was highly critical of a broad range of forensic disciplines, such as ballistics, hair and fiber analysis, impression evidence, handwriting analysis, and even fingerprint analysis. The academy concluded that there are problems with standardization, reliability, accuracy and error, and the potential for contextual bias. Clearly, the presence of a confession constitutes the kind of strong contextual bias that can skew expert judgments in these domains.

In cases in which a confession preceded other erroneous evidence, the mechanism of influence—if one is to be inferred from these correlations—is not known. One possibility is that subsequent witnesses were corrupted by mere knowledge of the confession and the cognitive confirmation biases resulting from the consequent belief in the suspect's guilt. A second possibility is that knowledge of the confession increased their motivation to help police and prosecutors implicate the presumed-guilty suspect. Indeed, recent studies indicate that just as people tend to see what they expect to see, they also tend to see what they *want* to see (Balcetis & Dunning, 2006). A third possibility is that police and prosecutors sought out support for previously taken, recanted, and disputed confessions. This mechanism is suggested by research showing that nonblind mock investigators (i.e., those who know which lineup member is the suspect) often lead witnesses, albeit inadvertently, to falsely identify their suspect within a lineup (Greathouse & Kovera, 2009). Without delving into the often unknown details of the cases in our sample and making subjective judgments about the mental states of investigators and witnesses, it is not possible to tease apart these possible sources of influence.

We have reason to believe that the present analysis may have underestimated the more general problem of evidence corruption in two important ways. First, confessions might spawn incriminating evidence of sorts that we did not address in our study (e.g., additional confessions by codefendants). Moreover, false confessions may serve to suppress exculpatory evidence—an effect that would not be detectable in our study. At present, only anecdotal data are available on this point. In one case, for example, John Kogut, who was eventually exonerated on the basis of DNA evidence, had alibi witnesses who withdrew their support once told by police that he had confessed. In a second case, Barry Laughman confessed to rape and murder. When two witnesses insisted that they had seen the victim alive after the confessed murder, police sent them home and said that they must have seen a ghost. Additional systematic research is needed to determine the prevalence with which exculpatory evidence is suppressed by confession.

A second way in which our analysis may have underestimated the problem is in our exclusive and unidirectional focus on confessions as a corruptive agent. Confessions are powerfully persuasive. As noted earlier, however, many wrongful-conviction cases involve mistaken eyewitnesses, and often more than one per case. Therefore, it might be useful to examine DNA exoneration cases to determine whether different witnesses were corrupted by one another. Our analyses also revealed that eyewitness mistakes often precede false confessions when the two co-occur, thus suggesting the broader conclusion that strong evidence of any sort can corrupt judgments, testimony, and even confessions themselves. This latter notion in particular receives anecdotal support from numerous cases in which innocents were induced to confess to police by the true or false presentation of an eyewitness, physical evidence, failed polygraph, or other incriminating evidence (Gudjonsson & Pearse, 2011; Kassin et al., 2010).

It is important to note that this study was based on a dynamic and fluid data set. In drawing from DNA exoneration case files, we took an archival “snapshot” of 241 cases in which the contributing causes of conviction were identified by the Innocence Project. As the numbers of DNA exoneration cases have increased, there has been a great deal of consistency in the data (e.g., the percentages of false confessions and eyewitness errors have remained stable over time). Precise frequencies and patterns may fluctuate from one snapshot to another, however, whenever new cases are added to the data set and new information about old cases is discovered. For this reason, researchers who use this database should consider periodic reexamination of their results.

Finally, our findings have profound implications for criminal law and the safety nets designed to prevent miscarriages of justice. In a pretrial rule founded in common law in England, many states require that confessions be corroborated by independent evidence as a precondition for admissibility. At the appellate level, courts may determine that although a confession was coerced and erroneously admitted at trial, the conviction may stand if that error was “harmless”—as measured by whether the remaining evidence alone was sufficient to support a jury's conviction. Both corroboration and harmless error rest on the assumption that the other evidence on record is independent of the confession. Yet our results suggest that this assumption is incorrect, that the other evidence may be tainted, and that the appearances of corroboration and sufficiency may be more illusory than real.

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Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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