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The truth about snitches: an archival analysis of informant testimony

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Informants are witnesses who often testify in exchange for an incentive (i.e. jailhouse informant, cooperating witness). Despite the widespread use of informants, little is known about the circumstances surrounding their use at trial. This study content-analyzed trials from 22 DNA exoneration cases involving 53 informants. Because these defendants were exonerated, the prosecution informant testimony is demonstrably false. Informant characteristics including motivation for testifying, criminal history, relationship with the defendant and testimony were coded. Most informants were prosecution jailhouse informants; however, there were also defence jailhouse informants and prosecution cooperating witnesses. Regardless of informant type, most denied receiving an incentive, had criminal histories, were friends/acquaintances of the defendant and had testimonial inconsistencies. In closing statements, attorneys relied on informant testimony by either emphasizing or questioning its reliability. The impact of informant testimony on jurors' decisions is discussed in terms of truth-default theory (TDT), the fundamental attribution error and prosecutorial vouching.

Key words: jailhouse informant; cooperating witness; truth-default theory; secondary confessions.

In the Nassau County Courthouse on 12 November 1986, Samuel Newsome took the witness stand and promised to tell the truth, the whole truth and nothing but the truth. He testified that he had heard the defendant, Dennis Halstead, confess to the rape and murder of a young girl while the two were playing spades in jail together. Newsome had a long criminal history, and the defence attorney suggested at trial that the criminal charges against him were being dropped in exchange for his testimony. The prosecution had only circumstantial evidence and therefore their star witness was Newsome. He proved to be an effective witness, providing a detailed account of how the victim was raped and killed, including where she had been picked up, the vehicle that was used and even that the defendant had smiled while committing the act. Despite his adamant claims of innocence, Halstead was convicted of rape and murder and sentenced to $33\frac{1}{3}$ years to life. Nineteen years later, DNA evidence conclusively proved that Halstead could not have been the perpetrator; he was exonerated on 29 December 2005. Research has shown that false testimony from informants like Samuel Newsome is one of the leading causes of the growing number of wrongful convictions (Gross et al., 2005; Warden, 2005).

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Since DNA testing became available in the late 1980s, there have been over 350 DNA exonerations of wrongfully convicted individuals. The Innocence Project lists informant testimony among the major contributing factors to wrongful convictions, along with eyewitness misidentification, faulty forensic science, false confessions, government misconduct and inadequate defence (http://www.innocenceproject.org). In capital cases, false testimony from informants is *the* leading cause of wrongful convictions, with informant testimony present in 49.5% of cases since the mid-1970s (Warden, 2005). According to the Innocence Project, informant testimony contributed to more than 15% of the wrongful convictions that were later overturned through DNA testing (http://www.innocenceproject.org). Courts have repeatedly indicated that offering incentives to informants provides enormous motivation to give false testimony and evidence (*Giglio v. United States*, 1972; *United States v. Singleton*, 1998).

Generally, accurate informant testimony is an effective means of securing convictions against guilty defendants. Ideally, false informant testimony should be detected as false by the judges and juries charged with hearing criminal cases. However, as the many wrongful convictions clearly demonstrate, false informant testimony can be compelling evidence against innocent defendants. In order to better understand the influence of informant testimony, DNA exoneration cases involving 53 informants were content analyzed. These cases provide a critical context in which to evaluate and understand informant testimony because any testimony implicating the defendant is demonstrably false, as proven by the subsequent DNA exoneration.

Informant witnesses

Informants, in the most general sense, are individuals who provide information about criminal activity. Sometimes informants are recruited by the government to infiltrate criminal circles and collect incriminating evidence, and sometimes informants initiate contact with the government because they possess incriminating information and have the hope of gaining some incentive in exchange for reporting it. This paper investigates the latter type; that is, informants who collect or encounter incriminating evidence by themselves rather than being planted by the government. The evidence given by these informants has often been referred to as 'bartered testimony', because the informant has negotiated a deal in return for their cooperation (Roth, 2016).

Within this definition of informant there are three subtypes: jailhouse informants, cooperating witnesses and accomplice witnesses (Roth, 2016). Jailhouse informants are individuals who gain evidence about a fellow inmate's case while they are both in custody and who often come forward in return for some promised incentive. Jailhouse informants' testimony typically includes a secondary confession, meaning that they claim to have heard the defendant confess to committing the crime (Neuschatz et al., 2008). Cooperating witnesses are citizens with incriminating evidence about a defendant's case but who require an incentive to testify. Cooperating witnesses typically learn about a case through some connection to the defendant (e.g. they are a friend) or through their own experiences (e.g. as an eyewitness). For example, an eyewitness may be reluctant to testify for fear of retaliation, thus prosecutors may provide some type of incentive (e.g. relocation funds) to secure their testimony. Finally, accomplice witnesses are individuals who allegedly committed the crime with the defendant but testify against the defendant for some leniency in their own case. The present research is focused on jailhouse informants and cooperating witnesses (but not accomplice witnesses), and therefore the term 'informant' is used to refer to these two types collectively.

Despite the prevalence of informants, especially in capital cases, their contribution to wrongful convictions has not been sufficiently studied (Roth, 2016). By contrast, eyewitness

identification – another leading cause of wrongful conviction – has received a great deal of attention from both the scientific and legal communities. A search of PsycINFO revealed 786 peer-reviewed studies pertaining to eyewitness identification; however, a search for jailhouse informants and cooperating witnesses produced only 9 peer-reviewed studies, 6 of which address the impact of informant testimony on juror decision-making. What little research has been done demonstrated that jurors' verdicts are uninfluenced by informants' incentives for testifying (i.e. no incentive vs. a five-year reduction in sentence) or by their role in the case (i.e. jailhouse informant, accomplice witness or civilian; Neuschatz et al., 2012). These studies have also demonstrated that jurors hold a number of erroneous beliefs about informant testimony (Key et al., 2018), are unable to detect that informants may be lying and rely heavily on informants' testimony when making verdict decisions (Wetmore et al., 2014). Therefore, it is necessary to understand the information that informants provide and the reasons why jurors may be unable to detect their deception. The current analysis addresses these two questions by documenting what informants testified about and how attorneys used the testimony in their arguments to jurors.

Deception detection

There are several findings from the deception detection and attribution literatures that elucidate why jurors tend to believe that informants are telling the truth: they rely on inappropriate cues, exist in a truth-default state, identify when testimony matches the fact pattern of the case and succumb to the fundamental attribution error (Gilbert & Malone, 1995). First, in order for jurors to assess informant testimony accurately they must be able to identify cues that indicate truth telling and deception. Unfortunately, people are generally poor at detecting deception, as accuracy rates are usually at chance levels in studies which have examined this ability (see Vrij et al., 2010). One reason for this is that people often rely on cues which they believe to be indicative of deception, but in fact are not. For instance, it has been found that behaviors which are often believed to be associated with lying (e.g. averting one's eyes, shifting in one's seat or fidgeting) are in fact not at all related to deception (DePaulo et al., 2003; Vrij et al., 2000).

Second, not only do people rely on the wrong cues but they are also naturally inclined to believe that other people are telling the truth – that is, they have a truth bias. According to Levine (2014), people naturally exist in a truth-default state, meaning that they initially evaluate all incoming messages as truthful unless there is a reason to suspect deception. Furthermore, people do not actively look for deception; rather, they have to be compelled to do so. The inclination to believe that people are being truthful and honest may be strengthened in the courtroom, where witnesses must take an oath to tell the truth and where jurors rely on prosecutorial vouching – that is, the belief that prosecutors rigorously vet their witnesses and would not let a dishonest witness testify (Covey, 2014; Roth, 2016).

Third, it may be especially difficult to detect deception when it is embedded in a narrative that is factually accurate. Vrij et al. (2010) have suggested that rather than telling lies which are completely untrue, people often change a few details of an otherwise true account. This strategy tends to be true of criminals (see Hartwig et al., 2007). For example, it has been found that when criminals assume a false identity they only change a small portion of their actual identity (Wang et al., 2004). Informants may adopt a similar strategy, weaving a few lies into an otherwise factually accurate depiction of the case (e.g. facts gathered from media coverage, non-public facts given by the police), making them more believable and making it more difficult for jurors to detect their deception. Along with the presence of accurate facts and details in their accounts, informants are also more likely to be believed if they are thought to be testifying

against their self-interest (e.g. they may be harmed in jail or a family member may be put in danger as a result of testifying). According to Kassin (2015), statements made against self-interest are reflexively believed.

Lastly, determining whether the evidence points to deception or truth may be very difficult; not only can deception be embedded in accurate facts but individuals often make the fundamental attribution error, or have a correspondence bias, when evaluating others – even informants (Neuschatz et al., 2008; Ross, 1977). The fundamental attribution error refers to the tendency for individuals to overestimate dispositional factors and underestimate situational factors when explaining other people's behavior (Ross, 1977). Therefore, when evaluating an informant's motives for testifying, jurors will identify dispositional reasons (e.g. trying to do the right thing) rather than relying on situational factors (e.g. incentives to cooperate).

Given the issues laid out above, we coded all the DNA exoneration cases involving informants in order to provide some insight into why their testimony was believed by the jurors. Unfortunately, it is impossible to know from this set of cases whether or not the jurors detected the appropriate cues or how they evaluated the evidence. However, it is possible to address various aspects of the cases that relate specifically to the narratives provided by the informants and attorneys, whether statements against self-interest were made or not and whether dispositional or situational explanations for testifying were present. In order to evaluate the narrative components of the case, we coded the informants' testimony for the number of case details and their accuracy, the presence of inconsistencies, how they purportedly heard the confession (if at all), whether or not they received an incentive and whether or not they testified against their self-interest. In addition, we also coded the closing arguments made by the prosecuting and defence attorneys to further evaluate the case facts presented during the trial, the presence of inconsistencies in the informants' testimony and whether or not any ulterior motives or alternative explanations for the informants' testimony were explored.

It is clear that in some, if not all, of the cases examined herein, the juries failed to detect the deceptive nature of the informants' testimony. Nonetheless, it is still an important first step in better understanding the impact of informant testimony to analyze what the informants actually said at trial and how they were portrayed by both the prosecution and the defence. This is important because the way in which attorneys portray informants likely influences jurors' perceptions of their truthfulness, which may in turn affect verdict decisions. Because there is scant research on the content of informant testimony, this study is by necessity exploratory. Even so, some predictions could be derived from the deception detection and attribution literatures. First, because it has been shown that the majority of informants are repeat players (Roth, 2016), we hypothesized that the informants in the present study would also be found to have prior convictions and previous involvement in the criminal justice system (Hypothesis 1). Second, we expected to find that the informants made statements against their self-interest in order to increase their credibility (Hypothesis 2). Kassin (2015) argues that false confessions are persuasive because people reflexively believe that statements made against self-interest are true; therefore, to the extent that jurors perceive informants to be making such statements, they may be more likely to accept their testimony as truthful. Third, we predicted that the informants would be found to have given dispositional reasons for their testimony (e.g. they felt bad for the family) rather than situational explanations (e.g. receiving an incentive; Hypothesis 3). Finally, we expected to find that the prosecutors and defence attorneys specifically addressed the informants' motivations in

their cross-examinations and closing arguments (Hypothesis 4).

Method

Trial transcripts

We identified and coded all 22 trial transcripts in the Innocence Record that contain at least 1 informant. We defined an informant as someone who claimed to have obtained evidence about the defendant's case while incarcerated (i.e. a jailhouse informant) or someone who learned about the case through some connection with the defendant or through their own experiences but required an incentive to testify (i.e. a cooperating witness). This study is focused exclusively on wrongful conviction cases overturned by incontrovertible DNA evidence. Consequently, these cases provide known examples of instances when informants provided false incriminating testimony in court (excluding the informants who testified for the defence). There are 28 defendants in the identified cases, all of whom were convicted of major crimes: 4 for murder, 6 for rape and 18 for both murder and rape. There are 53 informants in the identified cases (43 jailhouse informants, 10 cooperating witnesses); of the 43 jailhouse informants, 34 testified for the prosecution (79.07%) and 9 testified for the defence (20.93%). All 10 of the cooperating witnesses were called to testify for the prosecution.

Data analysis

In order to analyze the data, we developed a coding scheme to capture information about: (1) the defendants; (2) the jailhouse informants for the prosecution; (3) the jailhouse informants for the defence; (4) the cooperating witnesses for the prosecution; and (5) the attorneys' closing arguments.

Defendants

The demographic information for the defendants includes age, gender, race, education, criminal history, crime date, trial date, presence of multiple trials, sentence and exoneration date. The details of the defendants' testimony include: response to a secondary confession (where relevant); type of contact with the informant; and relationship with the informant.

Jailhouse informants and cooperating witnesses for the prosecution

The demographic information for the jailhouse informants and cooperating witnesses presented by the prosecution includes age, gender, race, education, criminal history, current incarceration and testifying history. The details of these informants' testimony include: a description of the secondary confession (if applicable) or details about the event; the amount of time between the point at which the secondary confession was alleged to have been witnessed (if applicable) and the point at which the informant contacted the prosecutor or police; incentives, motivations and deterrents related to testifying; prior knowledge of the crime; the number of details of the crime that were given; testimonial inconsistencies; the type of contact between the informant and the defendant; and the informant's relationship to the defendant.

Jailhouse informants for the defence

The demographic information for the jailhouse informants presented by the defence (no cooperating witnesses were presented) includes the number of prior convictions and details of their criminal history. The details of these informants' testimony include: the topics discussed; the incentives and motivations for testifying; and the informant's relationship to the defendant. The informants presented by the defence had an overall different purpose for testifying (i.e. impeaching the informants presented by the prosecution) – therefore, fewer variables in the coding scheme are relevant to their testimony.

Attorneys' closing arguments

The content of the prosecution and defence attorneys' closing arguments includes whether or not they contain mention of: the informant's criminal history; incentives and motivations for testifying; testimonial inconsistencies; non-public details given during testimony; credibility of the defence's informant (if applicable); and overall truthfulness of the testimony.

Additional coding

The informant's motivation for testifying and consistency of testimony were also coded. The informant's motivation was coded as situational, dispositional or both. A situational motivation is characterized as an informant acknowledging that their reason for testifying was due to external influences promoting personal gain – for example, receiving some type of incentive such as a reduced prison sentence or a monetary reward. A dispositional motivation is characterized as an informant stating that their reason for testifying was due to internal characteristics, such as wanting to do the right thing, empathizing with the victim or wanting to help the victim's family.

Inconsistencies within an informant's testimony were coded as present or absent. If inconsistencies were found to be present, they were further categorized into three different types. First, there could be inconsistency between the informant's current testimony and the actual case facts or details of the crime. For example, the informant could have relayed incorrect information about the timing of the crime or the weapon that was used during its commission. Second, there could be inconsistency between the informant's current testimony and prior statements given to the police or prosecutor. For instance, the informant could have initially provided one description of a defendant's secondary confession to the police and then altered the details by the time they presented that information at trial. Finally, there could be inconsistency between the informant's current and previous testimony at trial. For example, the informant could have initially provided testimony in front of a grand jury or alternate trial and then changed their testimony at a different hearing or trial. This also includes informants stating contradictory information within the same trial if their testimony changed between cross-examination and re-direct examination.

At least two independent raters coded each transcript. Afterward, two authors reviewed the coding to evaluate the coding decisions. Any differences between the initial coders were resolved by the authors. The interrater reliability was calculated for 20% of the cases and is sufficiently high, with an average kappa of .877.

Missing data

Data are not available for every variable for all 28 defendants and 53 informants (43 jailhouse informants and 10 cooperating witnesses) due to the following reasons: (1) missing transcript pages; (2) the variable being nested within another variable such that the coding of the higher-order variable makes the lower-order variable not applicable (e.g. if there are no inconsistencies present within an informant's testimony then the subsequent type of inconsistency variable is not applicable); or (3) the attorneys never mentioning the variable during the trial proceedings. Thus, the amount of missing data differs for each variable. To account for these differences, we calculated sample sizes for each variable by subtracting the number of informants/defendants with missing data from the total number of informants/defendants. We only considered data 'missing' for the purposes of these sample size calculations if they were not coded for the first two reasons stated above (i.e. missing transcript pages or nested variables). Accordingly, the sample sizes still include defendants and informants who were not asked about the target variable during the trial proceedings, as we deemed it important to highlight the absence of critical information from the trial. For example, although we coded a total of 34 jailhouse informants for the prosecution, the

sample size for prior convictions is only 32 because transcript pages were missing for this portion of the testimony of 2 informants; however, that sample of 32 includes 6 informants who were not asked about their prior convictions during the trial. If the final sample size includes less than the total number of people in the applicable category (i.e. less than 28 defendants, 34 jailhouse informants for the prosecution, 9 jailhouse informants for the defence or 10 cooperating witnesses) then we report the number that was used to calculate the percentages next to each result.

Results

Defendants

The defendants were all male. At the time that the crime was committed, the average age of the defendant was 25.21 years ($SD = 6.55$); at the time of the trial, the average age of the defendant was 27.57 years ($SD = 7.10$). Most of the defendants had only one trial (60.71%); however, 11 had multiple trials pertaining to their current offense (39.29%), each of which may or may not have included a jailhouse informant. The defendants are mostly Caucasian (60.71%), followed by African American (32.14%) and Hispanic (7.14%).

Jailhouse informants for the prosecution

A total of 34 jailhouse informants testified for the prosecution against 22 of the 28 defendants; 1 informant was coded twice because she testified in two separate trials against different defendants. The informants were mostly male (91.18%) and had a mean age of 29.55 years ($SD = 11.32$, based on 21 available) when they testified at trial.

Criminal background

Most of the jailhouse informants for the prosecution were incarcerated for nonviolent crimes when they testified at the defendant's trial (68.75% of 32 available); these include crimes that do not rely on a weapon (e.g. burglary, theft; 50.00% of 32 available), crimes that involve deceit (e.g. perjury, fraud; 12.50% of 32 available) or both (6.25% of 32 available). A smaller proportion of these informants were incarcerated for violent crimes (e.g. murder, sexual assault; 21.88% of 32 available) or a combination of violent and nonviolent crimes (9.38% of 32 available).

Three quarters of these informants were found to have a prior history with the criminal justice system (75.00% of 32 available), consistent with Hypothesis 1. Surprisingly, the defence attorneys and prosecutors questioned these informants about their criminal histories at an equal rate (79.31% of 29 available for both the defence and the prosecution). However, despite the vast majority of these informants having had frequent run-ins with the criminal justice system, most were never asked during the trial if they had ever previously testified for the prosecution (68.97% of 29 available). Of the 9 informants who were asked whether or not they had previously testified, 7 responded that they had (77.78% of 9 applicable).

Motives for testifying

Given the argument that incentives are the main motivation for informants to testify, it is not surprising that the majority of the jailhouse informants for the prosecution were asked if they were receiving anything in exchange for their testimony by both the prosecution and the defence (see Table 1). More specifically, 28 informants (of 32 available) were questioned by the prosecution (71.43%) and/or the defence (75.00%) about whether or not they were provided with any incentive to testify. Of these 28 informants, 12.50% admitted to receiving an incentive. In one case, the informant openly admitted that he was receiving a reduced sentence on an unrelated charge in exchange for his testimony against Kenneth Wyniemko (Trial Transcript, 1994, p. WYN-000333). He stated that the prosecutor had promised that he would only need to spend one year in prison for his conviction of

Table 1. Percentages of variables coded from jailhouse informant and cooperating witness testimony in *the DNA* exoneration cases.

Variable	**Coding category**	**Jailhouse informant**	**Cooperating witness**
Incentive	Receiving	12.50%	22.22%
	Not receiving	75.00%	66.67%
	n/a	12.50%	11.11%
	Missing	2	1
	N	*32*	*9*
Motivation*	Not given	0.00%	20.00%
	Situational	13.79%	0.00%
	Dispositional	44.83%	40.00%
	Both	0.00%	10.00%
	n/a	41.38%	30.00%
	Missing	5	0
	N	*29*	*10*
Deterrents to testifying	Dangerous	34.48%	40.00%
	Inconvenience	3.45%	0.00%
	Relationship w/def.	0.00%	10.00%
	Both	3.45%	0.00%
	n/a	58.62%	40.00%
	Missing	5	0
	N	*29*	*9*
Inconsistencies	Present	64.29%	70.00%
	Not present	35.71%	30.00%
	Missing	6	0
	N	*28*	*10*

Note: *Two informants provided no motivation and 1 informant provided multiple motivations. One informant stated their relationship with the defendant.

unarmed robbery as opposed to five, which is the standard sentence for this class of felony. Nevertheless, the majority of these informants (75.00%) explicitly denied receiving anything in exchange for their testimony. This corresponds with the finding that of the 18 jailhouse informants for the prosecution who were asked why they had decided to testify, 77.79% provided a dispositional motivation such as wanting to do the right thing or testifying out of the goodness of their heart, consistent with Hypothesis 3. For instance, one informant stated in his testimony against John Restivo: 'It's something I'm doing as a man. I feel it's the right thing to do…' (Trial Transcript, 1986a, p. RHK-014802).

The amount of time between the point at which the informant allegedly heard the defendant's secondary confession and the point at which they subsequently contacted the police or prosecutor with this information is available in the trial transcripts for 17 informants. It ranges from less than one day to two and a half years, with 24.14% (of 17 available) reportedly contacting the authorities within two days. Some of the informants claimed that they had been hesitant to contact the police or prosecutor out of fear of being labeled as a snitch. For example, one informant – in his testimony against Curtis McCarty – stated that he had waited to contact the prosecutor because he believed that he might have been in danger 'if the people there in the tank found out that I told anybody about it' (Trial Transcript, 1986b, p. MCC-004042). Throughout the trials, 37.93% of the jailhouse

informants for the prosecution (of 29 available) recounted similar deterrents to testifying by claiming that they now feared for their personal safety, consistent with Hypothesis 2.

Confession circumstances

Nearly all of the jailhouse informants for the prosecution testified about an alleged secondary confession (93.94% of 33 available), which comprised their role in the trial. There were only 2 informants who did not provide secondary confession evidence (6.06% of 33 available); the first was acquainted with the defendant outside of prison and was able to verify that the defendant owned the type of weapon that was used during the crime, and the second merely corroborated that the defendant had spoken with another jailhouse informant who claimed to have heard a secondary confession. Some of these informants never explained how the secondary confession occurred (37.93% of 29 available). However, those who did explain ($n = 16$) most commonly claimed that the defendant had confessed to them only after being directly asked whether or not they were guilty (43.75%), whereas others claimed that the defendant had confessed on their own without any prompting (25.00%) or that they had overheard the defendant confessing to someone else (18.75%).

In order to establish some credibility for their testimony, informants must show that they have had the opportunity to converse with the defendant. Indeed, almost all of the informants indicated during their testimony that just such an opportunity had arisen. In fact, approximately half of them testified that they were housed in the same area as the defendant at the time (51.72% of 29 available) – in the same cell, tier, block or anywhere else that permitted them to come into contact with each other. A total of 24 informants described the nature of their relationship with the defendant (82.76% of 29 available): 54.17% as acquaintances (they knew each other but had no significant relationship), 20.83% as friends (either from in prison or outside of prison) and 20.83% as complete strangers. Alongside their relationship with the defendant, 24 informants also described the nature of their contact with them (82.76% of 29 available): 5 informants testified to having had singular contact with the defendant while incarcerated (i.e. they only met once; 20.83% of 24 applicable), 2 informants stated that they were merely acquaintances of the defendant (8.33% of 24 applicable) and 3 informants admitted to having no relationship at all with the defendant (12.50% of 24 applicable). One informant claimed that he first met the defendant, Wilton Dedge, in a prison transport van, and that during their short time together Dedge confessed that he had 'raped and cut some old hog' after being asked what he had done to get a 90-year sentence (Trial Transcript, 1984, p. DED-000735).

Secondary confession details

As mentioned earlier, it can be more difficult to detect deception when it is embedded in truth. Therefore, the testimonies of the jailhouse informants for the prosecution were evaluated for the number of crime details they include. Each testimony contains an average of 4.5 crime details ($SD = 3.2$, based on 32 available) with a maximum of 12 details, although 3 informants did not provide any crime details at all. For example, one informant stated that the defendant, Rolando Cruz, had told him that he was going to write a book entitled *How to Kill Little Girls* but had never actually described the murder (Trial Transcript, 1985b, p. HERN-034023). Details were coded as accurate if they were found to be consistent with verifiable facts of the crime. Although some of the details are unverifiable (e.g. claims about what the victim said while being attacked), on average 66.95% of the details stated by each informant were found to

be accurate (based on the 28 informants who provided details that could be verified as accurate).[1] Details were coded as inaccurate if they were found to directly contradict the factual details of the crime. On average, 12.81% of the details stated by each informant were found to be inaccurate (based on the 29 informants who provided details that could be verified as inaccurate). For instance, one informant testified that the defendant, Chad Heins, had confessed that he had 'stabbed [the victim] and assaulted her and made it look like a burglary' (Trial Transcript, 1996a, p. HEI-001748). Although the victim had indeed been stabbed and assaulted, the crime scene experts who had testified earlier in the trial had explicitly stated that there were no indications of burglary (no forced entry, the victim was wearing all of her jewelry, etc.), a fact that was central to the prosecution's case. Most of the informants (66.67% of 30 available) were questioned on whether or not they had learned about the crime from somewhere else (e.g. newspapers, TV), conceivably to help the jurors ascertain whether or not the defendant's alleged confession was the true source of the crime details being given by the informants. Of those informants who were asked ($n = 20$), 85.00% denied having any prior knowledge about the crime. Additionally, 4 informants' testimonies include one or more accurate details that had never been released to the general public (14.29% of 28 available).

Most of the jailhouse informants for the prosecution were inconsistent in their reports (64.29% of 28 available). Of those informants ($n = 18$), most exhibited inconsistency between their current testimony and the actual case facts (55.56%), followed by inconsistency between their current and previous testimony (50.00%) and inconsistency between their current testimony and the prior statement reported to the police or prosecutors (50.00%). These values add up to more than 100.00% due to the fact that half of the informants exhibited more than one type of inconsistency in their testimony. For example, in the trial of Dennis Williams and Willie Rainge, the informant continually mixed up what he had allegedly heard each defendant confess. In his original police report and during the prosecutor's direct examination, he stated that Williams had claimed to have hidden the weapon. However, during cross-examination, he switched the details and stated that Rainge had claimed to have hidden the weapon. Furthermore, later on within the same testimony he switched back again to Williams, stating that Williams had claimed to have hidden the weapon. In cross-examination, the defence attorney asked him: 'That wasn't too hard to memorize. Why did you forget?' (Trial Transcript, 1978c, p. WILLD-000706). This type of inconsistency was coded as both inconsistency between current and previous testimony and inconsistency between current testimony and the prior statement provided to the police.

Jailhouse informants for the defense

A total of 9 jailhouse informants presented by the defence testified for 6 of the 28 defendants; 2 defendants (7.14%) had multiple informants testify on their behalf. Based on the available data, 5 informants had at least one prior conviction for a nonviolent crime (e.g. burglary, delivery of a controlled substance, trespassing; 62.50% of 8 available) and 4 informants had at least one prior conviction for a violent crime (e.g. murder, armed robbery; 50.00% of 8 available). The attorneys asked 7 informants about their relationship with the defendant, of which 3 reported being friends with the defendant in prison (42.86%), 3 reported being acquaintances of the defendant (42.86%) and 1 reported not knowing the defendant (14.29%).

The testimony of the jailhouse informants for the defence often included information concerning the jailhouse informants for the prosecution (77.78%). Specifically, the

[1]This percentage was calculated by first dividing the number of accurate details by the total number of crime details for each jailhouse informant for the prosecution, then averaging.

informants for the defence often testified about the motives of the informants for the prosecution for testifying. For example, one informant for the defence testified that an informant for the prosecution had told him: 'this time is killing me and I'm going to set [the defendant] up […] I'm going to get this 20 years up off me man, I can't take it' (Defendant-Appellant's Brief, 1994, HUNT-000276). Another informant for the defence testified about the same informant for the prosecution, stating that he had said 'that he expected to be out of prison by October and that no matter what it took or who he had to burn that he was going to get out of prison' (Defendant-Appellant's Brief, 1994, p. HUNT-000276). In another trial, the informant for the defence testified that he had heard the informant for the prosecution say that 'they were going to get some of their time knocked off, they were doing something to get some of their time taken care of' and that 'they were going to jump on [the defendant's] case. Which meant testify against him' (Trial Transcript, 1996b, p. HEI-001993).

The two jailhouse informants for the defence who did not testify about jailhouse informants for the prosecution both testified for the same defendant, Jerry Watkins. Both of these informants provided information concerning the character of the defendant, as they were acquainted with him through various prison activities, including church and Bible study.

None of the jailhouse informants for the defence explicitly stated that they were receiving an incentive for testifying after being asked by either the prosecutor or the defence attorney. Additionally, most of these informants did not testify as to their motivation for testifying; only one explained his reason for testifying, which was that friends 'watch out for each other' (Trial Transcript, 1996b, p. HEI-002006).

Cooperating witnesses for the prosecution

A total of 10 cooperating witnesses testified for the prosecution against 13 of the 28 defendants. Of these, 2 witnesses (20.00%) testified against multiple defendants and 2 defendants (7.14%) had multiple witnesses testify against them. One trial was missing all transcripts but contained limited information about the witnesses in the appeals documents; therefore, the statistics reported below are based on the available data for each variable.

Demographics

The *cooperating* witnesses were mostly male (80.00%) and had a mean age of 26.50 years ($SD = 5.78$) when they testified at trial. They reported varying involvement with the crime: 7 witnesses claimed to have learned about the crime through their associations with the defendant (70.00%), 2 witnesses claimed to be eyewitnesses (20.00%) and 1 witness allegedly overheard the defendant confess at the crime scene (10.00%). They also reported varying relationships with the defendants: 5 witnesses claimed to be friends with the defendant (50.00%), 4 witnesses claimed to be acquaintances of the defendant (40.00%) and 1 witness claimed not to know the defendant (10.00%).

Criminal background

Defense attorneys questioned 7 witnesses (77.78% of 9 available) and prosecutors questioned 5 witnesses (55.56% of 9 available) about their criminal history. Most of the witnesses reported prior experience with the criminal justice system; 6 had at least one prior conviction for a nonviolent crime (e.g. burglary, drug possession, unauthorized use of a motor vehicle; 66.67% of 9 available), 2 had at least one prior conviction for a violent crime (e.g. rape, murder; 22.22% of 9 available) and 1 had at least one prior conviction for a crime of dishonesty (i.e. forgery; 11.11% of 9 available). Attorneys asked only 1 witness whether or not he had testified for the prosecution in the past (11.11% of 9 available), to which he responded negatively.

Motives for testifying

Defense attorneys asked all of the witnesses (100.00% of 9 available) and prosecutors asked 3 witnesses (33.33% of 9 available) whether or not they were receiving an incentive in exchange for their testimony (see Table 1). The majority of the witnesses explicitly stated during their testimony that they were not receiving an incentive (55.56% of 9 available), but 3 admitted that they were (33.33% of 9 available), which included funding to relocate (66.67% of 3 applicable) and a reduced sentence for pending charges (33.33% of 3 applicable). In fact, 1 witness explicitly stated that he would not have testified without receiving an incentive, which was relocation for his family and himself. The defence attorney asked when he and the prosecutor had 'decided' that he had seen the defendants, to which he replied: 'I decided that when I was going to be relocated […] I wasn't going to testify against them and live there since everybody around there is kin, some kin and relatives and girlfriends and what have you' (Trial Transcript, 1978b, p. WILLD-000208).

Attorneys also questioned the majority of the witnesses about their motivations for testifying (60.00%) and any deterrents to testifying (60.00%). Of these witnesses, 2 explicitly provided dispositional motivations (e.g. wanting to be a good citizen; 33.33% of 6 applicable), 1 provided a situational motivation (i.e. she felt that her family was in danger; 16.67% of 6 applicable) and 1 provided both dispositional and situational motivations (i.e. thinking about his family and wanting to be relocated; 16.67% of 6 applicable) One witness claimed that she felt compelled to testify: 'in view of everything that happened […] I just felt that we were all in extreme danger and I could no longer jeopardize [my family's] lives and I just couldn't hold back anymore' (Trial Transcript, 1977, p. EVA-000473). Although fear was a motivating factor for this witness, it was also the most prevalent deterrent; 4 witnesses explicitly stated that perceived danger, or fear for their own or their family's safety, had made them hesitant to contact the police and testify at trial (66.67% of 6 applicable).

Testimony details

The cooperating witnesses' testimony includes an average of 4.8 crime details (range = 1−12). None of the witnesses provided non-public crime details and only one provided verifiably inaccurate crime details, testifying that the crime had occurred during the summer when it had actually occurred in November and that the defendant had picked up the victim from a roller-skating rink when other evidence verified that she had left the rink and gone to a restaurant before the crime had occurred.

The testimony of 7 witnesses was found to be inconsistent with what they had reported in the past (70.00%). Of these witnesses, all 7 exhibited inconsistency between their current testimony and what they had previously reported to the police or prosecutor (100.00% of 7 applicable). For example, 1 witness had originally told the police that she had witnessed the crime after leaving work at 6:37 p.m.; however, at trial she testified that she had actually left her workplace at around 8:00 p.m., which was verified as the approximate time at which the victim had left her house, shortly before the crime had occurred. Another 3 witnesses exhibited inconsistency within their testimony (42.86% of 7 applicable), such as 1 witness who – according to appeals documents – 'changed his testimony' regarding whether or not he had told someone else about the crime he had witnessed, shortly after making a 911 call to report it (Defendant-Appellant's Brief, 1994, p. HUNT-000225). Only 1 witness exhibited inconsistency between their current testimony and the case facts (14.29% of 7 applicable). As with the jailhouse informants, these figures add up to more than 100.00% because the majority of the

witnesses exhibited more than one type of inconsistency in their testimony (57.14% of 7 applicable). Defense attorneys asked all of the witnesses about their inconsistencies during cross-examination (100% of 6 available), whereas prosecutors asked only 1 witness about their inconsistencies during direct examination (16.67% of 6 available).

Sources of information

The cooperating witnesses allegedly came to know the crime details through various sources. As stated above, 2 witnesses claimed to know certain crime details from their own witnessing of the event (20.00%); others allegedly came to know of the crime details through personal conversations with the defendant and outside sources, as discussed below.

Secondary confessions

Most of the cooperating witnesses' testimony includes a secondary confession (70.00%). Those whose testimony does not include a secondary confession claimed to have been eyewitnesses to the crime (66.67% of 3 applicable) or a friend of the defendant who had evidence linked to the crime (33.33% of 3 applicable).

The witnesses testified between 2 and 20 months after the alleged secondary confession had occurred ($M = 8.69$ months, $SD = 6.14$ months). When describing how the secondary confession had occurred, 2 witnesses claimed that the defendant had confessed after being asked if he was guilty (28.57% of 7 applicable), 2 witnesses stated that the defendant had confessed directly to them without any prompting (28.57% of 7 applicable) and 2 witnesses claimed to have overheard the defendant confess to someone else (28.57% of 7 applicable). In one trial, the defendant had allegedly confessed to the witness during a phone conversation from jail that he had committed part of the crime that he was charged with (i.e. rape) but not the whole crime (i.e. murder): 'I had asked [the defendant] to confide in me. I asked what he had done. That the police had to have some evidence against him to indict him' (Trial Transcript, 1986a, p. RHK-014866). The defendant had then allegedly shared that he and his co-defendants had raped the victim and that one of the co-defendants had strangled her in a graveyard.

Outside sources

As another potential explanation for how the cooperating witnesses came to know the crime details, defence attorneys questioned 5 witnesses (55.56% of 9 available) and prosecutors questioned 1 witness (11.11% of 9 available) regarding whether they had learned about the crime from sources other than the defendant or from witnessing the crime themselves. Of those questioned, 5 witnesses admitted to having had prior knowledge about the crime (100.00% of 5 applicable) and 4 witnesses testified that they had read about the crime in the newspaper (80.00% of 5 applicable).

Attorneys' closing arguments

The coding for the closing statements was separated into statements concerning jailhouse informants and statements concerning cooperating witnesses (see Table 2). However, if there were multiple jailhouse informants within a trial, they were coded as a collective unit for the corresponding closing statement. Thus, coding was not recorded per informant but per closing statement for each trial.

Closing statements for the prosecution

During their closing statements, the prosecution mentioned the jailhouse informants in 94.74% of the trials in which they testified (of 19 available) and the cooperating witnesses in 100.00% of the trials in which they testified (of 10 total). When the prosecution mentioned their jailhouse informants, it was done in such a way as to bolster their credibility and promote trust in their testimony. For example, in the trial of David Gray, the prosecution argued that since their informant had already testified

Table 2. Percentages of variables present in the case materials available that prosecutors and defence attorneys addressed in their closing arguments.

Variable	Coding category	Jailhouse informants		Cooperating witnesses	
		Prosecution	Defense	Prosecution	Defense
Informant mentioned	Present	94.74%	100.0%	100.0%	81.82%
	Absent	5.26%	0.00%	0.00%	18.18%
	Missing	3	2	1	0
	n	*19*	*20*	*10*	*11*
(Un)truthfulness	Present	78.95%	100.0%	80.00%	81.82%
	Absent	21.05%	0.00%	20.00%	18.18%
	Missing	3	2	1	0
	n	*19*	*20*	*10*	*11*
Criminal history	Present	57.89%	85.00%	30.00%	30.00%
	Absent	42.11%	15.00%	70.00%	70.00%
	Missing	3	2	1	1
	n	*19*	*20*	*10*	*10*
Motivation	Present	42.11%	80.00%	70.00%	80.00%
	Absent	57.89%	20.00%	30.00%	20.00%
	Missing	3	2	1	1
	n	*19*	*20*	*10*	*10*
Incentive	Present	47.37%	75.00%	70.00%	80.00%
	Absent	52.63%	25.00%	30.00%	20.00%
	Missing	3	2	1	1
	n	*19*	*20*	*10*	*10*
Inconsistencies	Present	29.41%	66.67%	22.22%	80.00%
	Absent	70.59%	33.33%	77.78%	20.00%
	Missing	5	4	2	1
	n	*17*	*18*	*9*	*10*
Credibility	Present	40.00%	80.00%	0.00%	0.00%
	Absent	60.00%	20.00%	0.00%	0.00%
	Missing	17	17	11	11
	n	*5*	*5*	*0*	*0*
Non-public facts	Present	26.32%	10.00%	10.00%	0.00%
	Absent	73.68%	90.00%	90.00%	100.00%
	Missing	3	2	1	1
	n	*19*	*20*	*10*	*10*

Note: Sample size n + Missing = N.

multiple times in the past, this actually made him *more* reliable:

> Now, [the informant] is a bum, but he's been used in the past, too, and the information that he has provided has been very reliable, in other situations. This is not uncommon, in law enforcement, and his information, in the past, was instrumental in the prosecution of other cases to successful conclusions, and he has furnished reliable facts. (Trial Transcript, 1978a, p. GRAD-000305)

Similarly, throughout the trials, the prosecution mentioned reasons that supported the truthfulness of the testimony given by the jailhouse informants in 78.95% of the trials (of 19

available) and by the cooperating witnesses in 80.00% of the trials (of 10 total). In the trial of David Camm, the prosecution made a point of mentioning the danger involved in testifying: 'you don't make your status in prison nicer because you testify for the State or cooperate with the police. It's not a good thing, as they say. You actually get threatened' (Trial Transcript, 2006, p. CAMD-015391). Furthermore, the prosecution mentioned the criminal history of the informants in 57.89% of the trials in which the jailhouse informants testified (of 19 available) and 30.00% of the trials in which the cooperating witnesses testified (of 10 total). Despite the presence of a criminal record, the prosecution promoted the trustworthiness of their jailhouse informant in the case against Alejandro Hernandez, stating:

> He's a burglar. He's a criminal. Would he lie? Of course, you have reason to believe he would. The question doesn't stop there, though. Was he lying? And the answer, I submit, is no. He was very forthright in his answers about his own past. (Trial Transcript, 1985a, p. HERN-008418–19)

In this instance, the prosecution argued that since their jailhouse informant had been honest and forthcoming about his own criminal past, that must also mean that he was being honest and forthcoming in his testimony incriminating Hernandez.

The prosecution also addressed the informants' motives for testifying. More specifically, they mentioned the motivations of the jailhouse informants in 42.11% of the trials (of 19 available) and the motivations of the cooperating witnesses in 70.00% of the trials (of 10 total), consistent with Hypothesis 4. Additionally, the prosecution mentioned the potential incentives received by the jailhouse informants in 47.37% of the trials (of 19 available) and by the cooperating witnesses in 70.00% of the trials (of 10 total). In regard to the content of the testimony, the prosecution mentioned the presence of inconsistencies within the testimony of the jailhouse informants in 29.41% of the trials (of 17 available) and within the testimony of the cooperating witness in 22.22% of the trials (of 9 available). However, when the prosecution mentioned these inconsistencies, it was done in a way that could potentially have enhanced the credibility of the informant's inaccurate testimony. For example, in David Gray's trial, the prosecution argued:

> He is reciting what he was told [by the defendant] […]. If he was being told what the facts were [by the police/prosecution], his story would have been right down the line with the facts, in this case, and it wasn't. (Trial Transcript, 1978a, p. GRAD-000304)

Thus, the prosecution attempted to use the presence of inconsistencies to bolster the overall believability of the informant's testimony. For trials that had a jailhouse informant testifying for the defence, the prosecution attacked the credibility of the informant in 40.00% of the trials (of 5 available). Finally, the prosecution mentioned the presence of non-public crime details within the testimony of the jailhouse informants in 26.32% of the trials (of 19 available) and within the testimony of the cooperating witnesses in 10.00% of the trials (of 10 total).

Closing statements for the defence

The defence mentioned the jailhouse informants for the prosecution in 100.00% of the trials (of 20 available) and the cooperating witnesses in 81.82% of the trials ($n = 11$).[2] When the defence mentioned these informants, it was done in such a way as to attack their credibility and cast suspicion on their testimony. For example, in David Camm's trial, the defence recounted how one informant had altered his testimony after guidance by the prosecution: 'And before your very eyes, [the informant] under [the prosecution's] skillful

[2]The total is 11 instead of 10 because one of the cooperating witnesses presented two separate closing statements at two separate trials, so she was counted twice.

examination changed his story' (Trial Transcript, 2006, p. CAMD-015499). Overall, throughout the trials, the defence mentioned reasons as to why the testimony of the jailhouse informants for the prosecution was untruthful in 100.00% of the trials (of 20 available) and why the testimony of the cooperating witnesses was untruthful in 81.82% of the trials ($n = 11$). Furthermore, the defence mentioned the criminal history of the jailhouse informants for the prosecution in 85.00% of the trials (of 20 available) and the criminal history of the cooperating witnesses in 30.00% of the trials (of 10 total). In Calvin Washington's trial, the defence stated in regard to the numerous informants presented by the prosecution: 'A parade of liars. A parade of admitted liars. Rapists. Burglars. Thieves. Habitual criminals' (Trial Transcript, 1987, p. WASC-002922).

The defence mentioned the motivations for testifying of the jailhouse informants for the prosecution in 80.00% of the trials (of 20 available) and the motivations of the cooperating witnesses also in 80.00% of the trials (of 10 total), again consistent with Hypothesis 4. Additionally, the defence mentioned the potential incentives received by the jailhouse informants for the prosecution in 75.00% of the trials (of 20 available) and by the cooperating witnesses in 80.00% of the trials (of 10 total). The defence also mentioned the presence of inconsistencies within the testimony of the jailhouse informants for the prosecution in 66.67% of the trials (of 18 available) and within the testimony of the cooperating witness in 80.00% of the trials (of 10 total). In Calvin Washington's trial, the defence stated the following about the prosecution's cooperating witness: 'The reason the inconsistencies are there are not because of faulty memories, [but] because of faulty stories' (Trial Transcript, 1987, p. WASC-002929). Conversely, in trials that had jailhouse informants testifying for the defence, the defence bolstered the testimony of their own informants in 80.00% of the trials (of 5 available). For example, in David Camm's trial, the defence stated: 'for every one of their informants, we have an informant to inform on their informants' (Trial Transcript, 2006, p. CAMD-015497). Finally, the defence mentioned the presence of non-public facts within the testimony of the jailhouse informants for the prosecution in just 10.00% of the trials (of 20 available) and did not mention it in any of the trials with a cooperating witness (of 10 total).

Evidence in the cases

The Innocence Project lists all of the contributing factors to the wrongful convictions of each DNA exoneree (http://www.innocenceproject.org). The six causes within these cases are as follows: informants/snitches, false confessions or admissions, eyewitness misidentification, unvalidated/improper forensics, government misconduct and inadequate defence. In order to gauge whether or not other evidence contributed to the wrongful conviction of these defendants, we analyzed the frequency of all the contributing factors in each trial included in this research. The average number of contributing factors in these cases is 2.68 (1.68 when excluding informants as a factor). The range for the number of contributing factors is 1–5 (1–4 excluding informants). After informants, which are a factor in every case because of the focus of this study, the second contributing factor is unvalidated/improper forensics, which occurred in 12 of the cases. This is followed by eyewitness misidentification, which occurred in 8 of the cases. So, it is clear that the informants were an essential – if not *the* essential – contributing factor to the wrongful convictions. However, it is worth noting that every case analyzed herein has more than one contributing factor.

Discussion

The present study was designed to better understand the substance of false informant testimony. The content analysis has revealed several consistent patterns across the

testimonies. Most often the informants testified on behalf of the prosecution and had extensive criminal backgrounds (especially the jailhouse informants). Despite this proclivity for criminal behavior, most of the informants claimed to be motivated primarily by a moral imperative – a desire to do the right thing – and not by their desire to earn an incentive. In fact, the majority explicitly stated that they were not getting any benefit for testifying. Furthermore, across both the cooperating witnesses and the jailhouse informants there is a consistent pattern of details given during testimony matching the crime fact pattern. As expected, both the prosecution and the defence highlighted the secondary confession in their closing arguments in nearly all of the cases. The prosecution generally pointed out why the informants should be believed and emphasized the sacrifice that they had to make, ignoring personal risk to deliver their testimony. By contrast, the defence attorneys were more likely to focus on discrediting the informants' testimony. Finally, informant testimony brought to trial by the defence was relatively rare – occurring in only 6 of the 28 trials, just over 20% – and generally was used only to impeach the prosecution's own informants.

Theoretical explanations

The jurors' difficulty in detecting the false testimony given by the informants in these trials can potentially be explained through truth-default theory (TDT; Levine, 2014). TDT consists of 14 propositions which explain when to suspect the presence of a lie, when to conclude that a lie has been told and the conditions under which people make truth-lie judgments. It is centered on the concept that people naturally exist in a truth-default state, evaluating incoming messages as truthful (Levine, 2014). This truth-default state is seen as adaptive because the majority of communication that people encounter on a daily basis is honest (Levine, 2014; Serota et al., 2010). In order to detect deception, the truth-default state has to be abandoned; however, this only occurs following a trigger, or cue, which suggests that deception might be occurring (e.g. an ulterior motive). The trigger must be a strong enough indicator of deception to cause an individual to abandon the truth-default state and enter into a state of suspicion, in which they actively believe that deception might be occurring. Once in this state, the individual actively searches for evidence of truth or deception. If there is enough evidence of deception, the individual then judges the message as deceptive. If there is not enough evidence to make a judgment, the individual remains in a state of suspicion and seeks more evidence; if there is enough evidence of truth, the individual then reverts into the truth-default state and judges the message as non-deceptive (Levine, 2014).

Although we cannot know from the present data whether or not the jurors ever entered into a state of suspicion, TDT identifies a primary factor that could have (and should have) acted as a trigger – namely, the ulterior motives of the informants for testifying. According to TDT, people detect the presence of an ulterior motive when they become aware that an individual can better achieve their goal by lying than by telling the truth. The jurors should have detected that the jailhouse informants had ulterior motives by realizing first that they were already incarcerated and therefore should be identified as dishonest, and second that their desire to receive the incentive might have motivated them to give false testimony. These factors, according to TDT, should have made the jurors aware of the informants' ulterior motives, thereby triggering a state of suspicion. Although their criminal history was addressed in almost 95% of the cases, only a small percentage of the informants admitted to receiving an incentive in exchange for their testimony. This meant that there was little opportunity to question the credibility of the informants based on their having been offered an incentive, and consequently the majority of the jurors were likely not aware that the informants had ulterior motives. It might also

be the case that merely knowing that the informants had a history of criminality was not enough to trigger a state of suspicion because the jurors committed the fundamental attribution error (Ross, 1977). Consistent with previous research, it is plausible that the jurors believed that the informants had decided to testify out of a moral imperative to do the right thing, as the majority of them claimed during their testimony (Neuschatz et al., 2008).

The data suggest that there are several reasons why the jurors may have been more likely than not to commit the fundamental attribution error and fail to enter into a state of suspicion. First, although all of the defendants were on trial for rape or murder (two of the most violent crimes), only some of the informants had a history of committing violent crimes themselves. Their claims of being morally driven to help put a rapist or murderer away therefore may not have been perceived as conflicting strongly with their tendency to act immorally (but not violently) in the past. Second, laypeople are less likely to suspect an ulterior motive when an individual (i.e. the informant) behaves in a way that works against their self-interest, as there is no apparent motive to deceive. Approximately 44.74% of the 38 informants with available data (both jailhouse informants and cooperating witnesses) gave reasons as to why testifying for the prosecution was, in fact, acting against their best interests, such as the danger of being labeled a snitch in jail or losing time toward serving their prison sentence. All of these factors could have lessened the chances of the jurors entering into a state of suspicion according to TDT and, subsequently, remaining in the truth-default state.

In addition, even if the jurors had entered into a state of suspicion, this does not mean that sufficient evidence of deception would have successfully been detected – merely that the jurors would have started actively searching for it. In most of the cases (83.33% of 24 available), such evidence came from confronting the informants about inconsistencies in their testimony during cross-examination. However, the fact that all of the trials examined in the current study resulted in wrongful convictions indicates that these inconsistencies were insufficient indicators of deception. In the context of TDT, it is possible that if the jurors were not in a state of suspicion then they would not have considered deception as a possible reason for the inconsistencies, and would therefore have been more likely to believe that they had occurred due to a non-deceptive reason, such as forgetfulness or nervousness. Just such a non-deceptive explanation for the inconsistencies was sometimes even offered by the prosecutors, as reflected in 25.93% of their closing statements (based on 26 available, regardless of informant type).However, the results point to an alternative explanation: namely, the matching fact pattern between the informants' testimony and the details of the crime. The high average proportion of factually accurate crime details given within the testimony may have acted as strong evidence of truth and thus counteracted any inconsistencies. Even more compelling, 86.49% of the informants (based on 37 available), both jailhouse informants and cooperating witnesses, gave details that were explicitly identified as non-public, with prosecutors pointing to these details as undeniable proof of the informants' veracity during their closing statements in 20.69% of the cases (based on 29 available). So even if the jurors had recognized the inconsistencies as being suggestive of deception and were aware that the informants were motivated to present false testimony to attain an incentive, their inability to explain how the informants knew non-public crime details may have caused them to believe the informants nonetheless. The above factors would have significantly weakened the power of the inconsistencies to act as an indicator of deception, which helps to explain why the jurors wrongfully convicted the defendants even when the informants exhibited several testimonial inconsistencies.

Finally, the jurors' belief in the legal system could have influenced their perception of the veracity of the informants. Experts have argued that the credibility of prosecution witnesses, including jailhouse informants and cooperating witnesses, is bolstered by implicit or explicit prosecutorial vouching (see Roth, 2016). Although it cannot be known for sure, the jurors could have assumed that the mere fact that the prosecution had called the informants to take the stand was evidence of honest testimony. Although pro-prosecution biases cannot be measured in the present sample of cases, it is notable that 79.31% of the prosecutors included reasons as to why the informants' testimony must be true in their closing statements (based on 29 available). Trust in both the justice system and the prosecutors may have caused the jurors to become less sensitive to triggers or more prone to dismissing inconsistencies as evidence of deception, thus remaining in the truth-default state and failing to recognize the testimony as fabricated. For instance, jurors' pretrial beliefs or biases have been shown to affect both their perception of evidence and their final verdict decisions (Carlson & Russo, 2001; Lecci & Myers, 2008). Altogether, the current study has found a prevalence of factors which could impair jurors' ability to accurately detect false testimony in the context of TDT.

Limitations

Archival research has the advantage of allowing the analysis of rich, complex, real-world data but it is not without its limitations. For example, in most archival research there is a clear challenge in establishing ground truth. DNA exonerations therefore provide a unique opportunity to examine cases in which the testimony – at least of the prosecution's informants – is indisputably false. However, there is still much that cannot be determined simply by reviewing the case files. For example, it is not possible to determine the extent to which the jurors considered the inconsistencies in the informants' testimony and their stated motivations for testifying when deliberating about the charges. Therefore, it is not clear how much of a role the informants played in the jurors' decisions to convict. Whatever flaws the jurors may have noticed in the informants' testimony – if indeed they noticed them at all – were not sufficient to produce an acquittal. Future research examining how informants are perceived by jurors should be conducted within the context of mock jury paradigms wherein potential variations in informant testimony can be tightly controlled as a reasonable proxy for real-world jury decisions (Bornstein et al., 2017).

We are also constrained in this analysis by the sample of available cases. For example, it is a virtual certainty that informants have also provided false testimony in cases where wrongful convictions have not yet been identified. Whether or not these cases are systematically different from those analyzed herein is difficult to determine. Similarly, we do not have access to cases in which informants provided false testimony but defendants were rightfully acquitted, or where genuinely guilty defendants were convicted despite the presence of false informant testimony. Such cases would provide useful information about whether or not jurors' perceptions of informants can be a primary justification for their verdicts. Although these questions cannot be answered with the cases analyzed herein, future experimental research might identify variables that can produce persuasive informant testimony.

Another limitation of this research is the inability to have a control group. Presumably, there are cases in which informants tell the truth – and one may question whether or not the characteristics of honest informants are different from those of lying informants. Because this study focuses exclusively on wrongful convictions overturned by DNA evidence, these cases can only present prosecution informants that are known to have provided false testimony in court. Unfortunately, there is no definitive way to know that an informant is telling the truth. In order for there to be a

proper comparison group, a defendant's guilt would need to be verified with DNA evidence alongside informant testimony. Access to cases in which informants provided confirmed honest testimony is not readily available. However, this study could serve as a useful baseline for future research if a database of cases involving honest informant testimony was to be established.

Implications

Assessment of the content of informant testimony is critical to understanding the various ways in which informants contribute to wrongful convictions. For example, given that jailhouse informants are questioned about their motives in 87.5% of cases, researchers should routinely include this variable in studies designed to better understand why informants are persuasive. The content analysis conducted in the current research also speaks to the importance of understanding how informants might shape the early stages of investigations. For example, in their trial testimony, 73.33% of the jailhouse informants (22 out of 28) invoked motives for testifying that *excluded* any mention of an incentive (e.g. wanting to do the right thing). Future research should investigate whether or not these same explanations appear in informants' first encounters with prosecutors and detectives. Do informants try to make themselves believable by invoking a sense of higher purpose from the outset, or do these self-serving explanations only emerge as they are preparing to testify? Knowing how informants' explanations for their decision to testify shift over time might provide fruitful directions for future research designed to help detectives and prosecutors appropriately evaluate potential evidence (e.g. Charman et al., 2019).

The courts have long been aware of the potential for incentives to produce deceit in informants (*Giglio v. United States*, 1972; *United States v. Singleton*, 1998). However, in order to weigh the contribution of incentives appropriately, jurors first have to know about them. Based on the sample of cases analyzed herein, this information is not regularly made available to jurors; only 6 of the 28 informants with available data admitted to receiving an incentive. One reason for this might be that the incentives which informants receive in exchange for their cooperation typically remain hidden. Prosecutors rarely negotiate explicit deals with informants prior to their testimony; rather, prosecutors and informants work together with a shared understanding that an informant's positive performance will eventually be rewarded with tangible benefits (Covey, 2014). The defense attorneys made valiant efforts to impugn the credibility of these informants in the absence of information about incentives; in 67% of the cases they highlighted the inconsistencies in the informants' testimony – and in the small number of cases where an informant testified for the defence, it was usually to impeach the testimony of the jailhouse informants for the prosecution. It is important to note that, unlike prosecutors, defence attorneys cannot offer incentives to informants. This could explain why the defence attorneys called informants at a much lower rate than the prosecution in the present sample. Given that the attempts to undermine the informants' credibility failed, perhaps the simple omission of information about incentives to testify is the primary explanation for why these informants were believed – the jurors did not have complete information with which to evaluate whether or not they were being deceptive. Without a requirement that all informants testify about the incentives they are receiving, the potential for future wrongful convictions based on false informant testimony continues to be strong.

Public significance statement

An examination of the wrongful conviction cases that utilized informant witnesses highlights why jurors may be unable to detect this

often deceptive testimony. Prosecution informants typically had extensive criminal backgrounds, denied getting any incentive for their cooperation, and provided accurate crime facts. According to Truth-Default Theory, triggers were potentially not readily available for jurors to be able to detect the deceptive testimony.

Ethical standards

Declaration of conflicts of interest

Jeffrey S. Neuschatz has declared no conflicts of interest
Danielle K. DeLoach has declared no conflicts of interest
Megan A. Hillgartner has declared no conflicts of interest
Melanie B. Fessinger has declared no conflicts of interest
Stacy A. Wetmore has declared no conflicts of interest
Amy B. Douglass has declared no conflicts of interest
Brian H. Bornstein has declared no conflicts of interest
Alexis M. Le Grand has declared no conflicts of interest

Ethical approval

This article does not contain any studies with human participants or animals performed by any of the authors.

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