The Execution of Cameron Todd Willingham: Junk Science, an Innocent Man, and the Politics of Death

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THE EXECUTION OF CAMERON TODD WILLINGHAM: JUNK SCIENCE, AN INNOCENT MAN, AND THE POLITICS OF DEATH

“The only statement I want to make is that I am an innocent man convicted of a crime I did not commit. I have been persecuted for twelve years for something I did not do.” — Cameron Todd Willingham’s remarks before his execution.1

Paul C. Giannelli*

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1 See David Grann, Trial by Fire: Did Texas Execute an Innocent Man?, NEW YORKER, Sep. 7, 2009, at 63.
I. INTRODUCTION

Two-year-old Amber Willingham, along with her younger twin sisters, Karmon and Kameron, died in a fire on December 23, 1991 in Corsicana, Texas. Their father Cameron Todd Willingham escaped from the fire, was tried, and eventually executed for their deaths. The expert testimony offered against him to establish arson has been labeled “junk science.” The case has since become infamous, the subject of an award-winning New Yorker article, numerous newspaper accounts, and several television shows. It also became enmeshed in the death penalty debate and the reelection of Texas Governor Rick Perry, who refused to grant a stay of execution after a noted arson expert submitted a report debunking the “science” offered at Willingham’s trial. The governor has since attempted to derail an investigation by the Texas Forensic Science Commission into the arson evidence presented at Willingham’s trial.

Whatever else the Willingham case may stand for, it is a trenchant illustration of the judicial acceptance of expert testimony devoid of empirical

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2 Christy Hoppe, Some Experts Question Science in Texas Arson Cases, CHARLESTON GAZETTE & DAILY MAIL (W. Va.), Sep. 20, 2009, at 11A (“Arson investigators in Texas have relied on old wives’ tales and junk science to send men to prison, and perhaps even the death chamber, top experts on fire behavior say.”).

3 See Grann, supra note 1. Grann’s article won the 2009 George Polk Award for Magazine Reporting, the America Bar Association’s 2010 Silver Gavel Award for Media and the Arts, and the 2009 Sigma Delta Chi Award for magazine investigative reporting from the Society of Professional Journalists.


6 See Emily, supra note 4 (“The Willingham case has drawn worldwide attention from death-penalty opponents and others since questions were raised about the integrity of the science evidence used to convict him of murder.”). Justice Scalia once wrote: “It should be noted at the outset that the dissent does not discuss a single case—not one—in which it is clear that a person was executed for a crime he did not commit. If such an event had occurred in recent years, we would not have to hunt for it; the innocent’s name would be shouted from the rooftops by the abolition lobby.” Kansas v. Marsh, 548 U.S. 163, 188 (2006).

7 See Mary Alice Robbins, Fired Up: Changes Sought for Texas Forensic Science Commission at Center of Heated Controversy, 25 TEX. LAWYER, Nov. 9, 2009 (“Anti-death penalty activists have contended that Willingham was innocent and that [Governor] Perry replaced the commission members to block a review of a report questioning whether the fire Willingham was accused of starting was arson.”).

8 See infra text accompanying notes 98-115.
support and the legal system’s inability to effectively police such testimony. The National Academy of Science’s landmark 2009 report on forensic science, *Strengthening Forensic Science in the United States: A Path Forward*, made the breathtaking observation that, “[a]mong existing forensic methods, only nuclear DNA analysis has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between an evidentiary sample and a specific individual or source.”

The report went on to observe: “In a number of forensic science disciplines, forensic science professionals have yet to establish either the validity of their approach or the accuracy of their conclusions, and the courts have been *utterly ineffective* in addressing this problem.” Moreover, recent studies document the role that forensic science played in convicting the innocent.

### II. The Trial

#### A. The Arson Evidence


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10. *Id.* at 53 (emphasis added). The Report devotes only two paragraphs to arson investigations: “Despite the paucity of research, some arson investigators continue to make determinations about whether or not a particular fire was set. However, according to testimony presented to the committee, many of the rules of thumb that are typically assumed to indicate that an accelerant was used (e.g., ‘alligatoring’ of wood, specific char patterns) have been shown not to be true. *Experiments should be designed to put arson investigations on a more solid scientific footing.*” *Id.* at 173 (emphasis added).

11. A study of 200 DNA exonerations found that expert testimony (55 percent) was the second leading type of evidence (after eyewitness identifications, 79 percent) used in the wrongful conviction cases. Of the types of forensic evidence introduced at trial, “serological analysis of blood or semen [was] the most common (79 cases), followed by expert comparison of hair evidence (43 cases), soil comparison (5 cases), DNA tests (3 cases), bite mark evidence (3 cases), fingerprint evidence (2 cases), dog scent (2 cases), spectrographic voice evidence (1 case), shoe prints (1 case) and fiber comparison (1 case).” Brandon L. Garrett, *Judging Innocence*, 108 Colum. L. Rev. 55, 81 (2008). See also Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 Va. L. Rev. 1, 44 (2009) (“Of the 100 cases involving serology in which transcripts were located, 57 cases, or 57%, had invalid forensic science testimony. Of the 65 cases involving microscopic hair comparison in which transcripts were located, 25 cases, or 38%, had invalid forensic science testimony.”); Paul C. Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, 86 N.C. L. Rev. 163 (2007) (discussing lab scandals in West Virginia, Oklahoma City, Chicago, Houston, Virginia, Montana, and the FBI Lab).

12. Willingham’s court-appointed trial attorneys, John Martin and Robert Dunn, advised him to accept the offer, but he refused. “Willingham was implacable. ‘I ain’t gonna plead to something I didn’t do, especially killing my own kids,’ he said. It was his final
1. Developments in Arson Investigations

The arson evidence was critical. No arson, no crime. The prosecution proffered two experts: Manuel Vasquez, a deputy state fire marshal, and Douglas Fogg, an assistant fire chief in Corsicana. Arson investigators with years of experience, they came from the “old school” of investigators—those who used intuition and a number of rules of thumb to determine whether a fire was incendiary. In Vasquez’s words: “The fire tells a story. I am just the interpreter. . . . And the fire does not lie. It tells me the truth.”

Critics of this approach complained that it lacked a scientific foundation. Rather, it was based on folklore that had been passed down from generation to generation—without any empirical testing. As early as 1977, a government report noted that common arson indicators had “received little or no scientific testing” and “[t]here appears to be no published material in the scientific literature to substantiate their validity.” Through the 1980s, proponents of a science-based approach to arson investigations waged an uphill battle, finally winning a major victory in 1992 when the National Fire Protection Association (NFPA) published its Guide for Fire and Explosion Investigations (NFPA 921). Although NFPA 921 would subsequently

decision. Martin says, ‘I thought it was nuts at the time—and I think it’s nuts now.’” Grann, supra note 1, at 48. “Though his father did not believe that he should plead guilty if he were innocent, his stepmother beseeched him to take the deal. ‘I just wanted to keep my boy alive,’ she told me.” Id.


Under state law, the Texas State Fire Marshal is responsible for investigating suspicious fires. TEX. GOV’T CODE § 417.007.

“Often, the bulk of an investigator’s training came on the job, learning from ‘old-timers’ in the field, who passed down a body of wisdom about the telltale signs of arson . . . .” Id. at 58.


become the bible in fire and arson investigations, it was published weeks after Willingham’s trial.

2. The Willingham Fire

Deputy Fire Marshal Vasquez told the jury that he had found twenty indicators of arson during his post-fire investigation of Willingham’s house. One indicator was a low burning fire. “All fire goes up”, Vasquez testified. Thus, burn patterns on the lower walls and floor suggested that an accelerant was used.

This common-sense notion, however, has its limitations, especially when a fire occurs in a contained area, such as a house. Due to buoyancy, a thermal plume initially rises once a fire is ignited. As the fire continues, the plume reaches the ceiling, which causes it to spread outward towards the walls. When it reaches the walls, the combustion products press down from the ceiling creating an upper level, which continues to increase in depth and temperature. Eventually thermal radiation replaces convection as the principal method of heat transfer. When the temperature of the hot gas layer reaches approximately 1100-1200 F, every exposed combustible surface in the room will burst into flames. This phenomenon, known as “flashover,” can occur within minutes. After flashover, the entire room is engulfed in flames, including the lower walls and floor.

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21 Assistant Chief Fogg’s testimony essentially tracked Vasquez’s.

22 Vasquez testified that there was “char burning, like, for example, this is the bottom here. It’s burned down here at the bottom. That is an indicator in my investigation of an origin of fire because it’s the lowest part of the fire.” Willingham transcript (vol. XI), supra note 16, pt. 2, at 239. See also Willingham, 897 S.W.2d at 354 (“An expert witness for the State testified that the floors, front threshold, and front concrete porch were burned, which only occurs when an accelerant has been used to purposely burn these areas. This witness further testified that this igniting of the floors and thresholds is typically employed to impede firemen in their rescue attempts.”).


24 “So when I found that the floor is hotter than the ceiling, that’s backwards, upside down. It shouldn’t be like that. The only reason that the floor is hotter is because there was an accelerant.” Id. at 256.

25 See Willingham transcript (vol. XI), supra note 16, at 75 (“The windows, the electricity started crackling and popping, and the top of the well—well, I was facing the side of the house, and it just blew out. The flames just blew out. . . . All the windows and the front room was engulfed.”) (testimony of Dianne Barbe); id. at 96 (“We was running towards the house, me and my mother, we was fixing to go and try to get in, and that’s when it was an explosion . . . .”) (testimony of Dianne Barbe). Vasquez mentioned flashover in his testimony
is the point at which the fire transitions from a “fire in a room” to a “room on fire.” Consequently, a low burning fire is not necessarily indicative of an incendiary origin.

Moreover, some of Vasquez’s other “indicators”—splotchy looking areas called “puddle configurations” and “pour patterns”—are present after flashover in an accidental fire. Similarly, additional indicators such as “alligatoring” marks on wood (char blisters) are also explained by flashover. Flashover also accounts for another fact that Vasquez thought incriminatory. Willingham told investigators that he had attempted to save his daughters, but the heat was too great and he was forced to run from the house without shoes. Willingham’s feet were not burnt, and in Vasquez’s mind, burnt debris on the floor made that impossible. However, if Willingham left his home before flashover, his feet would not have been burnt. (Willingham exaggerated his attempts to save his children—a common occurrence when a parent survives a fatal fire.)

Still another clue was charring under an aluminum threshold of an interior door. Here, again, this may occur in a flashover. Still other arson indicators—melted bed springs, multiple points of origins, and brown stains on a concrete floor—were also consistent with an accidental blaze.

(id. (vol. XII) at 47-48), but he does not appear to understand its implications.

26 LENTINI, supra note 17, at 68-70.

27 According to Vasquez, a burn “trailer” was etched on the floor. Willingham transcript (vol. XI), supra note 16, at 244 (“You can see that on the burnt patterns on this puddle configuration on Exhibit No. 36. This is a strong indicator of a liquid.”).

28 “There was fire on the floor. . . . He had no injuries on his feet.” Id. at 267.

29 “[T]he springs were burned from underneath. This indicates there was a fire under this bed because of the burn underneath the bed.” Id. at 241.

30 “Multiple areas of origin indicate—especially if there is no connecting path, that they were intentionally set by human hands.” Willingham transcript (vol. XI), supra note 16, at 255. There are two problems here. First, the fire scene did not exhibit multiple origins, according to independent experts. DOUGLAS CARPENTER ET AL., REPORT ON THE PEER REVIEW OF THE EXPERT TESTIMONY IN THE CASES OF STATE OF TEXAS V. CAMERON TODD WILLINGHAM AND STATE OF TEXAS V. EARNEST RAY WILLIS 11-12 (2006). Second, even if the fire scene had shown multiple points of origin, this would not necessarily indicate an intentional fire. LENTINI, supra note 17, at 461-62.

31 Willingham transcript (vol. XI), supra note 16, at 248-49. Fire experts reviewing the evidence from Willingham’s trial pointed out that “[t]he behavior of concrete in fires, including the development of various colors, has been extensively studied.” CARPENTER ET AL., supra note 30, at 18. These experts concluded that there is simply “no scientific basis for Mr. Vasquez’s statement about the brown discoloration being an indication of the presence of accelerants.” Id.

32 Vasquez’s testimony also demonstrated other misconceptions. A common one is that arson fires burn hotter and faster than “normal” fires: “You know, it makes the fire hotter. It’s not a normal fire.” Willingham transcript (vol. XII), supra note 16, at 249. However, the temperature of burning wood and burning gasoline are nearly identical, so to claim that a fire using liquid accelerants burns “hotter” than a wood fire is wrong. LENTINI,
Vasquez also relied on the presence of “crazed glass”—spider-web patterns on the windows as an indication of arson.\textsuperscript{33} It was long believed that crazed glass resulted from a fire that burned fast and hot—i.e., one fueled by a liquid accelerant. Yet, subsequent research demonstrated that crazing occurs only from rapid cooling when water from fire hoses is sprayed on heated windows.\textsuperscript{34}

In retrospect, the most damning piece of evidence involved one of the numerous debris samples submitted for laboratory analysis.\textsuperscript{35} It came from an area near the front door and was the only sample that tested positive for a chemical commonly used in charcoal lighter fluids. Nevertheless, this finding can be explained by the fact that a charcoal grill and lighter fluid were on the front porch at the time of the fire.\textsuperscript{36} Eyewitnesses reported no fire at the front door when they first saw Willingham on the porch. In fact, the negative results from the other samples supports Willingham’s case.\textsuperscript{37}

The cause of the fire remains unknown,\textsuperscript{38} and the scene cannot be

\textsuperscript{33} supra note 17, at 465.

\textsuperscript{34} LENTINI, supra note 17, at 439 (“It is unclear why anyone ever thought that crazing of glass indicated rapid heating.”).

\textsuperscript{35} In closing argument, the defense counsel referred to a “dozen samples.”

\textsuperscript{36} Id. (vol. XII), at 15 (although photographs show a grill, Vasquez apparently did not know of the grill’s presence); id. at 16 (acknowledging that a fire-damaged charcoal lighter fluid container was found on the front porch).

\textsuperscript{37} The prosecutor would later say that he “‘never did understand why they weren’t able to recover’ positive tests in these parts.” Grann, supra note 1, at 61. At trial, he argued that the “liquid burned away in that destructive madness created by Cameron Todd Willingham.” Willingham transcript (vol. XIII), supra note 16, at 45.

\textsuperscript{38} Willingham’s defense suggested at trial that Amber, the two-year old, could have caused the fire by knocking over a kerosene lamp. This seems like speculation. In his 2009 New Yorker article, Grann raised another theory—a space heater in the children’s bedroom—which was never confirmed. Both Willingham and his wife, Stacy, had warned Amber not to play with it. Willingham told investigators that “[h]e and Stacy used three space heaters to keep the house warm, and one of the them was in the children’s room. ‘I taught Amber not to play with it,’” he said, adding that she got “whuppings every once in a while for messing with it.” Grann, supra note 1, at 46. Although Vasquez testified that the heater was off when he inspected the premises four days after the fire, Stacy said it was on when she left the house on the morning of the fire. Elizabeth Gilbert, who befriended Willingham in 2000 when he was on death row, eventually began to investigate his case after initially believing that he was guilty. During this process, she conducted a taped interview with Stacy: “Stacy was sure that, at least on the day of the incident—a cool winter morning—it had been on. ‘I remember turning it down,’ she recalled. ‘I always thought, Gosh, could Amber have put something there?’ Stacy added that, more than once, she had caught Amber ‘putting things too close to
reconstructed due in part to the disappearance of records.\textsuperscript{39}

3. Credibility Testimony

Vasquez did not limit himself to an opinion on the cause of the fire. He also testified that Willingham was not truthful, informing the jury that during an interview Willingham “told me a story of pure fabrication”\textsuperscript{40} and, “[h]e just talked and he talked and all he did was lie.”\textsuperscript{41} This testimony was improper—and extremely prejudicial. Vasquez was accepted by the court as an arson investigator, not as an expert on credibility. He was thus testifying beyond his expertise.\textsuperscript{42} Indeed, it is axiomatic that witnesses, lay and expert, are not permitted to testify about credibility.\textsuperscript{43} Moreover, research suggests that police and other investigators are not all that good at judging credibility: “Unfortunately, psychological research has generally failed to support the claim that individuals [CIA, FBI, and police investigators] can attain high levels of performance in making judgments of truth and deception. Over the years, numerous studies have demonstrated that these individuals perform at no better than chance level in detecting deception.”\textsuperscript{44}

\textsuperscript{39} REPORT OF THE TEXAS FORENSIC SCIENCE COMM’N, WILLINGHAM/WILLIS INVESTIGATION 21 (April 15, 2011) (hereinafter TFSC REPORT) (“Although the [Corsicana Fire Department] informed the Commission that a thorough examination was conducted, the documentation provided to the District Attorney no longer exists.”).  
\textsuperscript{40} Willingham transcript (vol. XI), supra note 16, at 258.  
\textsuperscript{41} Id. at 260.  
\textsuperscript{42} In addition to a lack of expertise, some courts cite the jury’s historic role as a reason for rejecting opinions on credibility. In rejecting polygraph evidence, for example, Justice Thomas wrote of the importance of “[p]reserving the court members’ core function of making credibility determinations in criminal trials. A fundamental premise of our criminal trial system is that the jury is the lie detector.” United States v. Scheffer, 523 U.S. 303, 312-13 (1998) (quoting United States v. Barnard, 490 F.2d 907, 912 (9th Cir. 1973) (emphasis added). Justice Thomas further stated: “Determining the weight and credibility of witness testimony, therefore, has long been held to be the ‘part of every case [that] belongs to the jury, who are presumed to be fitted for it by their natural intelligence and their practical knowledge of men and the ways of men.’” Id. (quoting Aetna Life Ins. Co. v. Ward, 140 U.S. 76, 88 (1891)).  
\textsuperscript{43} See Westcott v. Crinklaw, 68 F.3d 1073, 1077 (8th Cir. 1995) (“expert testimony going to the issue of credibility is not admissible”); United States v. Shay, 57 F.3d 126, 131 (1st Cir. 1995) (“[A]n expert’s opinion that another witness is lying or telling the truth is ordinarily inadmissible . . . because the opinion exceeds the scope of the expert’s specialized knowledge and therefore merely informs the jury that it should reach a particular conclusion.”).  
\textsuperscript{44} Christian A. Meissner & Saul M. Kassin, “He’s guilty!”: Investigator Bias in Judgments of Truth and Deception, 26 LAW & HUM. BEHAV. 469, 470 (2002); see also Saul M. Kassin, Human Judges of Truth, Deception, and Credibility: Confident But Erroneous, 23 CARDOZO L. REV. 809, 811 (2002):  

Surprisingly, however, professionals who regularly make these kinds of [truth-
Remarkably, Vasquez also testified that Willingham’s “intent was to kill the little girls.” Here, again, the testimony was far beyond his expertise. A qualified arson investigator may be able to determine whether a fire was intentionally set but not why it was set—i.e., whether it was set for insurance money, vengeance, etc. Other parts of Vasquez’s testimony were also beyond the scope of a fire investigator’s expertise. For example, he claimed that Willingham’s injuries, including singed eyelids and hair, were self-inflicted.

B. Jailhouse Informant

Johnny Webb, a jailhouse informant, was another prosecution witness. For obvious reasons, jailhouse snitches are notoriously unreliable. As Judge Trott, a former prosecutor, has observed, “[t]he most dangerous informer of all is the jailhouse snitch who claims another prisoner has confessed to him.” According to the Innocence Project, such testimony determination] judgments for a living, like the rest of us, are highly prone to error. In one study, researchers Paul Ekman and Maureen O’Sullivan were curious to know whether groups of so-called experts—such as police investigators; CIA, FBI, and military polygraph examiners; trial judges; psychiatrists; and U.S. Secret Service Agents—are truly better than the average person. Using stimulus materials from past studies—consisting of true and false stories—they found that college students had a 52.8 percent accuracy rate, which is pretty typical. Police detectives were only slightly higher, at 55.8 percent; CIA, FBI, and military polygraph examiners were at 55.7 percent, trial judges were at 56.7 percent, and psychiatrists were at 57.6 percent. U.S. Secret Service Agents won the prize, exhibiting a 64 percent accuracy rate, the highest of all groups.

45 Willingham transcript (vol. XII), supra note 16, at 54.
46 Id. at 262 (“In my opinion, they are self-inflicted.”). Vasquez also testified that Willingham did not suffer smoke inhalation. Id. at 265. He had no firsthand knowledge of Willingham’s condition immediately after the fire. He started his investigation on December 27, four days after the fire. Id. at 229.
47 See Willingham, 897 S.W.2d at 358 (“Johnny Webb, a State’s witness, testified that appellant confessed to him that he committed the offense; that appellant explained in detail how he poured lighter fluid throughout the house, purposely burned one of the children, set the house on fire, fled, and refused to go back into the house to rescue the children.”).
48 Stephen S. Trott, Words of Warning for Prosecutors Using Criminals as Witnesses, 47 HASTINGS L.J. 1381, 1394 (1996); see also CENTER ON WRONGFUL CONVICTIONS, THE SNITCH SYSTEM 3 (2004) (Northwestern University School of Law) (snitch cases account for 45.9 % of the 111 death row exonerations since the death penalty was restored in the 1970s; most were jailhouse informants); ROBERT M. BLOOM, RATTING: THE USE AND ABUSE OF INFORMANTS IN THE AMERICAN JUSTICE SYSTEM 65 (2002) (Leslie Vernon White “admitted to consistently fabricating confessions of fellow inmates and offering perjured testimony to courts.”); JOHN GRISHAM, THE INNOCENT MAN: MURDER AND IN JUSTICE IN A SMALL TOWN (2006) (discussing the snitch testimony of Terri Holland in the Ron Williamson case; Williamson was later exonerated by DNA); Vesna Jaksic, Calif. May Crack Down on Use of Jailhouse Informants, NAT’L L.J., Jan. 1, 2007, at 6 (reporting that the California Commission on the Fair Administration of Justice issued guidelines on the use of
appeared in nineteen percent of the cases in which convicts were subsequently exonerated by DNA profiling. 49

Like many informants, Webb was a drug addict (crack cocaine) who had a criminal record (aggravated robbery, car theft, selling marijuana, theft, and forgery). 50 He also suffered from post-traumatic stress disorder as a result of a prison rape. Indeed, during cross-examination he claimed that he could not remember the crime for which he pled guilty (aggravated robbery): “I could have done it, but I do not remember doing it.” 51 Webb, who was serving a fifteen-year sentence, testified that no promises had been made to him, which in itself is suspect. Implied inducements to informants are well-known in criminal practice. 52 Five years later the prosecutor asked the Texas Board of Pardons and Paroles to grant Webb parole. 53

Moreover, Webb’s assertions were inherently problematic. He was not Willingham’s cellmate. Instead, Webb claimed Willingham told him, a virtual jailhouse informants; Of the 117 death penalty appeals pending in the California State Public Defender office, 17 involved testimony by in-custody informants and 6 by informants in constructive custody).

51 Id. at 23.
52 As one court wrote: “We are not unaware of the reality that the Government has ways of indicating to witness’s counsel the likely benefits from cooperation without making bald promises . . . .” United States v. Ramirez, 608 F.2d 1261, 1266 n.9 (9th Cir. 1979) (citing United States v. Butler, 567 F.2d 885, 888 (9th Cir. 1978); see also R. Michael Cassidy, “Soft Words of Hope:” Giglio, Accomplice Witnesses, and the Problem of Implied Inducements, 98 Nw. L. Rev. 1129, 1132 (2004) (“The Court’s decision in Giglio has created an incentive for prosecutors to make representations to an accomplice witness that are vague and open-ended, so that they will not be considered a firm ‘promise’ mandating disclosure. . . . Such indefinite agreements have the added advantage of allowing prosecutors to argue to the jury that no specific promise has been made to the witness; this is viewed as tactically more advantageous to the government because it prevents the factfinder from second-guessing the appropriateness of concessions ultimately conferred.”). Another authority put it this way:
To enhance the credibility of his testimony, an informant often testified that there have been no promises of benefits made to them in return for their testimony. Even though nothing may be explicitly stated, both the prosecutor and the informant knew that there will be some compensation for the testimony. “The practice (of promising rewards) was done by a wink and a nod and it was never necessary to have any kind of formal understanding.”

53 Grann, supra note 1, at 52.
stranger, of his misdeeds through a hole in a steel door in Willingham’s cell. Yet, Willingham went to his grave proclaiming his innocence. Webb also asserted that Willingham said he started the fire to hide his wife’s abuse of their children (“one of the babies were injured or dead or something like that”); there was no evidence of child abuse. Later, Webb recanted his testimony and then retracted the recantation. A journalist would later recount an interview with Webb: “After I pressed him, [Webb] said, ‘It’s very possible I misunderstood what [Willingham] said.’ . . . He paused, then said, ‘The statute of limitation has run out on perjury, hasn’t it?’”

C. Demeanor Evidence

The other type of evidence involved Willingham’s behavior—that is, he made insufficient efforts to save his children and did not show sufficient grief at the hospital or the next day. The prosecution emphasized this in his final argument. Not surprisingly, the evidence regarding about the fire scene is somewhat conflicting. Several neighbors, who testified for the prosecution, acknowledged that Willingham “was hollering. He was screaming the babies was in there.” A paramedic testified that Willingham was “really excited” and “hysterical.”

Neighbors of appellant testified that as the house began smouldering, appellant was “crouched down” in the front yard, and despite the neighbors’ pleas, refused to go into the house in any attempt to rescue the children. . . . The testimony at trial demonstrates that appellant neither showed remorse for his actions nor grieved the loss of his three children. Appellant’s neighbors testified that when the fire “blew out” the windows, appellant “hollered about his car” and ran to move it away from the fire to avoid it being damaged. A fire fighter also testified that appellant was upset [the next day] that his dart board was burned. One of appellant’s neighbors testified that the morning following the house fire, Christmas Eve, appellant and his wife were at the burned house going through the debris while playing music and laughing.

In prison, Willingham said he moved the car because he was afraid it would catch on fire and explode. Grann, supra note 1, at 50. See also Mills & Possley, supra note 4 (One juror “said she would have found Willingham guilty even without the arson finding solely because he did not try to save his children.”).

See Willingham, 897 S.W.2d at 354-55:

Neighbors of appellants testified that as the house began smouldering, appellant was “crouched down” in the front yard, and despite the neighbors’ pleas, refused to go into the house in any attempt to rescue the children. . . . The testimony at trial demonstrates that appellant neither showed remorse for his actions nor grieved the loss of his three children. Appellant’s neighbors testified that when the fire “blew out” the windows, appellant “hollered about his car” and ran to move it away from the fire to avoid its being damaged. A fire fighter also testified that appellant was upset [the next day] that his dart board was burned. One of appellant’s neighbors testified that the morning following the house fire, Christmas Eve, appellant and his wife were at the burned house going through the debris while playing music and laughing.

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55 Grann, supra note 1, at 52.

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57 Willingham transcript (vol. XI), supra note 16, at 43-44.

58 Id. at 72 (testimony of Dianne Barbe, neighbor of Willingham). See also id. at 88 (“He was screaming that there was fire, that his babies were burning and for someone to he/p him, to call 911.”) (testimony of Brandy Barbe, neighbor of Willingham); id. at 103 (“He was hollering, ‘My babies are inside burning up. Help me.’”) (testimony of Buffy Barbe, neighbor of Willingham).

59 Id. at 128 and 132 (testimony of Ronald Franks).

60 Id. at 149 (testimony of Jason Grant).
that Willingham had attempted to reenter the house by breaking several windows. 61

The reactions of persons to traumatic events is far too varied to place much weight on their demeanor, and this includes survivors of fires. 62 Further, this evidence changed over time, becoming more damaging after the investigators became convinced that Willingham was an arsonist. 63 Once witnesses learn of investigators’ suspicions, it is not unusual for their testimony to harden and become more definitive. 64 Moreover, similar “demeanor” evidence has proved unreliable in other arson cases. 65

D. Motive Evidence

“There was no clear motive. The children had life-insurance policies, but they amounted to only fifteen thousand dollars, and Stacy’s grandfather, who had paid for them was listed as the primary beneficiary.” 66 Moreover, neither Willingham nor his wife knew about the insurance until after the fire. 67

The only prosecution evidence concerning motive is found in the jailhouse informant’s testimony. Johnny Webb testified that Willingham had

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61 Id. at 104 (testimony of Buffy Barbe, neighbor of Willingham).
62 The fire “experts who reviewed the case didn’t put any stock in the claims that Willingham’s behavior was damning. They say experience shows that there is no way to predict how people will react in a fire or to the grief of losing loved ones.” Mills & Possley, supra note 4. The literature on rape trauma syndrome also illustrates this point. There is no typical way that a rape victim will react. Some victims are hysterical; others are calm. See Giannelli & Imwinkelried, supra note 13, § 9.03 (discussing rape trauma syndrome).
63 “The witnesses’ testimony also grew more damning after authorities had concluded, in the beginning of January, 1992, that Willingham was likely guilty of murder. In Diane Barbee’s initial statement to authorities, she had portrayed Willingham as ‘hysterical,’ and described the front of the house exploding. But on January 4th, after arson investigators began suspecting Willingham of murder, Barbee suggested that he could have gone back inside to rescue his children, for at the outset she had seen only ‘smoke coming from out of the front of the house’—smoke that was not ‘real thick.’” Id. at 49-50.
64 This type of contextual bias is not limited to witnesses, everyone is subject to it. Even professionals are subject to context bias. See D. Michael Risinger et al., The Daubert/Kumho Implications of Observer Effects in Forensic Science: Hidden Problems of Expectation and Suggestion, 90 CAL. L. REV. 1, 39 (2002); Itiel E. Dror et al., Contextual Information Renders Experts Vulnerable to Making Erroneous Identifications, 156 FORENSIC SCI. INT’L 74 (2006).
65 In the Willis case, discussed below, the “[w]itnesses maintained that Willis had acted suspiciously; he moved his car out of the yard, and didn’t show ‘any emotion,’ as one firefighter put it.” Grann, supra note 1, at 56. Similarly, in the famous Lime Street fire, witnesses “told authorities that Lewis seemed too calm during the fire and had never tried to get help.” Id. at 59. In both cases, the defendants were exonerated.
66 Id. at 47.
said that he had started the fire to hide his wife’s abuse of their children: “one of the babies were injured or dead or something like that.” There was no evidence in the record that either Willingham or his wife had ever abused their children, and the medical evidence concerning the autopsies did not support such a claim. (At the time, this motive may have made sense to the prosecution because Willingham’s wife Stacey supported him at trial.)

The prosecution did not refer to this evidence in his closing statement. Instead, he demonize Willingham with the demeanor evidence.

E. Defense Case

Willingham did not testify. Apparently, he wanted to testify, but his lawyers thought he would not make a good witness. Willingham’s baby sitter, a defense witness, testified that Willingham would not hurt his children. Another defense witness, an incarcerated felon, was proffered in an attempt to impeach Webb, but it was ruled hearsay.

F. Guilt Phase

In sum, the demeanor evidence was not very probative, and the snitch testimony was not reliable. The key to the conviction (and arrest) was the expert testimony. No arson, no crime, no arrest.

68  Id. at 18 (testimony of Johnny Webb).
69  After the trial, the prosecution would suggest another motive: “[A]s the local district attorney, Pat Batchelor, put it, ‘The children were interfering with his beer drinking and dart throwing.’” Grann, supra note 1, at 47. This appears to be no more than speculation.
70  The prosecution called her as a hostile witness in the penalty stage. She testified that Todd “never hurt those kids.” Then, the prosecutor asked: “Well, are you the one who hurt the kids?” Willingham transcript (vol. XIV), supra note 14, at 5. There is no evidence in the record that anyone had ever hurt the children. The prosecutor also cross-examined her about life insurance. Id. at 20.
71  “Dunn [defense counsel] told me that Willingham had wanted to testify, but Martin and Dunn thought that he would make a bad witness.” Grann, supra note 1, at 48.
72  At most, it made Willingham appear callous and perhaps a coward, if one believes that a father should have entered burning house. Willingham told investigators that the smoke was too thick, and he was singed by flames. See also Grann, supra note 1, at 63 (Later Willingham “confessed to his parents that there was one thing about the day of the fire he had lied about. He said that he never actually crawled in the children’s room. ‘I just didn’t want people to think I was a coward,” he said. [Dr.] Hurst told me, “People who have never been in a fire don’t understand why those who survive often can’t rescue the victims. They have no concept of what a fire is like.’”).
73  The penalty phase included its own version of junk science. In this phase, the prosecution offered the testimony of Dr. James Grigson, who was known as “Dr. Death.” Ron Rosenbaum, TRAVELS WITH DR. DEATH AND OTHER UNUSUAL INVESTIGATIONS 218, 220 (1991). Grigson said that Willingham was a violent sociopath. One scholar labeled Grigson’s testimony in death penalty cases as “at the brink of quackery.” George E. Dix, The Death
III. PARDON & CLEMENCY PROCEEDINGS

Willingham lost his appeal to the Texas Court of Criminal Appeals in 1995. When other attempts at judicial redress also failed, his execution date was set for February 17, 2004. At this point, his only hope was clemency, a process that is initiated in the Board of Pardons and Parole before an application goes to the governor. By this point Willingham’s appellate attorney had contacted Dr. Gerald Hurst, a nationally recognized arson expert with a chemistry degree from Cambridge University. Working pro bono, Hurst reviewed the evidence (e.g., the fire marshal report, trial testimony, photographs, and a 52-minute video of the scene) and prepared a report, concluding that the arson testimony was invalid:

The fire investigation report of the Texas State Fire Marshal’s Office in this case is a remarkable document. On first reading, a contemporary fire origin and cause analyst might well wonder how anyone could make so many critical errors in interpreting the evidence. However, when the report is looked at in the context of its time and in light of a few key advances that have been made in the fire investigation field in the last dozen years, it becomes obvious that the report more or less simply reflects the shortcomings in the state of the art prior to the beginning of serious efforts to introduce standards and to test old theories that had previously been accepted on faith.

The five-page report, which methodically examined the major deficiencies of the Willingham fire investigation, was submitted four days before the execution to the Pardon Board and to Governor Rick Perry. Notwithstanding this report, which raised substantial questions about the origin of the fire, the state of Texas executed Willingham by lethal injection as scheduled. Whether either the Board or the Governor read the report is

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Willingham, 897 S.W.2d at 354. The United States Supreme Court denied certiorari from the direct appeal. Willingham v. Texas, 516 U.S. 946 (1995).


Willingham’s lawyer also petitioned the Court of Criminal Appeals, which ruled that the Hurst report was not newly discovered evidence.
unclear.  

IV. Texas Forensic Science Commission

After Willingham’s execution, two seemingly unrelated statutes were enacted that ensured that the case would not die. In November 2004, Congress passed the “Justice for All Act.” Because of numerous crime laboratory scandals, this legislation included a requirement that each state receiving federal funds designate an entity to investigate forensic misconduct and incompetence.

One of the major scandals involved the Houston crime laboratory. According to a state senator, “the validity of almost any case that has relied upon evidence produced by the lab is questionable.” As described by a later investigation, “the DNA Section was in shambles—plagued by a leaky roof, operating for years without a line supervisor, overseen by a technical leader who had no personal experience performing DNA analysis and who was lacking the qualifications required under the FBI standards, staffed by underpaid and undertrained analysts, and generating mistake-ridden and poorly

78 Grann, supra note 1, at 62 (“The Innocence Project obtained, through the Freedom of Information Act, all the records from the governor’s office and the board pertaining to Hurst’s report. ‘The documents show that they received the report, but neither office has any record of anyone acknowledging it, taking note of its significance, responding to it, or calling any attention to it within the government,’ Barry Scheck said.”). See also Dave Mann, Fire and Innocence, TEX. OBSERVER, Nov. 27, 2009 (“Because the governor’s office has refused to release relevant documents, it’s unclear what, if anything, the governor’s staff did with Hurst’s report or whether Perry ever saw it.”).

79 42 U.S.C. § 3797k(4) (2004) (“[A] certification that a government entity exists and an appropriate process is in place to conduct independent external investigations into allegations of serious negligence or misconduct substantially affecting the integrity of the forensic results committed by employees or contractors of any forensic laboratory system, medical examiner’s office, coroner’s office, law enforcement storage facility, or medical facility in the State that will receive a portion of the grant amount.”).

80 See Giannelli, supra note 11.

81 See Quality Assurance Audit of Houston Police Dep’t Crime Laboratory–DNA/Serology Section (2002) (revealing a dysfunctional organization with serious contamination issues and an untrained staff using shoddy science). See also Nick Madigan, Houston’s Troubled DNA Crime Lab Faces Growing Scrutiny, N.Y. TIMES, Feb. 9, 2003, at A20 (reporting that operations were suspended after an audit found numerous problems, including poor calibration and maintenance of equipment, improper record keeping, and a lack of safeguards against contamination; “Among other problems, a leak in the roof was found to be a potential contaminant of samples on tables below.”); Giannelli, supra note 11, at 187-91 (discussing the Houston crime lab scandal).

82 Rodney Ellis, Editorial, Want Tough on Crime? Start by Fixing HPD Lab., HOUSTON CHRONICLE, Sept. 5, 2004. Similarly, the chair of the legislative committee investigating the lab has stated: “It’s a comedy of errors, except it’s not funny.” Adam Liptak, Review of DNA From Houston Police Crime Lab Clears Man Convicted of Rape, N.Y. TIMES, March 11, 2003 (quoting state Representative Kevin Bailey).
documented casework.” As a consequence, the state legislature created the Texas Forensic Science Commission (TFSC) in 2005. Among other duties, the Commission was tasked with investigating claims of professional or negligence and misconduct as required by the federal act.

A. Innocence Project Complaint

During this time, the *Chicago Tribune* began examining the Willingham case, after reviewing the Hurst report. The Tribune retained three independent experts to review the arson evidence, all of whom concluded that the evidence was seriously flawed. Next, the Innocence Project requested five experts to reexamine the case pro bono. These experts submitted a scathing forty-three page report, finding that “each and every one of the indicators relied upon have since been scientifically proven to be invalid.” The report even raised questions about Fire Marshal Vasquez’s general knowledge of the field. For example, Vasquez testified that of the 1200 to 1500 fires he had investigated, most were arson. Yet, the Texas Fire Marshal Office reported that between 1980-2005, only fifty percent of investigated fires were arson. Vasquez also testified that fifty percent of his fires involved injuries and deaths. In contrast, the annual percentage of fires between 1995 to 2005 that resulted in death was 0.23% and the percentage of those resulting in injuries was 1.22%.

In May 2006, the Innocence Project petitioned the Commission to review the arson testimony in the Willingham and another arson case (that of

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84 Tex. Crim. Proc. Code art. 38.01(4)(a)(3) (2005) (among other duties, the Commission should “investigate, in a timely manner, any allegation of professional negligence or misconduct that would substantially affect the integrity of the results of a forensic analysis conducted by an accredited laboratory, facility, or entity”).
85 See Mills & Possley, supra note 4.
86 Two of the experts are authors of standard texts in the field. See John DeHann, Kirk’s Fire Investigations (6th ed. 2006); Lentini, supra note 17. The third expert, Kendall Ryland, was the Louisiana fire chief. Phillip Martin, Juror in Willingham Execution Case: “Maybe this man was innocent”, Burnt Orange Report, Oct. 7, 2009.
87 Carpenter et al., supra note 30. One of these experts, John Lentini, was also one of the experts consulted by the Chicago Tribune. Maurice Possley, Report: Inmate Wrongly Executed; Arson Experts Say Evidence in Texas Case Scientifically Invalid, Chi. Trib., May 3, 2006, at C1.
88 “With the exception of a few, most all of them.” Willingham transcript (vol. XI), supra note 16, at 228.
89 Carpenter et al., supra note 30, at 5-6.
90 Willingham transcript (vol. XI), supra note 16, at 228 (“Unfortunately, fires injure a lot of people, kill a lot of people. It’s about 50 percent.”).
91 Carpenter et al., supra note 30, at 5-6.
Ernest Ray Willis). The expert evidence in both cases was comparable, but Willis was lucky. His death penalty conviction was overturned on procedural grounds, and the prosecutor subsequently refused to reindict him after Dr. Hurst wrote the same type of critical report in Willis’s case that he had written in Willingham’s. Willis, who had spent seventeen years on death row, was subsequently exonerated on grounds of actual innocence.

The TFSC was not authorized to determine guilt or innocence. Instead, the Innocence Project argued that the State Fire Marshal’s Office should have reinvestigated Willingham and other old arson cases, in which its experts had testified, after NFPA 921 was published in 1992—a full twelve years before Willingham’s execution.

B. The Beyler Report

The Commission’s work was hampered from the beginning. Initially, the legislature did not provide funding, and then the Governor and Lieutenant Governor delayed the appointment of Commission members. When funding was finally appropriated, the Commission spent a year formulating its procedures under the guidance of the Texas Attorney General’s Office. In late 2008, more than two years after the Innocence Project complaint was received, the Commission retained an independent consultant, Dr. Craig Beyler, another nationally recognized expert, to review the arson evidence. Beyler’s fifty-one page report dissected the expert testimony, concluding:

The investigations of the Willis and Willingham fires did not comport

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94 “Ori T. While, then the district attorney in Fort Stockton, filed a certificate of actual innocence for Willis in the Court of Criminal Appeals.” Robbins, New-York Based Innocence Project, supra note 92.
95 TFSC REPORT, supra note 39, at 13.
96 See Letter from Innocence Project, to Texas Forensic Science Comm’ (Aug. 20, 2010).
97 See Mary Alice Robbins, Lack of Money, Members Stalled Launch of Crime Lab Commission, 22 TEX. LAWYER, Oct. 23, 2006 (“‘It’s obvious that somebody’s dragging their feet on this,’ says state Sen. Juan Hinojosa, Senate sponsor of H.B. 1068.”). Under the statute, the Governor appoints four members—two forensic science experts, a prosecutor, and a defense attorney. The Lieutenant Governor appoints three members—one each from University of Texas and Texas A&M University, specializing in clinical laboratory medicine, and one from Texas Southern University specializing in pharmaceutical laboratory research. See TEX. CRIM. PROC. CODE art. 38.01(3)(a) (2005).
98 The Commission voted to investigate the Willingham case at its August 15, 2008 meeting.
with either the modern standard of care expressed by NFPA 921, or the standard of care expressed by fire investigation texts and papers in the period 1980-1992. The investigators had poor understandings of fire science and failed to acknowledge or apply the contemporaneous understanding of the limitations of fire indicators. Their methodologies did not comport with the scientific method or the process of elimination. A finding of arson could not be sustained based upon the standard of care expressed by NFPA, or the standard of care expressed by fire investigation texts and papers in the period 1980-1992.99

C. Governor’s Intervention

Once Beyler’s report became public, a political firestorm erupted, and Governor Perry, who was in the midst of a reelection battle, replaced Commission members three days before a scheduled hearing to consider Dr. Beyler’s report.100 The newly appointed chair, John Bradley, a prosecutor, cancelled the meeting.101 The timing of the governor’s action raised the specter of a cover-up.102 Bradley then raised procedural objections, arguing for closed-door meetings, training, development of written policies, and definitions of the terms “negligence” and “misconduct.”103 Bradley next
prepared a report exculpating the fire investigators of any negligence. The other Commission members, most of whom are scientists, balked, thwarting Bradley’s “attempt to turn the science commission into a legalistic briar patch.” Governor Perry responded by saying that “the evidence shows Willingham to be guilty, and [dismissing] the work of Beyler and other arson experts. The Governor declined to specify . . . what evidence he believes backs up the case.” Before the Commission could reconvene, Governor Perry was reelected. By this time, the Fire Marshal’s Office and the city of Corsicana were challenging the TFSC’s jurisdiction to review old cases. Surprisingly, the State Fire Marshal’s Office asserted that “[i]n reviewing the documents and standards in place then and now, we stand by the original investigator’s report and conclusions.”

At its January 7, 2011 meeting, the Commission finally heard from Dr. Beyler, who once again reiterated his position that the Willingham fire investigation was seriously flawed and the cause of the fire should have been designated as “undetermined.” In his view, the investigators failed to eliminate natural or accidental causes in violation of professional standards.

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Overhaul May Delay Arson Review for Years, DALLAS MORNING NEWS, Nov. 12, 2009 (Bradley faulted former chairman Sam Bassett, saying he “utterly failed to adopt even a definition of negligence or misconduct.”); CSI: Texas: In This Episode, a Governor Shakes Up a Commission and Covers up Tracks, HOUS. CHRONICLE, Nov. 18, 2009 (Bradley “canceled the meeting [with fire expert Craig Beyler] and raised a number of issues about the commission’s lack of rules and procedures.”).

See Emily, supra note 4 (“The Texas Forensic Science Commission rebelled Friday against its head commissioner, refusing to accept his draft report clearing arson investigators of misconduct or negligence in a 1991 fatal fire where flawed science was used to determine the blaze was intentionally set.”).

See Rick Casey, columnist, The Revolt of the Scientists: No Legalistic Briar Patch Allowed, HOUS. CHRONICLE, Jan. 31, 2010, at B1. See also Rick Casey, columnist, A Win for Bradley, and Another Loss: Panel Worried About Funding, HOUS. CHRONICLE, Feb. 3, at B1 (“[T]he seven scientists on the nine-member commission rebelled at a set of policies and procedures presented by Bradley that would have given him formidable powers as chairman, including naming members and chairs of three standing committees and of ad-hoc committees that will direct the investigations of alleged failures at police labs and other agencies.”).


Letter from Terry Jacobson, City Attorney, to Leigh Tomlin, Commission Coordinator, Texas Forensic Science Comm’n (Aug. 20, 2010) (“[T]he commission lacks the authority to even review this matter.”).


Erin Mulvaney, National Experts Criticize State’s Study of Fatal 1991 House Fire, DALLAS MORNING NEWS, Jan. 8, 2011. See also Aziza Musa, Arson Experts
Another arson expert, Dr. John DeHaan, author of a standard text in the field,¹¹¹ agreed with Beyler. According to DeHaan, “everything that was documented post-fire was consistent with accidental rather than intentional fire. There was no basis for concluding that this was arson.” DeHaan said he was dismayed that the state fire marshal’s office stood by the conclusion of the investigators.”¹¹² In contrast, Ed Salazar, a lawyer with the State Fire Marshal Office, defended the fire investigation. One report put it this way: “Salazar became impassioned with his criticism of the opposing expert, but he was short on analysis. ‘It was embarrassing,’ said one scientist on the commission afterward.”¹¹³ Buddy Wood, a senior investigator with the Houston Fire Department, testified that the investigators were not negligent. However, he also stated that he could not determine the cause of the fire because he had not gone to the scene.¹¹⁴

On January 28, the Commission requested a legal opinion regarding its jurisdiction from the state Attorney General’s Office.¹¹⁵ Legislators who had sponsored the law that established the Commission had sent letters that it had jurisdiction. Next, the legislature refused to reconfirm Bradley as Commission chairperson.

C. TFSC Report

While awaiting the Attorney General’s response, the Commission considered a limited report—one that did not directly deal with the Willingham and Willis cases.¹¹⁶ Nevertheless, the report’s recommendations and

Testify in Willingham Investigation, TEXAS TRIB., Jan. 7, 2011 (“Beyler accused the original investigators of ignoring eyewitnesses, whose testimony contradicted the arson determination.”); Allan Turner, Arson Probe that Led to Execution Assailed, HOU. CHRONICLE, Jan. 8, 2011 (“Beyler also faulted Vasquez for failing to investigate the possibility that the fire had been set by one of the children or by an intruder. Rather than systematically explore possible causes such as an electrical short, Coricana authorities ‘shoveled out the room and put it out the window,’ Beyler charged.”).

¹¹¹ See supra note 108.
¹¹² Mulvaney, supra note 110.
¹¹³ Casey, supra note 109.
¹¹⁴ By this time, Willingham’s family along with the Innocence Project sought a judicial inquiry into Willingham’s conviction. Petition to Convene a Court of Inquiry and For Declaration to Remedy Injury to Mr. Willingham’s Reputation under the Texas Constitution, 299th Dist. Court, Travis County, Tex., Sep. 24, 2010. See also TEX. CRIM. PROC. CODE, art. 52.01 (1995) (courts of inquiry). The prosecutors responded by asking the judge to recuse himself and then filed a writ of mandamus on the recusal issue. Relator’s Petition for Writ of Mandamus and Emergency Motion for Immediate Stay, 3d Jud. Dist. Court of Appeals, Oct. 14, 2010.
¹¹⁶ The Attorney General would eventually issue a controversial opinion stating that the Commission lacked jurisdiction. Letter from Greg Abbott, Texas Attorney General, to
statements indicated that the Willingham arson investigation was seriously flawed. Its first recommendation was “that fire investigators adhere to the standards of NFPA 921.” In addition, the report reviewed a number of the arson indicators that were used in the Willingham and Willis cases. Citing Vasquez’s testimony, the report undermined his opinions concerning V-patterns as an indicator of origin, pour patterns, low/deep burning, multiple separate points of origin, spalling, burn intensity, and crazed glass. Other recommendations included: enhanced certification, comprehensive reports, retention of records, and training in testifying. It also observed that “testimony, such as Vasquez’s response to a question regarding Willingham’s state of mind, is an example of the type of testimony that experts should avoid as falling outside of their field of expertise.” The report even encouraged lawyers to “aggressively pursue admissibility hearings in arson cases.”

The State Fire Marshal’s Office was also criticized. That office had submitted a letter that included the following statement: “In reviewing documents and standards in place then and now, we stand by the original investigator’s report and conclusions.” In response, the report commented: “This appears to be an untenable position in light of advances in fire science. The fires in these cases occurred two decades ago; there are few circumstances in which an investigation could not be improved with the benefit of twenty years of controlled scientific experiment and practical experience.”

Significantly, the report also pointed out that forensic disciplines have a “(1) duty to correct; (2) duty to inform; (3) duty to be transparent; and (4) [a duty to] implement[] corrective action” when new scientific knowledge develops.

CONCLUSION

There is little dispute that the arson evidence in Willingham’s case, based on myths that had permeated fire investigations for years, was invalid. Every independent expert, including the top experts in the country, has concluded that there was no evidence of arson. Without the arson evidence,
there never would have been an arrest, much less a trial or execution. The other evidence introduced at trial (e.g., jail-informant testimony and demeanor evidence) was suspect.\textsuperscript{125} Willingham was executed. On comparable evidence, Willis was exonerated after spending seventeen years on death row.

Although NFPA 921 was published in 1992 just weeks after Willingham’s trial, many of its findings had been reported during the prior decade.\textsuperscript{126} After NFPA 921 was published, the State Fire Marshal’s Office became aware of its contents but did not take corrective action in old cases during the dozen years Willingham waited on death row. Indeed, the Office still maintains it did everything right.

Moreover, once Dr. Hurst’s report was made available to them, the Texas Pardon Board and Governor Perry had the opportunity to stay the execution to investigate further. They did not. Although the United States Supreme Court has called clemency the “failsafe” procedure in death penalty cases,\textsuperscript{127} the Texas procedure was known as “death by fax” because the Pardon

Texas officials have suggested that Willingham was guilty, even if the arson evidence was flawed. The statements of Willingham’s wife, Stacy, are cited as support for this view. At the trial, she testified at the penalty stage at she believed him to be innocent. See \textsuperscript{supra} note 70. After the trial, she worked for his exoneration. See \textsuperscript{Grann}, supra note 1, at 49 & 47 (Stacy “wrote to Ann Richards, then the governor of Texas, saying, ‘I know him in ways that no one else does when it comes to our children. Therefore, I believe that there is no way he could have possibly committed this crime.’” She reported to “investigators that even though Willingham hit her he had never abused the children— ‘Our kids were spoiled rotten,’ she said—and she did not believe that Willingham could have killed them.”). She later remarried. For over a decade, she did not visit him on death row. At some point she changed her mind. Recently, she said that he had confessed to her in their last meeting immediately before his execution. Yet, “[i]n their final meeting . . . he did not confess, she told the Tribune.” \textsuperscript{Mills & Possley, supra note 4.}

\textsuperscript{126} See SFMO Letter, supra note 108 (“The guidelines NFPA 921 set out were used by the State Fire Marshal prior to NFPA 921’s initial publication”; “The SFMO staff began referencing and received training on NFPA 921 almost immediately after its initial publication in 1992.”).

\textsuperscript{127} Herrera v. Collins, 506 U.S. 390, 415 (1993). See also Kansas v. Marsh, 548 U.S. 163, 193 (2006) (Scalia, J., concurring) (“Reversal of an erroneous conviction on appeal or on habeas, or the pardoning of an innocent condemnee through executive clemency, demonstrates not the failure of the system but its success. Those devices are part and parcel of the multiple assurances that are applied before a death sentence is carried out.”); Dretke v. Haley, 541 U.S. 386, 399 (2004) (Kennedy, J., dissenting) (“Among its benign if too-often ignored objects, the clemency power can correct injustices that the ordinary criminal process
Board is not required to meet or discuss a case; each member can vote by fax. “Between 1976 and 2004, when Willingham filed his petition, the State of Texas had approved only one application for clemency from a person on death row.” In another case, a Texas judge wrote: “Applicant’s complaints about the inadequacies of our Texas executive clemency procedures are not unheard of. Not only are they not unheard of, but her complaints are pretty much accurate. I would say that clemency law in Texas is a legal fiction at best.”

Then, by interfering with the work of the Texas Forensic Science Commission, Governor Perry and his allies undermined a process intended to improve expert testimony in criminal prosecutions. Congress enacted the requirement that each state designate an entity to investigate forensic misconduct and incompetence because few states had such a procedure and the experience in the states varied. Thus, the TFSC’s decision to review the Willingham case was historic—one of the first investigations by a forensic commission in the country. Unfortunately, the Fire Marshal’s Office’s resistance to admitting prior mistakes and the Governor’s interference undermined the Commission’s work. Moreover, there are still inmates in

seems unable or unwilling to consider . . . ”).

Grann, supra note 1, at 62 (“The vote was unanimous . . . [T]he board deliberates in secret, and its member are not bound by any specific criteria. The board members did not even have to review Willingham’s materials, and usually don’t debate a case in person; rather, they cast their votes by fax—a process that has become known as ‘death by fax.’”).

TEX. GOV’T CODE ANN. § 508.047(b) (Vernon 2004) (“The members of the board are not required to meet as a body to perform the members’ duties in clemency matters”). In a 2002 case, a criminal defendant alleged that “only one live clemency hearing has been held in the past thirty years.” Lagrone v. Cockrell, No. Civ.A.4:99-CV-0521-G, 2002 WL 1968246, at *23 (N.D. Tex. Aug. 19, 2002).

Grann, supra note 1, at 62. Texas’ lackluster reputation for reviewing death penalty cases includes the conduct of Sharon Keller, presiding judge of the Court of Criminal Appeals, who refused to keep the clerk’s office open past five o’clock to permit a last-minute petition by an inmate executed later that night. See Gretel C. Kovach, Mixed Opinions of a Judge Accused of Misconduct, N.Y. TIMES, Mar. 7, 2009.

Ex parte Tucker, 973 S.W.2d 950, 951 (Tex. Crim. App. 1998) (Overstreet, J., concurring); see also Steve Woods, Comment, A System Under Siege: Clemency and the Texas Death Penalty After the Execution of Gary Graham, 32 TEX. TECH. L. REV. 1145, 1146 (2001) (“Critics are enraged at the Texas Board of Pardons and Paroles’s record of only recommending one individual for clemency since 1995. . . . The execution of Gary Graham in Huntsville, Texas, in June of 2000, cast a worldwide spotlight on Texas and its clemency procedure and has cemented the need for the state to examine its methods to determine whether any improvements can, or even should, be made.”).

Until recently, only New York had established a Commission on Forensic Science. It is authorized to (1) develop minimum standards and a program of accreditation for all state laboratories, (2) establish minimum qualifications for laboratory directors and other personnel, and (3) approve forensic laboratories for the performance of specific forensic methodologies. N.Y. EXEC. LAW § 995-a (McKinney 1994). See Giannelli, supra note 11.
Texas prisons who were convicted on the same flawed arson evidence.\textsuperscript{133}

\textsuperscript{133} See Mann, supra note 78 (discussing the cases of Curtis Severns, Ed Graf, and Alfredo Guardiola).