IN THE COURT OF CRIMINAL APPEALS OF TEXAS

NO. AP-76,284 & AP-76,285

EX PARTE LAWRENCE JAMES NAPPER, Applicant

ON APPLICATION FOR A WRIT OF HABEAS CORPUS FROM HARRIS COUNTY

KELLER, P.J., delivered the opinion of the Court in which MEYERS, WOMACK, KEASLER, and HOLCOMB, JJ., joined. COCHRAN, J., joined except section II B 2. PRICE, JOHNSON, and HERVEY, JJ., concurred.

Applicant was convicted of aggravated sexual assault and aggravated kidnapping. Some of the evidence supporting the convictions involved DNA testing conducted by the Houston Police Department (HPD) Crime Lab. After widespread problems were discovered with the HPD Crime Lab, the present case was subjected to further investigation, including additional DNA testing. Applicant has filed an application for a writ of habeas corpus based upon this further investigation. He alleges, among other things, that agents of the State consumed the entire DNA sample in bad faith, that a state witness perjured himself or gave false testimony, and that defense counsel was ineffective for failing to discover the problems with the lab's testing and its analysis of test results.

We conclude that, despite problems with the lab, applicant's claims are without merit.

I. BACKGROUND

A. Before Trial

1. *The Kidnapping*

On February 11, 2001, six-year-old "E.T." was kidnapped. One of E.T.'s friends was ten-year-old Remington Allen. While E.T.'s mother worked that day, Remington's grandmother cared for E.T., his nine-year-old brother "Junior," and his ten-year-old sister Denetta. Remington, Junior, and their friend Carlos went to a nearby park. Denetta and E.T. walked with them, but crossed the street to go to a store. Denetta went inside the store. E.T. may have accompanied her, but at some point he was outside again. While Remington, Junior, and Carlos played at the park, they saw a man drive up in a car and tell E.T. to "come here." Remington told E.T. not to get in the car.

The trial testimony of the children diverged somewhat at this point. Remington testified that the man got out of the car and acted like he was picking something up. Remington also testified that he saw the man hand E.T. some money when E.T. got into the car. However, on cross-examination, Remington agreed that he never saw the man. Junior testified that he saw the man inside the car and that the man had a mustache and was wearing sweats. On cross-examination, Junior agreed that he did not remember much about the car or the man inside the car because he did not see the man. Junior further testified that he did not know if the man ever got out of the car. E.T. testified that the man tried to get him to take money and then got out and put him in the car.

Remington, Junior, and E.T. all testified that the car sped away quickly once E.T. was in it. Junior and Remington chased the car. Remington picked up his scooter and threw it at the car, but the car did not stop. The children remained at the park for "a little bit" to see if the man would bring

E.T. back. The children then went to "Momma Ruth's" place, which was close by, but no adults were home, so they went back up the street to Remington's grandmother's house. At first, Remington's grandmother did not believe the children's story about E.T. being kidnapped, but once she became convinced, she called the police.

At trial, Remington described the car as a "burgundy-like" Oldsmobile with a white top. When asked whether the wheels were shiny, he responded negatively. Junior testified that the car was dark green with a blue top, and scratches at the top. Both Remington and Junior testified that they had picked out a car in a videotape lineup, but they were not asked which car they picked.

Houston Police Officer D.D. Thompson was dispatched to the scene at 3:12 p.m. and arrived at 3:19 p.m. According to Officer Thompson, the children described the kidnapper's vehicle as an Oldsmobile—some said a Monte Carlo. He explained that the "children couldn't pinpoint exactly what make and model it was." The descriptions and the colors given by the children were not consistent. The car was variously described to him as a two-door or a four-door, as dark blue or dark green, with a rusty top or a black top or a vinyl top, and with chrome wheels. Officer Thompson dispatched a description that included model years from 1980 to 1990.

Sergeant Larry Hoffmaster testified that Junior described the car as a mid-sized gray car with chrome rims and with damage to the front around the headlights. Sergeant Hoffmaster further testified that the children were taken to a police sketch artist to make a composite drawing of the suspect. The general broadcast for the suspect indicated a "skinny black male," but Sergeant Hoffmaster acknowledged that applicant was not skinny. When asked if he developed any suspects whose vehicles were black or dark in color, Sergeant Hoffmaster said no.

2. ***Aftermath***

E.T. was returned to the neighborhood the next day. He was crying, and his face was bruised and swollen. E.T., who is African-American, described his kidnapper as having skin color that was a little darker than his own.[1] E.T. described the man as having no facial hair, wearing eyeglasses, wearing a black hat, and wearing a purple jacket with green (or a purple and green jacket) and matching purple pants. E.T. described the car as a dark navy blue in color, like his tennis shoes, with a brown interior, and with a black console between the front two seats.

E.T. related that the man offered him money, and when E.T. got closer, the man pulled him into the car. The kidnapper took E.T. to a house that had a brown couch in the front room and a television next to the bed in the bedroom. He tied E.T.'s arms and legs to the corners of the bed. E.T. also said that the man rubbed "orange grease" on his body. The man told E.T. that "if I tell anybody he's going to kill me." When asked if he had been touched inappropriately, E.T. "clammed up" and started "tearing up." When asked by another officer what happened after he was tied to the bed, E.T. became extremely upset, crying and breaking down into hysterics.

E.T. was taken to the hospital the day he was returned. Pursuant to instructions from Chemist Reidun Hilleman at the HPD Crime Lab, Officer Lorenzo Verbitskey swabbed E.T.'s face. Verbitskey let the resulting two swabs air dry in his office. He then delivered the swabs to Hilleman. Hilleman also received anal and oral swabs and clothing. Hilleman gave the swabs to Mary Childs-Henry, a forensic biologist at the HPD Crime Lab who analyzed body fluids and conducted serology testing. Childs-Henry extracted two tubes of DNA from each of the face swabs (four tubes in all).

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[1] On cross-examination, a police officer testified that applicant's skin was lighter than the complainant's skin as depicted in photographs, but the officer noted that photographs "very often change the tone of a black person."

For each swab, one of the tubes contained a sperm fraction and the other tube contained an epithelial fraction of the genetic material. She then discarded the original swabs.

E.T. subsequently made an outcry to his aunt, Tangela Harding: E.T. described his kidnapper as wearing a baseball hat, wearing eyeglasses, and having a short haircut. The house had two rooms, and they went up some stairs to get into the house. The man said he was going to pull out his thing (Tangela understood E.T. to be referring to his penis) and wanted E.T. to put it in his mouth. When E.T. said no, the man started slapping him. So E.T. complied, his mouth started hurting, and the man "wet his face." This outcry was relayed to the police on February 14th. That same day, E.T. was taken to have two composite sketches done of his kidnapper—one with eyeglasses and one without.

Joseph Chu, a chemist at the HPD Crime Lab, received the four tubes of DNA that had been derived from the face swabs. Chu's typing of the DNA was completed on February 20th. Chu effectively consumed the entire sample in all four tubes during testing.[2] He determined that the sample was a mixed sample and that DNA patterns within the sample showed that a portion of the sample was consistent with E.T.'s DNA. He did not at that time have any information regarding the identity of any other contributor.

On February 23rd, E.T. told Officer Shawn Valenta that the kidnapper referred to his house as "his friend's house." E.T. described the house as wood frame, with about four concrete steps, and a number "2" on the front of the building. Applicant was not in custody at the time E.T. communicated this information.

Later that day, police received a Crime Stoppers tip implicating applicant. Sergeant

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[2] All of the sample was consumed except for microscopic residue adhering to the walls of the tubes.

Hoffmaster obtained a photograph of applicant and compared it to the composite; he could not eliminate applicant as a suspect based upon a comparison of the two. Sergeant Hoffmaster discovered that applicant had an outstanding parole warrant and went to applicant's house at 8602 Alsuma.[3] The house matched the description given by E.T.: a white wood frame home with a concrete sidewalk leading to two concrete steps in the front and the number 2 in the address. The address was on the mailbox and above the door to the house. The car parked in front of the house was a 1982 Buick Regal, with white vinyl over dark gray. The interior of the car was brown with gray. There was no grille in the front and there was damage around the headlights.

Applicant was arrested on the parole warrant at 10:00 p.m. that day. On February 24th, the police obtained a search warrant for applicant's house, car, and body. Police discovered that applicant's house had two rooms that were in use: a living room and a bedroom.[4] The living room contained only one piece of furniture: a brown sofa. In the bedroom was a four-poster bed with a headboard and a footboard, a television on a stand beside the bed, and a nightstand beside the bed. On the nightstand was a bottle of orange cocoa butter lotion. A Houston Oilers cannister and purple pants were also found in the house. A dark baseball cap and a multicolored windbreaker with dark sleeves and a purple inlay was recovered from the vehicle.

The next day, Sergeant Hoffmaster recorded a videotaped lineup that included applicant. He also recorded a video lineup that included applicant's car and four other cars. Before the video lineup of applicant was shown, witnesses were told to view the entire videotape and see if they

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[3] According to the habeas court's finding number two, the house was approximately eleven miles away from the site of the kidnapping.

[4] The house contained another bedroom that was being used to store property belonging to applicant's brother.

recognized anyone, "and if they didn't recognize anyone they should tell us that, that it was okay to do that." In addition, they were told to view the entire tape before saying anything or making any decisions. When the suspect-lineup video panned on applicant (in the number three position), a big smile came upon E.T.'s face, but E.T. continued to watch the rest of video. As soon as he was asked if he recognized anyone, E.T. immediately pointed to applicant and said, "That's the man that took me to his friend's house." E.T. indicated that he was positive in his identification. E.T. also identified applicant's car in the vehicle lineup.

On February 28th, Chu received applicant's reference sample for DNA testing. It was found to be consistent with the remaining portion of the DNA from the face swabs.

On March 15th, E.T. told Officer Valenta that applicant had placed his private part in his mouth and peed in his mouth. When asked what he meant by private part, E.T. pointed to his penis.

3. *HPD's DNA Test Results*

The following table summarizes the results obtained from Chu's testing of the face-swab DNA contained in the four tubes and from the victim's and applicant's reference samples:[5]

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[5] The table is taken from Michael R. Bromwich, FINAL REPORT OF THE INDEPENDENT INVESTIGATOR FOR THE HOUSTON POLICE DEPARTMENT CRIME LABORATORY AND PROPERTY ROOM, *Report* at 190 (June 13, 2007) (allelic table of STR Results Obtained by Mr. Chu) and is contained in the habeas record. The loci D3S1358, D8S1179, D21S11, D18S51, D5S818, D13S317, D7S820 have been abbreviated to D3, D8, D21, D18, D5, D13, and D7 respectively. In the table, "EF" stands for "epithelial fraction" and SF stands for "sperm fraction," and explanatory references to that effect in the table have been omitted.

The parties and the habeas court rely upon portions of the Bromwich Report in the instant habeas proceedings, and in finding 55, the habeas court cites to the report and to its website address. As will be discussed below, the Bromwich Report made a number of general observations about the DNA/Serology section of the Crime Lab. The portions of the report containing these observations are not included in the habeas record, though they are available at the website listed in finding 55, and the habeas court may have made reference to these portions when it referred in finding 41 to certain general practices of the HPD Crime Lab that were "subjects that the Bromwich Investigation would also underscore in its report five years later." We have in the past held that an appellate court

Sample	D3	VWA	FGA	AMEL	D8	D21	D18	D5	D13	D7
Napper	16	17	18.2, 21	XY	14, 15	29, 32.2	16, 20	10, 13	11, 12	8, 10
Swab #1 EF	15, 16	17, 19	19, 22	XY	14	28, 31.2	12, 18	12, 13 **10**	11, 14	8, 10
Swab #1 SF	15, 16	17, 19	**18.2, 21** 19, 22	XY	14, **15**	18, 32.2 **29**	**16, 20**	12, 13 **10**	11, 14 **12**	8, 10
Swab #2 EF	15, 16	17, 19	--	XY	14	28, 31.2	--	12, 13	11, 14	--
Swab #2 SF	15, 16	17, 19	**18.2, 21** 19, 22	XY	14, **15**	28, 31.2 **29, 32.2**	12, 18 **16, 20**	12, 13 **10**	11, 14 **12**	8, 10
Victim	15, 16	17, 19	19, 22	XY	14	28, 31.2	12, 18	12, 13	11, 14	8, 10

With respect to the results for the four swab samples displayed in the table, the alleles unique to applicant (possessed by applicant but not by the victim) are displayed in bold.[6] As can be seen from the table, the epithelial samples did not yield particularly useful results. One of the epithelial samples yielded results at all ten of the loci covered by the test, matched the victim's DNA profile at all ten loci, and matched ten alleles from applicant that were distributed across seven loci.[7] But only one of the alleles matching applicant was foreign to the victim.[8] The other epithelial sample

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may consider evidence that was not formally admitted if it is treated as admitted by the trial court. *Kissinger v. State*, 501 S.W.2d 78, 79 (Tex. Crim. App. 1973); *Richardson v. State*, 475 S.W.2d 932, 933 (Tex. Crim. App. 1972); *see also Texas Health Enters. v. Texas Dep't. of Human Servs.*, 949 S.W.2d 313 (Tex. 1997). Given the reliance by the parties and the habeas court and the ready availability of the entire report at the website recited in the habeas court's findings, we rely upon the Bromwich Report in its entirety.

[6] *Id.* at 190 (text and allelic table).

[7] *Id.* (allelic table).

[8] *Id.*

yielded results at only seven of the ten loci, matched the victim's profile at those seven loci, and matched seven alleles from applicant that were distributed across six loci.[9] But none of the alleles in the second epithelial sample that matched applicant were foreign to the victim.[10]

The sperm samples yielded far better results. Both samples yielded results at all ten loci. The first sample matched the victim's DNA profile at nine of the ten loci, matched all of applicant's alleles except one, and matched eight alleles from applicant (distributed across six loci) that were foreign to the victim.[11] The second sample matched the victim's applicant's profiles in their entirety and matched nine alleles from applicant (distributed across six loci) that were foreign to the victim.[12] With respect to all of the samples, all of the alleles foreign to the victim were alleles that matched applicant's profile.[13]

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[9] *Id.*

[10] *Id.*

[11] *Id.* The "D21" locus in the allelic table appears to contain some information contrary to Bromwich's characterizations. It displays the alleles "18, 32.2" on one row and "29" on the next row. *Id.* Although Bromwich stated that all alleles foreign to the victim are consistent with applicant's DNA profile, *id.* at 190, no "18" is contained in the victim's or applicant's profile at this locus. *Id.* (allelic table). The victim's profile contains a "28" at this locus and the other three samples include a "28" in the results, *id.*, so the "18" may have been a typographical error. Also, the report purports to indicate in boldface type all of the alleles matching applicant that were foreign to the victim, *id.* at 190, but "32.2" does not appear in boldface, *id.* (allelic table), though it matches applicant's profile and is foreign to the victim's profile. If, as seems probable, the "18" should be a "28," it is also probable that the "32.2" should be a "31.2"—an allele possessed by the victim—which would follow what appears to be Bromwich's convention of placing alleles belonging to the same individual on the same row if those alleles are unique to that individual. The body of this opinion assumes these were indeed typographical errors. If that assumption is incorrect, then the results match applicant's profile in its entirety and contain a single allele foreign to both the victim and applicant.

[12] *Id.*

[13] *Id.* at 190.

4. *Trial Preparation*

On April 23, 2001, defense counsel Steven Greenlee filed a motion to preserve/motion for independent analysis of semen and fibers—which included a request to hire a defense DNA expert at county expense to conduct the independent analysis and to testify at trial. That motion was granted. The prosecutors, Di Glaeser and Denise Nassar, had an open file policy and were prepared to fully cooperate with the defense regarding matters of discovery. Glaeser called the HPD Crime Lab to arrange for the delivery of DNA material for independent testing by the defense. Chu told her that there was no DNA material left because it had all been used up in the HPD Crime Lab's analysis. Glaeser conveyed this information to Greenlee. After discovering that there was no DNA material left to test, Greenlee decided not to hire a DNA expert.

At a pretrial hearing, applicant complained that his attorney had not done any investigation. He claimed that Greenlee had not disclosed to him copies of files, DNA, police reports, warrants, or anything else. Applicant complained that Greenlee "has no experience or knowledge about DNA to question any DNA expert officially." Applicant made numerous other complaints about his attorney that we need not detail here. The trial judge explained that applicant was free to hire his own attorney if he could do so, but he was not free to choose his court-appointed counsel.

B. Trial

1. *State's Case*

The evidence outlined in part A, subparts 1 and 2, of this opinion was presented at trial. In addition, testifying by closed-circuit television, E.T. related the events of his kidnapping. He testified that his kidnapper wore a purple jacket, purple sweat pants, eyeglasses, and a blue hat. E.T. described the car that he was pulled into as being light brown inside. E.T. said that he was taken to

a white, wood house with the numbers 2, 1, and 6 on it. He further testified that he went up concrete stairs to get into the house. Inside the house was a brown couch and a black television. E.T. said that the kidnapper tied him to the bed, with his "feet back" and his "hands in the front." When asked, "Did he tie you to parts of the bed with clothes?" E.T. answered, "Yes." E.T. testified that the television was on the side by the bed. With the help of anatomically correct dolls, E.T. testified that the kidnapper put his "private" in E.T.'s mouth. The kidnapper subsequently gave E.T. a bath, but did not wash his face. The next day, the man took E.T. back to the store where he had been abducted, and E.T. then went to Remington's grandmother's house.

E.T. testified that he had previously pointed out the man who kidnapped him on a video lineup. When shown photographs of applicant's purple jacket and pants, E.T. testified that they looked like the ones his kidnapper had worn. E.T. also testified that applicant's house and concrete steps, depicted in photographs, looked like the place the kidnapper had taken him to, and E.T. pointed to circles on the sidewalk that he remembered seeing. E.T. also testified that a brown couch and a Houston Oilers cannister that were depicted in photographs were items he had seen in the kidnapper's house. However, when the camera panned around the courtroom and E.T. was asked to identify his assailant, he did not do so.

The State questioned Childs-Henry and Chu regarding their roles in subjecting the face-swab samples to DNA analysis. The focus of the State's questioning was on the semen fraction of the DNA samples.

Childs-Henry testified regarding her role in extracting DNA material from the face swabs for analysis. Although the quantity of the sample was small, she determined that enough DNA was present for analysis. On cross-examination, defense counsel questioned Childs-Henry concerning

the DNA extraction protocol. Childs-Henry could not say how many steps were in the extraction protocol that she followed.

When asked whether an entire DNA sample could be consumed by testing, she responded that such a thing could happen "if you are a sloppy chemist" or "if there's not enough sample." When asked whether the sample was large enough not to have been completely consumed by testing, Childs-Henry responded affirmatively, and she responded that the sample in this case was not entirely consumed. "So there's a DNA sample left?" defense counsel asked. "Yes, there is," she responded. "And this was after Mr. Chu had done his analysis?" defense counsel queried further. "Yes," Childs-Henry replied.

Chu testified regarding his role in analyzing the DNA sample after it had been extracted. Chu explained that he had a Master's degree in Chemistry, that he completed in-house training as well as outside agency training on DNA analysis, and that he had to pass a proficiency test twice each year on federal guidelines. Chu had been working eight years in the DNA section of the HPD Crime Lab.

Chu testified that he conducted the STR method of DNA analysis. He determined that the DNA was a mixture of two individuals. One half was consistent with E.T.'s DNA, he explained, while the other half was consistent with applicant's. "Statistically," the DNA results from the face swab material "matched" applicant. The odds of a random match with an individual other than applicant was about the human population of the planet. Chu later testified that he could be about 99.999 percent sure DNA from that swab sample was applicant's, or about a one-in-1.3 trillion possibility of a random match with another individual. Chu also testified that he conducted a cross analysis of the DNA from both swabs to make sure that they were consistent with each other.

On cross-examination, Greenlee questioned Chu regarding whether any DNA material was left for independent analysis. Chu said that no evidence was left for re-analysis. "Very unfortunately, this case it's very small amounts," he said, "I have to consume." Chu also testified that there were ways to determine whether the sample was contaminated. There were strict guidelines in the laboratory to monitor contamination; controls in the DNA test itself would indicate whether contamination was present. So, if a mistake were made, Chu testified, it would show up.[14] "In this case we don't have any contamination in the laboratory to cause misleading results," he explained. Greenlee's cross-examination of Chu covered approximately six pages of the trial record.

2. *Defense's Case*

Reverend James Ginns testified that applicant was his nephew and that he, applicant, and applicant's brother had keys to applicant's residence, but applicant was the only person who lived there on February 11th. Although this evidence suggested that two other persons had access to applicant's home, no attempt was made to implicate either of these two individuals in the crime.

David Savage, applicant's cousin, testified that applicant came to Savage's grandmother's house on February 11th to have Savage work on the stereo in applicant's car. Applicant arrived at the house between 10:30 and 11:00 a.m. Savage's grandmother lived on Newbury Street, which was in a part of town that was close to the Southmore location from which E.T. was abducted. Savage testified that applicant left between 2:30 and 3:00 p.m. But Parole Officer Joel Butler later testified that Savage told him that applicant left at about 1:30 p.m. Savage testified that he remembered that day because he saw applicant on television the day after E.T. was taken. A prosecutor would later

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[14] Chu acknowledged that he could not say with 100 percent certainty that a mistake would show up.

argue to the jury that, because applicant was not a suspect until February 23rd, Savage must have recognized applicant on February 12th from the composite drawing.[15]

Darlene Savage, David Savage's mother, said applicant left around 3:00 or 3:30 p.m., but she later said she thought he left before she did, and she left between 2:30 and 3:30 p.m. On cross-examination, she said that applicant left after 2:00 p.m. and then said she did not really remember.

Applicant's brother, Ronnie, testified that applicant came by his house between 3:30 and 4:00 p.m. Ronnie further testified that applicant was alone, and did not stay long, because he had to go back home. Ronnie stated that he went over to applicant's house about five or ten minutes later and stayed thirty to forty-five minutes. Ronnie did not see a child in the house or in applicant's car. Ronnie returned to applicant's house at around 6:00 p.m., stayed for about ten minutes, and still did not see a child in applicant's house or car, despite the fact that he walked through the entire house.

On cross-examination, Ronnie said that his second visit lasted thirty to forty minutes. But Ronnie told Officer Valenta, in a February 27th conversation, that he went to applicant's house at 5:00 p.m. on February 11th, as was his usual routine, and that he went there only once. Ronnie told Parole Officer Paul Ford that, when he left applicant's house, applicant was asleep. Ronnie testified that he saw his brother's car when he left for work, between 5:00 and 6:00 a.m. on February 12th, but he had told Officer Valenta that he had seen the car at around 6:30 or 6:35 a.m.

Against his professional judgment, Greenlee called applicant's parole officers, Butler and Ford, to the witness stand because applicant insisted that he do so. Greenlee discussed his

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[15] Specifically, the prosecutor recounted Savage's testimony as follows: "Well, I remember when I went to work the next day all the police were there and they were talking about it, and the TV was on and I saw my cousin. Folks, that's February 12. Lawrence Napper's name was never mentioned until February 23, 2001. Why did he see his cousin on TV? The composite. He recognized his cousin on TV on February 12, 2001."

reservations with the trial court, but applicant insisted that calling these witnesses was essential to establishing an alibi by showing that he was on electronic monitoring. Applicant also expressed the opinion that he would have to "come behind" these witnesses and testify, even though he knew that doing so would enable the jury to learn his prior criminal record. Applicant reiterated his prior frustrations with his attorney, referred to what he considered to be an earlier request to represent himself, and indicated that he personally needed to question some of the witnesses "because all the facts of this case is not being brought out by my attorney, and he will not do it himself."

The parole officers testified that applicant was on parole for rape and aggravated rape. Applicant was on the highest level of supervision – the Super Intensive Supervision Program (SISP). This program included electronic monitoring. For a while, applicant was on GPS monitoring. At that time, only twenty-five people in the entire state were on that kind monitoring. Applicant was taken off GPS monitoring on December 12, 2000, and placed on a more traditional form of electronic monitoring, which recorded only whether applicant was at home. Applicant was required to report to his parole officer once a week, every Wednesday.

Under SISP, restrictions were placed on where applicant could go and when he could be there, and curfews were imposed. Where applicant could go and when he could be there depended upon the weekly schedule made out by his parole officer. On February 11th, applicant was allowed to leave the house at 10:00 a.m. to go to church until noon, and then he was allowed to go to his friend Ben's until 5:30 p.m. Newbury Street was not a place that he was allowed to go that day.

On February 18, 2001, a parole warrant issued against applicant for a curfew violation. Applicant told his parole officer that he was delayed in getting home that day because of a flat tire, and he showed a tire in his car with a screwdriver sticking out of it as proof. The warrant was in the

TCIC system, but applicant's parole officers chose to investigate the warrant, and a decision was later made to withdraw it, but applicant was arrested on the warrant before it was withdrawn.

Finally, applicant testified. Applicant denied having anything to do with E.T.'s abduction and sexual assault. Applicant confirmed that he was on parole for aggravated rape. Applicant said that he received permission from his parole officer to go to Newbury Street, but the parole officer just would not admit it. Defense counsel asked, "You heard Mr. Butler testify; is that correct?" Applicant responded, "I heard him lie, yes." When asked by defense counsel when he informed Butler that he would be visiting the Newbury residence on February 11th, applicant first responded that he would have told him on the 21st, when he visited the parole office. When Greenlee explained that the time frame had to be before Sunday, February 11th, applicant responded that he gave notice the Friday before, February 9th. Applicant further testified that he had no regularly scheduled reporting day—he just had to report every week. When confronted with the fact that Ford and Butler said it was every Wednesday, applicant retracted his earlier statement and confirmed that he was required to report every Wednesday. Then applicant claimed that he told Butler about going to the Newbury address on February 7th. When asked what his schedule was like on that Sunday, applicant replied, "Oh, it's different times, different Sundays that I am doing different things on different days. What particular Sunday are you asking me about?"

Greenlee further asked, "You heard [Butler] testify that your initial movement on Sunday was restricted to going to church, did you hear that?" Applicant responded, "Yeah, I heard him say it, but he's lying. He's lying. He knew I was going over there." Defense counsel later asked, "It's your testimony you had authority or permission to go to Newbury?" Applicant replied, "That's true."

Applicant also testified that there was no damage to his car, and that the police department

tore it up because they were the only ones that had access to the car. He testified that he left the Newbury address at around 2:30 to 2:35. He said that he did not go straight home because he stopped to get some gas, and then ran by Ronnie's house.

When asked whether he was familiar with the Southmore and Live Oak, Southmore-288 area, applicant responded that he was, because he had been there in November or December looking for his "brother's sister"[16] who was on drugs. Applicant agreed that it was a restricted area and that he was in violation of his parole. But then applicant claimed that it was not a parole violation to drive through the area so long as he was on his way to go somewhere he was allowed to go. Applicant stated that he went to the area many times looking for his brother's sister.

On cross-examination, applicant conceded that he was in the area in October, November, and December. When confronted with GPS records, applicant said that he did not know but may have been in the Southmore area on multiple occasions at times referred to in the records, with the last time being on December 10th. He said that he was taken off GPS two days later. The prosecutor then asked, "I'm sure your parole officer will come in and tell us that you had permission to cruise whatever area you wanted, is that correct?" Applicant responded, "He probably won't. He won't tell you nothing else that was the truth."

Applicant said that he told his parole officer that every Sunday from the middle of December through his arrest he was going to his friend Ben's on Sunday after church to work on his car. Later, the prosecutor asked, "Would you agree with me, Mr. Napper, that there were many occasions when

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[16] When asked to explain his relationship to his "brother's sister," applicant testified, "Me and Ronnie have the same mother and the same father, but me and his sister and other brother, they don't have the same, they just have the same daddies." Applicant also testified that his "brother's sister" was not related to him in any way.

you would deviate from your weekly schedule and do whatever you felt like doing?" Applicant replied, "Well, what's your definition of deviate, going another direction, or is that what you're saying?" Upon further questioning, applicant agreed that he could go only to church or to Ben's on Sunday unless he told his parole officer ahead of time or there was an emergency.

Applicant admitted to normally wearing a black baseball cap. When asked if he was taken from his residence on February 23rd, applicant responded, "I was kidnapped. They didn't have a warrant." With respect to whether there was body lotion in his bedroom, applicant said that his brother had a lot of stuff there and applicant "might have run in his room, grabbed it, put it in there." When asked who purchased the lotion, applicant said his brother's sister purchased it.

Applicant admitted that he had a prior aggravated rape conviction dated August 25, 1981, but he claimed that he did not do it, that his attorney sold him out just like in the present case. Applicant also admitted that he pled no contest to rape on September 4, 1981, but he claimed that he did not commit that crime either. When asked about a rape conviction on September 13, 1979, applicant claimed that he knew about only two rapes. When asked, "You remember being placed on probation one time before for rape?" applicant responded, "I was told that was dismissed or dropped." Applicant admitted being convicted of indecent exposure on September 21, 1993. He claimed that he was sitting inside his car peeing in a can, and he said he did not think he was guilty of that offense either.

Applicant acknowledged that, according to his electronic monitor, he arrived home at 3:07 p.m. on February 11, 2001. Applicant protested that this effectively gave him an alibi because the victim was picked up at 3:10 p.m. Applicant continued, "Parole officers know that. They won't tell you all of that. They told the news media that. I don't know why they won't tell the jury. That's

my reason for testifying."

Applicant also testified that the children did not describe his car: "It's not light green or red. My car is dark. It's gray. It's not even black." After admitting that several of E.T.'s descriptions matched applicant's house, applicant said, "You didn't even put that in the indictment, that it was at my house. [E.T.] was taken to an apartment before he come to my house. Y'all ain't telling the jury that."[17] Applicant denied telling Butler that Ronnie spent the night at his house on February 11th.

3. *State's Rebuttal*

On rebuttal, Sergeant Hoffmaster testified that applicant looked different at trial than he did when Hoffmaster first encountered him. Butler testified that applicant told him on February 27th that Ronnie Napper came over to applicant's house at 4:30 p.m. on February 11th and stayed all night. Butler also testified that applicant never told him that he was not going to church that day or that he wanted to go to the Savage residence. Butler further testified that applicant did not have permission to be at the Newbury address, and he testified that David Savage told him that applicant left Savage's grandmother's house at 1:30 p.m. Butler also testified that applicant had been instructed to take the most direct route to his destination and was not authorized to travel around the Live Oak and Calumet area for 30 minutes.

Finally, Butler testified that applicant told him that he did not do it. Butler replied that if applicant did not do it, then DNA ought to show that he did not do it. Applicant responded, "Well if it does, they are just setting me up."

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[17] Defense counsel objected to this testimony from applicant as nonresponsive, and that objection was sustained. Several other times, the trial judge sustained defense objections to applicant's nonresponsive testimony.

4. *Verdict and Judgment*

The jury found applicant guilty of aggravated sexual assault and aggravated kidnapping. At punishment, applicant testified and continued to maintain his innocence. After defense counsel completed his questioning of applicant, applicant stated, "You sold me out Greenlee." Greenlee then rested the defense, and applicant stated, "I didn't do it. I swear I didn't do this." While the jury was in recess, applicant stated, "They framed me in this case. I will fight it the rest of my life. They framed me." When the jury was brought in, applicant further stated, "Y'all going to pay me. Fed investigation, as soon as I get a chance y'all going to pay me. As soon as I can there's going to be a fed investigation." Finding that applicant had committed two prior sex-related felonies, the jury sentenced applicant to an automatic life sentence.[18] When asked whether he had anything to say before the trial judge pronounced sentence, applicant replied, "When they frame your family, remember me. That's all I have to say."

C. After Trial

1. *Motion for New Trial*

Applicant gave notice of appeal, and the trial court appointed Bob Wicoff as appellate counsel. Wicoff filed a motion for new trial on applicant's behalf, claiming that applicant was denied his right to represent himself at trial and that he received ineffective assistance of counsel.

In connection with the motion, applicant submitted an unsworn declaration in compliance with the Texas Civil Practices and Remedies Code.[19] Among other things, applicant pointed out that, although Greenlee elicited testimony from applicant's parole officers that applicant was on electronic

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[18] *See* TEX. PENAL CODE § 12.42(c)(2).

[19] *See* TEX. CIV. PRAC. & REM. CODE § 132.001, *et seq.*

monitoring on February 11, 2001, Greenlee failed to elicit any testimony from them that the electronic monitoring confirmed applicant's presence at home at 3:07 p.m. Applicant stated that this was the reason that he had wanted to call these witnesses and that the failure to elicit this information forced him to take the stand to testify about the matter. Wicoff also submitted an affidavit from Butler, who expressed surprise at the fact that Greenlee failed to elicit this information from him—leading Butler to wonder why defense counsel chose to call him as a witness.

Wicoff also filed a motion to hire a DNA expert at county expense, which was granted. Wicoff later submitted an affidavit from Dr. Elizabeth Johnson, a forensic DNA expert who had developed some widely utilized DNA analysis techniques.

Dr. Johnson concluded that the testimony of Childs-Henry and Chu reflected "a lack of understanding" on their part "as to some of the fundamental aspects of body fluid identification, DNA extraction and typing as well as interpretation of results." Dr. Johnson further stated that she had reviewed numerous HPD Crime Lab cases in which these individuals performed analyses and she had detected serious errors in most of these cases, including the "unnecessary consumption of the evidence due to poor extraction protocols and techniques . . . and erroneous interpretation of data." She also stated that re-testing was a critical part of the evaluation of a criminal case involving DNA evidence and a necessary part of preparing an adequate defense. "Because DNA evidence can have a tremendous impact on the outcome of a criminal case," she explained, "it is generally accepted in the relevant scientific community that re-testing needs to be performed whenever the evidence permits this." Dr. Johnson cited a National Research Council (NRC) recommendation that "whenever feasible, investigative agencies and testing laboratories should provide for repeat testing."

Dr. Johnson further observed that, in this case, "as in many other cases I have reviewed

involving the Houston PD lab, the lab apparently consumed all of the critical evidence . . . without notifying the prosecution of their intent to do so." She explained that "[m]any laboratories" with which she was familiar would "not consume limited samples without notification so that defense counsel can have the opportunity to have the testing observed if duplicate testing is not possible."

Although re-testing was not possible, Dr. Johnson stated that a qualified expert should have reviewed the bench notes from the HPD Crime Lab to determine whether "an error in the analysis was documented or if the data obtained were interpreted and testified to correctly." Dr. Johnson identified numerous questions that defense counsel should have asked Childs-Henry and Chu, including "what were the relative proportions of major and minor DNA contributors and the corresponding peak heights" and whether there could be an "alternative interpretation of the mixed DNA profiles other than the approach utilized by Mr. Chu in which he determines the DNA profiles in the evidence based on his knowledge of the victim's and defendant's reference DNA profiles" and "whether it was appropriate of Mr. Chu to isolate the defendant's profile out of a mixture and report the frequency of the defendant's DNA profile rather than calculating the combined frequency of all possible donors to the mixed DNA profile obtained from the evidence." Based upon a study conducted in Connecticut, Dr. Johnson further explained that mixed samples were especially difficult to interpret and that "often an analyst will 'see' a particular individual's profile in a mixture by comparing it to a defendant's or victim's profile and perform a biased analysis. This type of biased analysis does not consider that the evidence profile in a mixed sample could be the result of the profiles of individuals other than the defendant and the victim." Dr. Johnson stated that this information was a subject that should have been brought out in cross-examination. Dr. Johnson also criticized defense counsel for failing to cross-examine the witnesses regarding the NRC

recommendation or the practice of many laboratories to provide for repeat testing.

Dr. Johnson concluded that the expert testimony from Childs-Henry and Chu was "some of the most poorly presented and cross-examined testimony that I have ever reviewed." She found that Greenlee's "lack of knowledge . . . in the area of serology and DNA typing is apparent through his extremely cursory and superficial cross examination."

The State submitted an affidavit from Greenlee. After Greenlee became aware that there was no DNA left to test, and after consulting with other attorneys, he decided "that the only purpose that an expert would serve would be to review the procedures and methodologies used in the analysis by the State's experts." Greenlee believed that he "could effectively argue the unfairness of no sample being available to the defense to analyze" without the help of an expert. He further believed that, "if there were some issues with regard to methodologies and procedures," he "could get more mileage out of this on cross-examination." He also feared "the distinct possibility that our expert would confirm the propriety of the State's methodologies and procedures during the laboratory testing, thereby reinforcing the validity of the DNA results." Greenlee believed that he had effectively cross-examined the witnesses involved in the DNA collection and testing.

With respect to the testimony of the parole officers, Greenlee said that applicant believed that they would testify that there was not a valid parole warrant in effect at the time of his arrest. Greenlee had counseled against calling the parole officers, but applicant had insisted that they be called. Greenlee further stated that he did not spend much time on applicant's time of arrival at home on February 11th because "it would not eliminate [applicant] as being capable of committing the offenses alleged." This was so because applicant was "in an area not too far from the kidnapping" that day and because intervening circumstances that took place prior to the police being

called would have given applicant "more than enough time to travel from the kidnapping scene to his residence." Defense counsel believed that the weakest areas of the State's case were the DNA testing procedures and the victim's inability to identify applicant in the courtroom. Greenlee believed that, if jury were inclined to find guilt despite those weaknesses in the State's case, then they were not going to find the time of applicant's arrival at home to be significant.

Greenlee also stated that applicant was very demanding and uncooperative, and he repeatedly failed to take Greenlee's advice. Finally, Greenlee pointed out that he used an investigator, filed many motions on applicant's behalf, reviewed reports, and spoke to witnesses.

2. *Appeal*

The trial court denied the motion for new trial, and applicant appealed. The sole issues on appeal were claims of ineffective assistance of counsel. Applicant claimed that Greenlee was ineffective because: (1) he did not elicit testimony from applicant's parole officers regarding the fact that the electronic monitoring system had indicated that applicant had returned home at 3:07 p.m., (2) he elicited damaging testimony from his parole officers regarding his prior convictions and details of his previous level of surveillance while on parole, and (3) trial counsel's performance was deficient with respect to the DNA evidence.

The court of appeals affirmed.[20] With respect to the electronic monitoring allegation, the court responded that applicant was not prejudiced because the State elicited the 3:07 p.m.-arrival information during its cross-examination of applicant.[21] The court of appeals also found that

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[20] *Napper v. State*, Nos. 11-02-00017-CR & 11-02-00018-CR (Tex. App.–Eastland December 19, 2002, pet. ref'd) (not designated for publication).

[21] *Id.*, slip op at 4.

applicant's 3:07 p.m. arrival time did not necessarily exclude him from being the kidnapper.[22] Regarding the allegation about the testimony of the parole officers, the court of appeals found that applicant had insisted on calling these witnesses after being warned of the potential dangers and that defense counsel was not unreasonable in addressing, on direct examination, unfavorable facts that "most likely would have been addressed by the prosecutors on cross-examination."[23] Finally, with respect to the allegations regarding DNA evidence, the court of appeals concluded that Dr. Johnson's affidavit did "not allege any actual errors in Childs-Henry's or Chu's work which trial counsel failed to discover or develop."[24] The appellate court also pointed to defense counsel's cross-examination of police officers regarding how the facial swabs were handled prior to the HPD Crime Lab's receipt of the evidence and to defense counsel's emphasis on the fact that no sample remained for applicant to test independently.[25]

A petition for discretionary review was subsequently filed and refused.

3. *Additional Testing*

In November of 2002, adverse publicity began to arise about the condition and practices of the HPD Crime Lab.[26] Within a month, the acting Chief of Police commissioned an outside review of the lab's DNA/Serology section.[27] Based upon a preliminary oral report of the auditors, HPD

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[22] *Id.* at 4-5.

[23] *Id.* at 6.

[24] *Id.* at 8.

[25] *Id.*

[26] Bromwich, *Report* at 4.

[27] *Id.*

suspended the performance of all DNA analysis at the Crime Lab.[28] In 2003, HPD and the Harris County District Attorney's Office began identifying cases in which some form of DNA analysis had been performed by the lab.[29] "This process evolved into a long-term re-testing project coordinated among HPD, the District Attorney's Office, and outside DNA laboratories."[30]

One of the cases identified in this process was applicant's. The seemingly empty tubes that had contained DNA from the face swabs were forwarded by the HPD Crime Lab to ReliaGene Technologies. The lab also forwarded what purported to be reference samples from E.T. and applicant. ReliaGene used a buffer solution to re-suspend any DNA residue that might be left in the tubes, and it tested the DNA at fourteen genetic loci, including the original ten loci tested by Chu. Of the four tubes of DNA from the face swabs, only one tube—containing the epithelial fraction from one of the face swabs—produced any results.

In May of 2004, ReliaGene reported that the major component of the DNA was not consistent with E.T. or applicant, while the minor component contained two weak alleles that were consistent with applicant. These two weak alleles were found in the additional loci not tested by Chu. After these results, it was determined that the tube purporting to contain E.T.'s reference sample was not the correct tube. On June 30, 2004, after a new reference sample was procured from E.T. and analyzed, ReliaGene concluded that the major component of the face-swab DNA was indeed consistent with E.T.'s DNA. The conclusion with respect to the two weak alleles matching applicant was unchanged. No other DNA alleles foreign to E.T. were detected in the sample.

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[28] *Id.*

[29] *Id.*

[30] *Id.*

In an affidavit later obtained in habeas corpus proceedings, Gina Pineda, Assistant Director at ReliaGene, explained that she did not believe that the DNA extracts received by ReliaGene were quantitatively the same as those tested by the HPD Crime Lab. Consequently, she would expect ReliaGene to detect fewer alleles in its analysis, but for the results to remain consistent with what the HPD Crime Lab had found. Her examination of the data indicated that, indeed, the results obtained by the two testing laboratories were "not discrepant." She also expected that, if a third round of testing were performed, there would be a further progressive loss of alleles. Some of the victim's alleles might also become lost and "some allele drop-in may also be observed."

In an August 2004 newspaper article, assistant district attorney Marie Munier was quoted as saying about the ReliaGene results, "You can't even do a statistical analysis (on the probability that the DNA was Napper's). I don't know what it would be, but it wouldn't be very much."[31]

In 2005, during the instant habeas proceedings, the parties agreed to more testing, by Orchid Cellmark. They acknowledged in writing that the testing was expected to consume all of the evidence and agreed to waive the opportunity to have a representative observe or participate in the testing.

In June of 2005, Orchid Cellmark reported that it was able to obtain results for the face-swab tubes containing the epithelial fractions of DNA but was unable to obtain results for the tubes containing the sperm fractions. The samples were analyzed at sixteen different loci, including the ten loci tested by Chu and the four additional loci tested by ReliaGene. The samples for both epithelial-fraction tubes were mixtures.

For one of the epithelial samples, Orchid Cellmark determined that the major profile matched

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[31] The article is in the habeas record.

the victim, and the suspect could not be excluded as a possible donor of the minor alleles in the mixture. Four alleles foreign to the victim were found (across four different loci), all of which matched applicant's DNA profile. One of these alleles was found at a locus that had been tested by both HPD and ReliaGene but had not previously been found there. One of the alleles was confirmed at one of the new loci that had been tested by ReliaGene. The other two alleles were found at new loci tested only by Orchid Cellmark.

Orchid Cellmark determined that the other epithelial sample was a mixture of DNA from the victim and an unknown individual. Five alleles foreign to both the victim and applicant were found, and two loci yielded inconclusive results. In subsequent testing, Orchid Cellmark was able to exclude as possible contributors to the foreign alleles A.G. Riddle, C. West, J. Chu, J.W. Belk, L.R. Verbitskey, M. Childs-Henry, and R. Hilleman.

Orchid Cellmark provided statistical frequency calculations for the epithelial sample that contained the four alleles that matched applicant's DNA profile. According to Orchid Cellmark, the approximate frequencies for unrelated individuals for all possible types included in the mixture, making no assumptions regarding the number of DNA sources, are 1 in 255 for African-Americans, 1 in 3,427 for Caucasians, and 1 in 585 for Hispanics.

4. *Bromwich Report*

As a result of problems discovered with the HPD Crime Lab, a team headed by Michael R. Bromwich was chosen to further investigate and evaluate the Crime Lab's practices, both past and present. The report, published on June 13, 2007, contained numerous scathing criticisms of the Crime Lab's serology/DNA section. "On the whole," the serology/DNA section's "work did not meet the generally accepted forensic science principles that existed at the time and posed major risks

of contributing to miscarriages of justice in extremely significant cases."[32]

Bromwich attributed this failure to budgetary problems, incompetent leadership, and lack of training for the DNA analysts. "[U]ntil the public crisis engulfed the Crime Lab, it was never provided adequate financial support to hire and train the number of criminalists necessary to handle the Lab's ever-increasing workload."[33] 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 lacked the qualifications required under the applicable Federal Bureau of Investigation ('FBI') standards, [and] staffed by underpaid and undertrained analysts."[34] Training was one of the first areas in which funding was cut when the HPD Crime Lab's budget became tight.[35] The lab was populated by civilian, as opposed to law enforcement, employees, and as such, was marginalized within HPD.[36] Until the 2002 audit, the HPD Crime Lab did not submit to reviews by outside agencies and never sought to achieve accreditation.[37] As a result, HPD's analysts became isolated from the rest of the forensic science community.[38] Although the person with supervisory control over the DNA section certified that internal audits conforming to FBI quality assurance standards found that those standards were met,

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[32] Bromwich, *Executive Summary* at 4.

[33] *Id.*, *Report* at 26.

[34] *Id.*, *Executive Summary* at 10.

[35] *Id.* at 8.

[36] *Id.* at 7.

[37] *Id.* at 10.

[38] *Id.*, *Executive Summary* at 10, *Report* at 32.

the outside audit found to the contrary.[39]

Bromwich characterized the HPD DNA analysts as "woefully undertrained."[40] "The problems we observed in the historical DNA cases," he further explained, "are not attributable to individual rogue analysts who departed from the Crime Lab's approved practices. On the contrary, the widespread and serious deficiencies in the historical Crime Lab were consistent with the Crime Lab's accepted and understood practices."[41] Consequently, "[f]lawed practices and embedded misunderstandings . . . became accepted by analysts within the DNA/Serology Section as the correct way of doing things. These misunderstandings infected the work of the Section's analysts from the analysis through the trial testimony."[42] Bromwich found "the same types of major issues across all the Crime Lab's DNA work, regardless of the analyst or the DNA typing system used."[43]

One of the cases that Bromwich reviewed was applicant's. Bromwich criticized Childs-Henry for failing to properly document the procedures she used and for failing to use some of the more definitive procedures for detecting and confirming the presence of semen.[44] With respect to Chu's testing, Bromwich found that the "original DNA testing appears to have generated good

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[39] *Id.*, *Report* at 50-51.

[40] *Id.* at 32.

[41] *Id.* at 122. And when DNA analysts did recognize problems and voice concerns to their superiors, those concerns were often ignored. *Id.* at 41. For example, Chu recognized a problem with evidence being shuffled between "too many chemists," but this concern was dismissed by one of his superiors. *Id.* His concern proved to be prescient in the Lynn Jones case, two years later. *Id.*

[42] *Id.*, *Executive Summary* at 10.

[43] *Id.*

[44] *Id.*, *Report* at 189.

quality and clear results from potentially very difficult forensic evidence samples."[45] The "overall assessment" of Chu's testing was that "he developed clean, interpretable profiles from the four evidence samples he tested."[46]

But, according to Bromwich, applicant's case "illustrates two significant problems with the Lab's historical DNA work. First, the Crime Lab analysts utilized all of the readily testable sample in this case," and second, Chu used an inappropriate statistical analysis of the random match probability.[47] Regarding the first problem, Bromwich found that "it was unnecessary and inappropriate for Mr. Chu to have tested the extracts from both swabs, thereby consuming the available sample in this case."[48] Although Chu stated in an affidavit in the instant habeas proceedings that he did not "consume all of the extract in this case out of carelessness or out of a desire to prevent additional testing," Bromwich concluded that "there was no need, and it was a mistake, for him to consume both of the redundant 'face-cheek' swabs."[49] Doing so was "the product of very poor laboratory practice."[50] This "misstep" was compounded by the fact that Childs-Henry had "discarded the tubes containing the raw evidence (the swabs) after she performed the DNA extractions."[51] And while "outside laboratories have been able to obtain some

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[45] *Id.*, *Executive Summary* at 13.

[46] *Id.*, *Report* at 190.

[47] *Id.*, *Executive Summary* at 13.

[48] *Id.*, *Report* at 192.

[49] *Id.* at 195.

[50] *Id.* at 194-95.

[51] *Id.* at 192.

results"—"mixed results"—from testing the unseen residue in the tubes, those results "do not approach the strength" of "Chu's original results."[52] Notably, the Bromwich Report observed, "Neither laboratory has been able to confirm the alleles consistent with Mr. Napper's DNA profile that Mr. Chu detected in the sperm fractions of each of the swabs, which captured most of the consistency between evidence profiles and Mr. Napper's DNA profiles."[53]

Turning to Chu's statistical analysis, Bromwich initially criticized statements made by Chu in a March 30, 2001 report.[54] There, Chu characterized the DNA material as a "mixture" consistent with the victim and with applicant.[55] Chu went on to state, "Given the population on the face of the earth and eliminating the probability of identical twins, the DNA profile statistically matches only Lawrence Napper."[56] Bromwich criticized these statements as "contradictory" and called Chu's statistical statement "incorrect and misleading."[57]

Further, Bromwich's examination of Chu's file revealed that Chu had based his statistical calculation of the random match probability upon applicant's known profile, "which was the usual—and extremely flawed—practice in the Crime Lab."[58] In another portion of his report, Bromwich explained that, while calculating the random match probability of a single DNA profile

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[52] *Id.*

[53] *Id.* at 194.

[54] *Id.* at 191.

[55] *Id.*

[56] *Id.*

[57] *Id.*

[58] *Id.*

was "relatively simple and straightforward" and can "provide the most discriminating information about whether a particular individual could be the source of the biological evidence," the same could not be said of a mixed sample containing DNA from more than one person.[59] When a DNA profile contains DNA from more than one person, "it is much more difficult to provide compelling statistical evidence that a particular person's DNA was found in an evidence sample."[60] Random match probabilities related to a mixture "may result in frequency estimates that indicate that a relatively large proportion of the human population could have contributed to the biological evidence."[61] A frequency estimate based upon a suspect's known reference sample "is completely irrelevant to the strength of the DNA evidence when the DNA profile is a mixture."[62] Nevertheless, despite the inappropriateness of calculating a random match probability using a defendant's known profile, "the Crime Lab virtually always calculated its reported frequency estimates" in this fashion.[63]

When setting out an allelic table, Bromwich bolded the alleles that were unique to applicant's profile (matching applicant but foreign to the victim),[64] indicating that it was those unique alleles from which a random match probability must be calculated. Based on Chu's STR data, Bromwich calculated the accurate random match probability as "1 in 232,000 in the African American population, 1 in 1,920,000 in the Caucasian population, and 1 in 7,430,000 in the Hispanic

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[59] *Id.* at 140.

[60] *Id.*

[61] *Id.*

[62] *Id.*

[63] *Id.* at 141.

[64] *Id.* at 190.

population."[65] He characterized these statistics as "relatively strong results given the nature of the sample in this case," but "a far cry from the sole source, unique match that Mr. Chu reported."[66]

5. *Habeas*

Wicoff filed a habeas application on applicant's behalf. In addition to the evidence above, the habeas court obtained affidavits from Glaeser, Greenlee, Childs-Henry, Chu, and Johnson. Applicant submitted affidavits from two attorneys–Cunningham and Downey. The court conducted an evidentiary hearing, at which Greenlee testified. And the habeas court received various pieces of documentary evidence.

The facts conveyed by Glaeser's affidavit have already been discussed.

In his affidavit, Greenlee stated that applicant's response to the criminal charges "was an adamant denial of the charge." Before trial, Greenlee believed there would be three main pieces of evidence at trial: DNA evidence, evidence relating to the bottle of orange lotion, and evidence relating to applicant's electronic monitoring. Greenlee believed he had effectively shown on cross-examination that there was not a clear set of procedures, methodologies, and practices regarding how the DNA material was analyzed.

In her affidavit, Childs-Henry stated that she "did not observe the vials of extract after they were transferred to Chu" and had "no way of knowing what amount of liquid, if any, actually remained in the vials once Chu had completed his analysis." Realizing that this statement conflicted with her trial testimony, Childs-Henry explained that she had trained under the RFLP variant of DNA analysis and was unfamiliar with the STR procedure at the time of trial. She had just assumed

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[65] *Id.* at 191.

[66] *Id.*

there would be sample left based on her RFLP training because there was generally sample left after RFLP testing. After reviewing her trial testimony, Childs-Henry stated that she realized that the defense attorney was asking whether she knew for a fact that liquid DNA extract still existed and that, in reading over her answers, she could only assume that, while she was being cross-examined by defense counsel, she "did not understand the intent behind his questioning." She further stated that it was not her intent to be misleading or untruthful but that her statement that there was DNA sample left was "unintentionally incorrect."

Chu's affidavit contained his statement, recounted above, that his consumption of all of the DNA material was not from carelessness or a desire to prevent additional testing. He said he did not expect to be able to develop a profile from the sample because the concentration of DNA was so low. He also stated that in such cases, it is not uncommon to consume all of the liquid extract in testing. He also said that, when asked whether there was any DNA left to test, he interpreted the question, under "the common language and words of art used in our lab," to mean whether there was any liquid extract remaining—not whether it was possible to obtain DNA test results from residue that might have been left in the tubes. His statement to Glaeser and his subsequent testimony at trial accorded with that understanding and was not an attempt to hide or withhold anything from the defense.

Dr. Johnson's affidavit responded to the DNA test results from ReliaGene. She believed that the two alleles that matched applicant's DNA had to be analyzed separately for the purpose of establishing a random match probability. One of the alleles was present in 14.5 percent of African-Americans, 16.5 percent of Caucasians, and 10.29 percent of Hispanics. The other allele was present in 30 percent of African-Americans, 32.5 percent of Caucasians, and 39.23 percent of Hispanics.

She also expressed dismay at HPD's initial error in forwarding an incorrect reference sample to ReliaGene. "This type of serious error is typical of the work performed at the HPD lab based on my review of many cases," she said, "and it calls into question the validity and reliability of re-testing any DNA that was originally extracted by the HPD lab." She stated that it was "highly likely given the sloppy work performed by HPD, that even if the foreign alleles detected in the face swab extract originated from Mr. Napper's DNA, that it could be a result of contamination within the HPD lab."

Dr. Johnson also criticized the statistical frequency estimate offered by Chu at trial (that the DNA from the swabs statistically matched applicant's profile). She contended that the estimate was "completely unsupported scientifically" and was "patently false." She further stated that a "mixture of DNA cannot possibly statistically match only one person" and "attempts to discern the individual profiles in a mixture of DNA is very difficult."

In his affidavit, Cunningham opined that Greenlee's cross-examination of Chu was "inadequate" and "demonstrated the dangers of trying to question an expert if you have no training in his area of expertise." Cunningham faulted Greenlee for failing to hire a consulting expert. Cunningham believed that a consulting expert was necessary to help defense counsel understand the subject better, to shed light on the statistical calculation made by Chu, and to enable defense counsel to know what to request during discovery—e.g., bench notes, worksheets, and other documents used by the State's expert during testing. Cunningham also believed that a consulting expert would have reached the same conclusion as Bromwich regarding the inappropriateness of consuming all of the evidence. In addition, Cunningham opined that a testifying expert "can always make more headway" with regard to criticizing another expert's testimony than counsel can through cross-examination. Cunningham also stated that, when Childs-Henry testified at trial that some DNA sample still

existed, defense counsel should have moved for a continuance to have testing done by his own expert. Cunningham also said that the HPD Crime Lab should have notified the prosecutor's office before conducting testing that testing would consume all of the evidence. This would allow the prosecutor's office to alert the defense, who could have had an expert present at testing, or have the samples separated for independent testing. When faced with the HPD Crime Lab's failure to have done so, Cunningham would have filed a motion to suppress the DNA results.

Downey's affidavit stated that DNA "is an extremely difficult area of science to simply self-teach." He believed that an attorney with no prior experience with DNA analysis acts deficiently by failing to enlist the help of a consulting expert. He stated that a consulting expert could have helped defense counsel understand the proper standards of testing and provide valuable impeachment if the State's expert did not take the proper measures. He made the same points as Cunningham regarding the usefulness of a consulting expert with respect to the State expert's statistical analysis and with respect to discovery, and he also believed that Greenlee should have moved for a continuance after Childs-Henry's testimony. Like Cunningham, he believed that the HPD Crime Lab should have notified the prosecutor's office before conducting the testing and that reasonably competent counsel would have moved to suppress the DNA results.

At the evidentiary hearing, Greenlee testified that the State had a compelling case without the DNA evidence. Greenlee saw three "linkages" between applicant and the crime: (1) DNA, (2) E.T.'s description of applicant's house, "which was on point," and (3) the "unique orange lotion" found in the house. Nevertheless, Napper's defense was that he did not do it.

When asked about his prior experience, Greenlee acknowledged that he had no degree in the field of forensic training and that, before applicant's trial, he had never taken any continuing legal

education classes on DNA, had never presented a DNA expert as a witness, and had never cross-examined a DNA expert. When asked whether he had ever used a consulting expert, Greenlee said, "Well, I don't differentiate between consulting and using them as an expert witness. If I'm going to call somebody as an expert witness, I'm going to consult them. . . . From a semantic standpoint, it seems to me they're the same kind of person." When asked, "[I]f the State were relying on the testimony of an expert in an area that you were totally unfamiliar with, might you call someone to educate yourself through that expert so that you could more effectively handle the State's case yourself," Greenlee responded, "Not necessarily, because I can read." After Greenlee had discussed securing literature on fingerprint analysis as an example of self-teaching, Wicoff asked if DNA was more complex than fingerprints. Greenlee answered, "I'm not equipped to make that distinction."

When asked if he thought he could obtain "lab notes or worksheets or electronic data from DNA testing" through discovery, defense counsel replied that he believed that worksheets and lab notes would be protected by the work-product privilege, but electronic data should be available. When asked if he received an electropherogram, defense counsel said, "No," but he "saw a breakout of all of the alleles." When asked if he saw an allelic table, defense counsel said, "I believe I did," but then stated, "it's been eight years," when Wicoff pointed out that "HPD doesn't do allelic tables."

Greenlee also stated that he did not think he needed prior training with respect to reading the DNA information because it was "relatively straightforward." When asked whether a testifying expert would have enhanced his strategy of emphasizing the unfairness of not having DNA available for testing by the defense, Greenlee said, "Not necessarily," because the expert testimony might have been unfavorable, and he did not have the benefit of hindsight. "Because," Wicoff asked, "you never

checked with a consulting expert?" Greenlee said that he "didn't feel the need to."

When asked why he did not obtain testing after Childs-Henry testified that some DNA sample remained, Greenlee said that they later learned that Childs-Henry "was simply mistaken." When asked what he understood by the statement that no material was left for analysis, Greenlee replied, "That whatever material was taken from the little boy . . . there was nothing left for me to conduct an independent analysis on."

Greenlee also testified that he thought the defense was helped by Childs-Henry's testimony that a "sloppy chemist" would consume the entire sample. And he testified that the defense was seriously hurt by applicant's own testimony, that the damage caused by that outweighed the DNA evidence and was the "deciding factor" in the case.

The habeas record also contains documents from the FBI and the National Research Council (NRC) regarding standards for DNA testing. In the FBI document, Standard 7.2 states: "Where possible, the laboratory should retain or return a portion of the evidence sample or extract."[67] The NRC's Recommendation 3.3 states:

> Whenever feasible, forensic samples should be divided into two or more parts at the earliest practicable stage and the unused parts retained to permit additional tests. The used and saved portions should be stored and handled separately. Any additional tests should be performed independently of the first by personnel not involved in the first test and preferably in a different laboratory.[68]

In the commentary, the NRC states, "We recognize that no amount of care and proficiency testing can eliminate the possibility of error. However, duplicate tests, performed as independently as

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[67] FBI, DNA Advisory Board, QUALITY ASSURANCE STANDARDS FOR FORENSIC DNA TESTING LABORATORIES, Standard 7.2 (1998).

[68] National Research Council, NRC II Recommendations, Recommendation 3.3.

possible, can reduce the risk of error enormously. The best protection that an innocent suspect has against an error that could lead to a false conviction is the opportunity for an independent retest."[69]

II. ANALYSIS

In habeas corpus proceedings, this Court is the ultimate factfinder, but we usually defer to the habeas court's fact findings if they are supported by the record.[70] With this standard of review in mind, we turn to the three claims upon which we filed and set this application.

A. *Youngblood* Claim

1. *The Parties' Arguments and the Habeas Court's Findings*

Applicant contends that Chu and Childs-Henry "intentionally, recklessly, and in bad faith consumed and destroyed available evidence." He notes the Bromwich Report's criticism of Chu for effectively consuming the entire sample and of Childs-Henry for discarding the original swabs.

The habeas court recommends that relief be granted on this ground under *Arizona v. Youngblood*[71] and *Illinois v. Fisher*.[72] Under those cases, the court concludes that a defendant is entitled to relief if it is shown that the State acted in bad faith in destroying potentially useful evidence.

The habeas court concludes that the DNA material in this case constituted "potentially useful evidence" because the DNA test results might have exonerated applicant. Citing Professors Dix and Dawson, the court says that showing bad faith requires establishing that "law enforcement officials

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[69] *Id.* (introductory comment to Recommendation 3.3).

[70] *Ex parte Chabot*, 300 S.W.3d 768, 772 (Tex. Crim. App. 2009).

[71] 488 U.S. 51 (1988).

[72] 540 U.S. 544 (2004).

were actually aware their action or inaction would result in the loss of what they recognized would be evidence."[73] Under this standard, the court concludes that the lab workers acted in bad faith.

In support of its conclusion, the habeas court cites three items. First, it contends that Article 38.39 of the Texas Code of Criminal Procedure (requiring the preservation of evidence containing biological material) had already been enacted and was to take effect on April 5, 2001. The court further states that "it does not make sense, nor does this Court find it to be credible, that employees of the Houston Police Department Crime Lab would have been unaware of the statute which was about to take effect, or that they would not have fully realized that the evidence that they were testing precisely fit what the statute so obviously sought to preserve." Second, the court points to FBI and NRC standards that call for retaining a portion of DNA evidence for re-testing, if possible. Finally, the court states that it was the "customary practice in the criminal district courts of Harris County . . . that where there is danger of evidence being consumed in testing . . . for a forensic lab to alert the prosecutor, who may then alert both the defense counsel and the trial court . . . and obtain an acknowledgment signed by all parties that consumption of the evidence may occur." As an example, the court cites "Appendix 4" as showing how this practice was followed by the Orchid Cellmark Lab during the instant habeas proceedings.[74]

We asked the parties to submit briefs concerning whether the DNA samples that were destroyed constituted "potentially useful evidence" under *Youngblood*. Relying upon *Fisher*,

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[73] *See* George E. Dix and Robert O. Dawson, 42 TEXAS PRACTICE, 2nd ed., §22.63 (2001).

[74] The document in that appendix appears to be a draft that was signed by the prosecutor but not by defense counsel or the court. It is dated "2004," it does not specify most of the items that were tested, and it does not specify who would conduct the testing. As discussed above, in 2005, the parties signed an authorization for Orchid Cellmark to conduct testing.

applicant contends that the Supreme Court's definition of "potentially useful evidence" is broad, applying even if the potential for exculpatory results is low.[75] Applicant also argues that further testing has provided results that are actually exculpatory, showing that the link between applicant and the DNA material is "almost non-existent." He supports this argument with the following claims: (1) that assistant district attorney Munier concluded that the statistical link to applicant in this case "wouldn't be very much," (2) that ReliaGene's report observed that only two out of fourteen loci revealed a link to applicant and the two matches were "weakly detected," (3) that Orchid Cellmark concluded that the DNA profile obtained from "the epithelial fraction of the tubes of DNA extract" was a mixture of DNA from the victim and an unknown individual, and (4) that Orchid Cellmark's statistical analysis was that 1 in 255 individuals could be the source of the DNA profile developed from the epithelial fraction. Applicant asks, "[I]f accurate testing was not possible at ReliaGene due to the diminished state of the DNA extract, then how were they able to obtain a full DNA profile from such evidence?" Applicant contends that the State cannot dismiss the re-testing as unreliable with respect to applicant when it produced a full genetic profile for the victim.

The State contends that the DNA samples were not potentially useful because subsequent testing results (by both ReliaGene and Orchid Cellmark) include applicant as a possible donor of the genetic material. The State claims that the difference between Chu's results and the results obtained in re-testing involved the number of alleles detected and could be readily explained by the quantitative difference in the samples compared. Consequently, the State contends, the evidence consumed by the HPD Crime Lab was not potentially useful because further testing of the remnants

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[75] *See* 540 U.S. at 548 (referring to substance as "potentially useful evidence" where the claim was that "a *fifth* test" might produce exculpatory results) (emphasis in original).

of that evidence continues to affirm applicant's guilt.

Some of the habeas court's findings may be relevant to whether the DNA samples were potentially useful. In finding 37, the court recites Orchid Cellmark's conclusion that applicant "cannot be excluded as a possible donor of the minor alleles in the mixture," as "meaning that, as with ReliaGene's testing, there was only a weak link to Napper in the epithelial fraction of one of the face/cheek swabs." In finding 38, the habeas court recites Orchid Cellmark's conclusion that the "DNA profile obtained from the epithelial fraction of the tubes of DNA extract . . . is a mixture, including the victim and an unknown individual" as meaning that "the link to Napper was so weak that the other contributor to the epithelial fraction was labeled 'an unknown individual.'"

2. *Preservation of Error*

Ordinarily, a defendant is barred from raising a claim on habeas corpus if he could have raised the claim at trial and on direct appeal, but did not.[76] Although applicant was aware that the DNA material had been consumed during testing, he raised no *Youngblood* complaint at trial or on direct appeal. Trial counsel Greenlee did not know that consuming the entire DNA sample was improper, but that fact could have been discovered at the time of trial. However, some facts that are potentially relevant to the claim arose after trial: public discovery of the extensive problems with the HPD Crime Lab and the subsequent DNA testing conducted by ReliaGene and Orchid Cellmark. In his habeas application, applicant also claims that Greenlee's failure to move for suppression of the DNA test results on the basis of HPD's consumption of the DNA sample constituted ineffective assistance of counsel. Under these circumstances, we find it appropriate to address the merits of applicant's *Youngblood* claim without first addressing the question of procedural default.

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[76] *Ex parte Pena*, 71 S.W.3d 336, 337-38 (Tex. Crim. App. 2002).

3. *The Law*

a. Supreme Court Cases

In *Youngblood*, the defendant complained about the State of Arizona's failure to preserve semen samples from the victim's body and clothing.[77] Noting that the State's good or bad faith is irrelevant when the State fails to disclose exculpatory evidence, the Supreme Court nevertheless held that a different standard applies "when we deal with the failure of the State to preserve evidentiary material of which no more can be said than that it could have been subjected to tests, the results of which might have exonerated the defendant."[78] Quoting *California v. Trombetta*,[79] the Supreme Court concluded that different treatment was justified in part because "[w]henever potentially exculpatory evidence is permanently lost, courts face the treacherous task of divining the import of materials whose contents are unknown and, very often, disputed."[80] Consequently, when the destruction of potentially useful evidence is at issue, the defendant must show "bad faith" on the part of the State in destroying the evidence in order to show a violation of due process.[81] This rule confines the police's obligation to preserve evidence "to that class of cases where the interests of justice most clearly require it, *i.e.*, those cases in which the police themselves by their conduct indicate that the evidence could form a basis for exonerating the defendant."[82] Turning to the facts

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[77] 448 U.S. at 52.

[78] *Id.* at 57.

[79] 467 U.S. 479 (1984).

[80] *Youngblood*, 488 U.S. at 57-58 (quoting *Trombetta*, 467 U.S. at 486).

[81] *Id.* at 58.

[82] *Id.*

of the case, the Supreme Court explained that the "failure of the police to refrigerate the clothing and to perform tests on the semen samples can at worst be described as negligent."[83] Because there was no suggestion of bad faith on the part of the police, there was no violation of due process.[84]

The Supreme Court noted two distinctions between the case before it and *Trombetta*: "In the present case, the likelihood that the preserved materials would have enabled the defendant to exonerate himself appears to be greater than it was in *Trombetta*, but here, unlike in *Trombetta*, the State did not attempt to make any use of the materials in its own case in chief."[85] In a footnote to that sentence, the Supreme Court extensively discussed the requirements of *Trombetta* and then stated: "The presence or absence of bad faith by the police for purposes of the Due Process Clause must necessarily turn on the police's knowledge of the exculpatory value of the evidence at the time it was lost or destroyed."[86]

In *Trombetta*, the defendant complained about the failure to preserve breath samples for re-testing by the defense after the samples were obtained by a breathalyzer machine and produced inculpatory results.[87] The Supreme Court rejected the defendant's claim for three reasons. First, the authorities did not destroy the breath samples "in a calculated effort to circumvent the disclosure requirements established by *Brady v. Maryland*[88] and its progeny" but acted "in good faith and in

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[83] *Id.*

[84] *Id.*

[85] *Id.* at 56.

[86] *Id.* at 56 n.*.

[87] *See* 467 U.S. at 487-90.

[88] 373 U.S. 83 (1963).

accord with the normal practice."[89] The Court observed that the record contained no allegation "of official animus towards the respondents or a conscious effort to suppress exculpatory evidence."[90] Second, the evidence did not have exculpatory value that was apparent before it was destroyed.[91] "Although preservation of breath samples might conceivably have contributed to respondents' defenses, a dispassionate review of the Intoxilyzer and the California testing procedures can only lead one to conclude that the chances are extremely low that preserved samples would have been exculpatory."[92] Third, the evidence was not of "such a nature that the defendant would have been unable to obtain comparable evidence by other reasonably available means."[93] There were a limited number of ways in which the machine could malfunction—faulty calibration, extraneous interference with machine measurements, and operator error—and the defendants could raise these issues on cross-examination after examining the machine and the weekly calibration results.[94]

After *Youngblood*, the Supreme Court decided *Fisher*, which involved a complaint about the destruction of a substance alleged to be cocaine.[95] Four tests by a police crime lab confirmed that the substance was cocaine.[96] The Court held that the substance "was plainly the sort of 'potentially

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[89] *Trombetta*, 467 U.S. at 488.

[90] *Id.*

[91] *Id.* at 489.

[92] *Id.*

[93] *Id.*

[94] *Id.* at 490.

[95] *Fisher*, 540 U.S. at 545.

[96] *Id.*

useful evidence' referred to in *Youngblood*, not the material exculpatory evidence addressed in *Brady*" because "[a]t most, respondent could hope that, had the evidence been preserved, a *fifth* test conducted on the substance would have exonerated him."[97] The defendant did not show bad faith because "police testing indicated that the chemical makeup of the substance inculpated, not exculpated, respondent" and "it is undisputed that police acted in 'good faith and in accord with their normal practice.'"[98] Reversing an Illinois appellate court, the Supreme Court held that the existence of a pending discovery request does not eliminate the necessity of showing bad faith.[99]

b. "Potentially Useful Evidence"

Applicant's reliance on *Fisher* for the proposition that the term "potentially useful evidence" is broad is somewhat misplaced. None of the Supreme Court's cases, including *Fisher*, purport to provide a stand-alone definition of the term "potentially useful evidence." Rather, the Court's cases appear to contrast evidence that is *at best* "potentially useful" with "material, exculpatory" evidence under *Brady*. When evidence is *at best* "potentially useful," then the defendant must *at least* show "bad faith." That does not really answer the question of when the potential exculpatory value of evidence is so attenuated that even a showing of bad faith will not afford a basis for relief.

Professors Dix and Dawson suggest that the "possibility" of exculpation is not enough—that the defendant "must apparently show at least a substantial or considerable likelihood the evidence, if preserved, would have tended to show his innocence."[100] A few isolated cases from other

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[97] *Id.* at 548 (emphasis in original).

[98] *Id.*

[99] *Id.*

[100] Dix and Dawson, §22.64.

jurisdictions have held that evidence is not even potentially useful when the potential exculpatory value of the evidence is "mere speculation,"[101] when the allegedly exculpatory fact was legally irrelevant to the crime charged,[102] when the allegedly exculpatory fact would not really provide an exculpatory inference,[103] when the exculpatory relevance of the evidence was not shown,[104] when the chance that the evidence would exonerate the defendant was "virtually nil,"[105] or when other evidence conclusively established that testing would not yield an exculpatory result.[106]

c. "Bad Faith"

More effort has been expended trying to determine the meaning of "bad faith." As Dix and Dawson acknowledge, "Precisely what constitutes 'bad faith' is not clear."[107] The suggestion by the

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[101] *United States v. Jobson*, 102 F.3d 214, 219 (6th Cir. 1996) (no evidence that destroyed dispatch tape had contained any exculpatory information); *Grady v. State*, 2008 WY 144, P33, 197 P.3d 722, 732-33 (2008).

[102] *United States v. Williams*, 577 F.3d 878, 882-83 (8th Cir. 2009) (firearm did not have to be operational to support conviction under firearm charge, so evidence that firearm may not have been operational was not potentially exculpatory).

[103] *United States v. Smith*, 534 F.3d 1211, 1224 (10th Cir. 2008) (serial numbers would not have proven defendant's innocence but shown only "that perhaps she handled her money differently than a typical drug dealer"); *Torres v. Mullin*, 317 F.3d 1145, 1161 (10th Cir. 2003) (proving fingerprint did not belong to defendant had no exculpatory value because fingerprint could have been made by a number of people who lived in or visited the home).

[104] *Williams v. United States*, 881 A.2d 557, 565 (D.C. App. 2005) (defendant did not demonstrate how revolver owned by drug rival would have been exculpatory).

[105] *Wenzel v. State*, 306 Ark. 527, 533, 815 S.W.2d 938, 941 (1991) (DNA testing by the FBI of vaginal swabs containing semen).

[106] *State v. Dulaney*, 493 N.W.2d 787, 791 (Iowa 1992) (plasma sample showed alcohol concentration consistent with blood sample, so no valid claim that further testing of blood sample could yield exculpatory results).

[107] Dix and Dawson, §22.63.

habeas court in this case that the test for bad faith is whether the officials "were actually aware their action . . . would result in the loss of . . . evidence" miscomprehends Professors Dix and Dawson's thoughtful discussion. Dix and Dawson state that a defendant "must apparently prove at least that law enforcement officials were actually aware their action or inaction would result in the loss of what they recognized would be evidence."[108] They do not say that such awareness is necessarily enough. If awareness that evidence would be destroyed were enough, by itself, to constitute bad faith, then officials could never conduct a test that would consume all of the evidence, even if doing so were necessary to achieve probative results. Dix and Dawson suggest that *Trombetta* articulates at least two situations in which bad faith would be shown: when the prosecution acts with "official animus" toward the defendants or acts with "a conscious effort to suppress exculpatory evidence."[109]

A review of federal circuit courts and state courts of last resort in other jurisdictions reveals that they generally require a showing along those two lines. Some courts have expressly adopted the *Trombetta* formulation as the definitive test of bad faith.[110] Other courts have focused on one or both of the *Trombetta* situations, characterizing bad faith as involving improper motivation or malice,[111]

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[108] *Id.*

[109] *Id.*

[110] *Jobson*, 102 F.3d at 218; *United States v. Chaparro-Alcantara*, 226 F.3d 616, 624 (7th Cir. 2000); *Stuart v. State*, 127 Idaho 806, 816, 907 P.2d 783, 793 (1995); *State v. Lindsey*, 543 So. 2d 886, 891 (La. 1989).

[111] *United States v. Garza*, 435 F.3d 73, 75 (1st Cir. 2006) (Defendant must show "independent evidence that the [government] was somehow improperly motivated."); *United States v. Thompson*, 130 F.3d 676, 686 n.17 (5th Cir. 1997) (no demonstration of malice in tape's destruction); *Gausvik v. Perez*, 345 F.3d 813, 818 (9th Cir. 2003) (The defendant must "put forward specific, nonconclusory factual allegations that establish improper motive."); *Collins v. Commonwealth*, 951 S.W.2d 569, 573 (Ky. 1997) (Defendant "cannot substantiate any ill motive or intention on the part of the Commonwealth in failing to collect the towel."); *Murray v. State*, 849

or defining bad faith as an intent to deprive the defendant of access to (exculpatory or potentially exculpatory) evidence.[112] Various jurisdictions have also indicated that bad faith is not established by a mere showing that the government agent was grossly negligent,[113] engaged in intentional

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So. 2d 1281, 1286 (Miss. 2003) (quoting Black's Law Dictionary: "bad faith" means the "conscious doing of a wrong because of dishonest purpose or moral obliquity; it is different from the negative idea of negligence in that it contemplates a state of mind affirmatively operating with furtive design or ill will").

[112] *Featherstone v. Estelle*, 948 F.2d 1497, 1505 (9th Cir. 1991) (finding that destruction of lineup photo was not in bad faith because "it was not deliberately done to deprive petitioner of access to relevant evidence"); *People v. Seaton*, 26 Cal. 4th 598, 656-57, 28 P.3d 175, 209 (2001) (no showing that police believed the unpreserved blood evidence would have exculpated defendant or "that their purpose was to deny him the opportunity to use the evidence to exculpate himself"); *United States v. Day*, 697 A.2d 31, 35-36 (D.C. App. 1997) ("Nothing in the record on appeal hints, even remotely, that the police destroyed the car so that [defendant] could not examine it, or have it viewed by an expert."); *Dufour v. State*, 905 So. 2d 42, 68 (Fla. 2005) (quoting *Guzman v. State*, 868 So.2d 498, 509 (Fla. 2003): "Under *Youngblood*, bad faith exists only when police intentionally destroy evidence they believe would exonerate a defendant."); *Guzman*, 868 So. 2d at 510 (no showing that "any State actor intentionally deprived [defendant] of evidence which the State actor believed to be exculpatory"); *Dulaney*, 493 N.W.2d at 791 (no evidence State "intentionally destroyed" blood sample "in an effort to deprive [defendant] of evidence"); *State v. Berkley*, 567 A.2d 915, 918 n.3 (Me. 1989) (collusion designed to prevent independent testing would establish bad faith); *State v. Bailey*, 677 N.W.2d 380, 393 (Minn. 2004) ("no suggestion that the State destroyed or released items 'to avoid discovery of evidence beneficial to the defense'"); *Murray*, 849 So. 2d at 1286 (bad faith where "destruction was intentional and indicates fraud and a desire to suppress the truth"); *State v. Hernandez*, 2005 ND 214, P31, 707 N.W.2d 449, 461 (2005) (defining "bad faith" to mean "the evidence was deliberately destroyed by or at the direction of a State agent who intended to thwart and to deprive the defense of information."); *State v. Bousum*, 2003 SD 58, P16, 663 N.W.2d 257, 263 (2003) (adopting North Dakota's definition of "bad faith"); *Drury v. State*, 2008 WY 130, P19, 194 P.3d 1017, 1023 (2008) (In determining bad faith, "we must take into account the State's knowledge of the potential exculpatory nature of the evidence.").

The Supreme Court of North Dakota has indicated that, although not constituting "bad faith," if there were shown to be a "systemic disregard" of the "State's duty to zealously protect evidence in its possession" so that "haphazard handling and destruction of evidence . . . is commonplace," then "prophylactic measures, such as an adverse-inference instruction" may be justified. *City of Bismarck v. Holden*, 522 N.W.2d 471, 475 (N.D. 1994) (ellipsis in original).

[113] *Garza*, 435 F.3d at 75 (citing *United States v. Femia*, 9 F.3d 990, 995 (1st Cir. 1993)); *United States v. Branch*, 537 F.3d 582, 590 (6th Cir. 2008).

conduct,[114] did not follow proper procedures,[115] exercised poor judgment,[116] or performed sloppy work.[117] Bad faith was held to be absent when government agents did not suspect that the evidence they destroyed was or might have been exculpatory,[118] when destruction of the evidence was due to lack of training[119] or ignorance of a recently passed law,[120] when the government agent believed his

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[114] *Garza*, 435 F.3d at 75 ("While the evidence was destroyed as a result of Quinn's conscious and deliberate decision, intentionality is not enough to show bad faith."); *Bailey*, 677 N.W.2d at 393 ("destruction of the evidence was 'intentional'" but was not in bad faith).

[115] *Garza*, 435 F.3d at 76 (no bad faith even though "it was not the 'normal' procedure to destroy evidence in cases that were still open"); *United States v. Deaner*, 1 F.3d 192, 200 (3d Cir. 1993) ("[W]e have not held that an improper procedure in and of itself implies bad faith. While it may permit such an inference, it does not syllogistically imply the presence of bad faith as a matter of deductive logic."); *Guzman*, 868 So. 2d at 509 ("bad faith does not turn on whether law enforcement officers followed established procedures"); *State v. Lamae*, 268 Kan. 544, 551, 998 P.2d 106, 111 (2000) (failure of the DEA to follow its guidelines, though troubling, not enough to show bad faith).

[116] *Lovitt v. True*, 403 F.3d 171, 187 (4th Cir. 2005) (court clerk exercised "serious error in judgment" in destroying evidence); *Murray*, 849 So. 2d at 1286 (bad faith is "not simply bad judgment or negligence"); *State v. Hanna*, 123 Wn.2d 704, 714, 871 P.2d 135, 140 (1994) (failure to preserve and retain evidence may have reflected "poor judgment" but was based on a reasonable belief that the evidence would not be relevant to either party).

[117] *Carreno*, 363 F.3d at 888 (Sloppy work is not tantamount to bad faith.).

[118] *United States v. Stevens*, 935 F.2d 1380, 1388 (3d Cir. 1991) (test that destroyed the evidence "might have inculpated or exculpated" the defendant but "no one knew," thus nothing suggested government agents "suspected that the saliva/semen sample . . . could form a basis for exonerating" the defendant); *Jobson*, 102 F.3d at 218 ("no evidence that anyone in the Detroit Police Department or the U.S. Attorney's office suspected that the tape was exculpatory"); *Carreno*, 363 F.3d at 888 ("no evidence government knew, or even suspected, that" deported witness "would testify in [the defendant's] favor").

[119] *United States v. Ramos*, 27 F.3d 65, 71-72 (3d Cir. 1994) (due to inadequate training, government agent affiliated with the DEA believed he was following office procedure in destroying notes); *United States v. Houston*, 548 F.3d 1151, 1155 (8th Cir. 2008) (officers not trained to download video evidence).

[120] *Lovitt*, 403 F.3d at 187 n.3; *Lovitt v. Warden*, 266 Va. 216, 242, 585 S.E.2d 801, 816 (2003).

tactics were lawful,[121] or when the evidence was destroyed before the government agent was notified that it might have exculpatory value, before the defendant was a suspect, or before the defendant expressed a desire to have the evidence preserved.[122] Knowing the evidence is obviously relevant to, or even determinative of, guilt or innocence has been held to be insufficient to show bad faith.[123] The government's ability to preserve the evidence has also been held not to be dispositive.[124]

But courts have found bad faith where government agents hid or concealed the evidence until it was destroyed,[125] destroyed the evidence after being expressly notified by the defense of its

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[121] *Gausvik*, 345 F.3d at 818.

[122] *United States v. Beckstead*, 500 F.3d 1154, 1159-60 (10th Cir. 2007) (Government destroyed the evidence before the defendant had opportunity to notify the officials that the alleged drug lab and its chemicals were potentially exculpatory and it was unlikely that further testing of the lab would produce exculpatory results); *United States v. Bohl*, 25 F.3d 904, 910 (10th Cir. 1994) (discussing *United States v. Richard*, 969 F.2d 849 (10th Cir. 1992) where government destroyed boxes of marijuana and the defendant did not show that the government knew he wanted them preserved for trial); *Sharp v. State*, 286 Ga. 799, 802, 692 S.E.2d 325, 329 (2010) (State unaware of exculpatory value of condom that was lost "before [defendant] was arrested or identified as a suspect"); *State v. Eason*, 133 N.H. 335, 342, 577 A.2d 1203, 1207 (1990) (when police destroyed what they thought was an animal carcass, they did not know victim had been murdered, much less that the defendant murdered him).

[123] *Monzo v. Edwards*, 281 F.3d 568, 580 (6th Cir. 2002) ("It is not enough that the police knew that semen samples could be determinative of guilt or innocence if preserved or tested."); *State v. Osakalumi*, 194 W. Va. 758, 765, 461 S.E.2d 504, 511 (1995) (even though police acted negligently in disposing of a couch [with a bullet hole] that "was so obviously a part of a pending police investigation," court could not say their actions were motivated by bad faith).

[124] *Beckstead*, 500 F.3d at 1161.

[125] *Yarris v. County of Delaware*, 465 F.3d 129, 133, 142-43 (3d Cir. 2006) (plaintiff's petition alleged that detectives refused a request to deliver slides to coroner but kept them in a paper bag under a desk until the biological material rotted and became useless for DNA testing); *Stuart*, 127 Idaho at 816, 907 P.2d at 793 ("There is a clear recognition that concealment is one method of proving that the exculpatory value of the evidence was known to the government prior to its destruction." Prosecution concealed the existence of a tape recording of a phone call that would have led to phone logs that were later destroyed.).

potential exculpatory value,[126] destroyed the evidence after a dismissal of the case (and then re-instituted proceedings),[127] or where government agents refused to show up in court for an inquiry into their good or bad faith.[128] The Tenth Circuit has formulated a five-factor test that considers whether: (1) the government received explicit notice of the evidence's potentially exculpatory nature, (2) the claim was backed up with objective, independent evidence rather than being conclusory, (3) the evidence was in the government's control at the time of notice, (4) the evidence was central to the case, and (5) there is any innocent explanation for the evidence's destruction.[129]

Several courts have explained *Youngblood*'s "bad faith" requirement as substituting for *Brady*'s requirement that evidence be exculpatory.[130] Essentially, an inference that the evidence was probably exculpatory can be drawn from a government agent's bad faith conduct.[131]

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[126] *United States v. Cooper*, 983 F.2d 928, 931 (9th Cir. 1993) ("The equipment's value as potentially exculpatory evidence was repeatedly suggested to government agents." Parole officer and alleged drug lab's landlord reported lab's claims of legitimacy during pre-seizure investigation. Law enforcement agents knew lab was ostensibly configured to make a legal substance rather than methamphetamine before destroying the lab's equipment.); *Bohl*, 25 F.3d at 911 ("[G]overnment was explicitly placed on notice that" defendants "believed the tower legs were potentially exculpatory" before government destroyed the evidence. And assertion of potentially exculpatory value was not merely conclusory but was backed up by objective, independent evidence.).

[127] *State v. Jackson*, 302 S.C. 313, 316, 396 S.E.2d 101, 102 (1990).

[128] *State v. McGrone*, 798 So. 2d 519, 523 (Miss. 2001) (defense counsel subpoenaed police officers for two separate hearings, but the officers never appeared).

[129] *Smith*, 534 F.3d at 1224-25.

[130] *State v. Youngblood*, 173 Ariz. 502, 506, 844 P.2d 1152, 1156 (1993); *State v. Craig*, 490 N.W.2d 795, 797 (Iowa 1992). *See also Wenzel*, 306 Ark. at 533, 815 S.W.2d at 941 (quoting *Youngblood*'s statement that its standard was directed to "those cases in which the police themselves by their conduct indicate that the evidence could form a basis for exonerating the defendant").

[131] *See* authorities cited in previous footnote.

4. *The Present Case*

a. Potential Usefulness of the Evidence

The habeas court and the parties have arrived at some erroneous conclusions because they have treated the DNA evidence as a monolithic whole, instead of considering each of the four DNA samples separately. The habeas court made this mistake when it interpreted Orchid Cellmark's reference to an "unknown individual" as an indication that the link between applicant and the DNA evidence was weak. Although ReliaGene was able to obtain results from only one of the epithelial samples, Orchid Cellmark was able to obtain results from both epithelial samples. For both samples, Orchid Cellmark detected a primary DNA profile that matched the victim. One of the samples also contained some minor alleles matching applicant's profile. The other epithelial sample contained minor alleles that did not match either the victim or applicant. These alleles belonged to another individual (or individuals), whose identity was, of course, "unknown." Subsequent testing was done to attempt to rule in or rule out individuals who were involved in DNA testing as a possible source of contamination. Notably, Orchid Cellmark was able to rule out the persons from HPD who were originally involved in collecting and testing the material: Verbitskey, Hilleman, Childs-Henry, and Chu did not contribute the "unknown person's" DNA.

Although an unknown person's DNA was detected in one of the epithelial samples, that fact does not have any tendency to exculpate applicant. Because the epithelial samples are composed of cells that are easily shed, such as skin cells, the DNA in question did not necessarily come from the perpetrator—it could have come from anyone who had recent contact with the victim. It is also possible that the extraneous alleles are the result of contamination, or the "allele drop-in" (referred to by Pineda) that might occur as a result of repeated testing. Had the sperm samples yielded an

"unknown person's" DNA, that fact might have been significant, but that is not what happened.

The same fallacy of treating the DNA results as a monolithic whole also underlies the State's and applicant's competing positions regarding why the outside labs' test results differ from those obtained by HPD. Although the State contends that the difference in results is due to the quantitative decline of the sample, applicant questions how that can be, when the outside labs were able to obtain a complete profile matching the victim. The answer to applicant's question is simple once the samples are treated separately: The epithelial samples have consistently matched the victim throughout all of the testing but have never provided strong results with respect to the perpetrator. Chu's STR testing detected a single allele in one of the epithelial samples that was "unique" to applicant's profile (i.e. not possessed by the victim). Chu's testing of the other epithelial sample revealed no unique alleles. The one unique allele that was detected was one of nine unique alleles possessed by applicant that was subject to testing.

The outside labs actually detected a greater number of alleles unique to applicant's profile. ReliaGene detected two of twelve tested-for unique alleles, while Orchid Cellmark detected four of fourteen tested-for unique alleles. Although the habeas record does not contain a statistical calculation for the random match probability of the single unique epithelial allele detected by Chu, it seems likely that the four of fourteen unique alleles detected by Orchid Cellmark yields a stronger link to applicant than the one of nine unique alleles detected in HPD's testing.

Even if that one unique allele detected by Chu somehow carried special statistical significance that provided a stronger link to applicant than the four unique alleles detected by Orchid Cellmark (and the two detected by ReliaGene), that would not make the Orchid Cellmark (or ReliaGene) results exculpatory. ReliaGene's and Orchid Cellmark's failure to detect the unique

allele detected in Chu's testing is easily explained, as the State points out, by the quantitative decline of the sample. Although Chu had access to a liquid extract for his testing, ReliaGene and Orchid Cellmark were forced to use a buffer solution to re-suspend possible trace amounts of DNA attached to the walls of seemingly empty tubes.

Because the epithelial DNA was originally derived from cells from the skin of the victim's face, one would expect the victim's cells in the epithelial sample to be, by far, the most abundant, explaining the outside labs' ability to obtain a full DNA profile matching the victim, even from the trace amounts of DNA. Chu's ability to detect only one foreign allele suggests that the epithelial samples contained only a small amount of DNA extraneous to the victim. So it is not surprising that this single foreign allele would be lost after the massive decline in the quantity of the sample. Likewise, Orchid Cellmark's failure to detect one of the alleles detected by ReliaGene could have resulted from the further decline in the sample caused by the second round of tests.

If the testing of the three labs is considered together, a stronger link to applicant is established. Each lab detected at least one unique allele that was not detected by the others. Such results could be explained by the loss of some alleles caused by a quantitative decline in the sample, combined with the detection of additional alleles through progressively more sensitive techniques (or perhaps by chance). If all of the detected alleles that correspond to the tested loci are considered without regard to which lab detected them, then there were six alleles unique to applicant out of fourteen that he possessed that were subjected to tests. We do not know if a statistical calculation could be done that incorporated all three labs' results. We simply point out that the discovery of diverse alleles unique to applicant by the three labs tends to inculpate applicant. So, the further testing of the epithelial samples seems to have produced a stronger inculpatory inference than the

epithelial samples originally provided.

It is nevertheless true that the epithelial results do not approach the strength of Chu's results for the sperm samples. The outside labs were not able to obtain any results for the sperm samples. The failure to obtain results is not exculpatory in itself; it might simply mean that the samples had degraded to the point where re-testing could not produce any results. But with respect to the strength of the test results, the parties and the habeas court have failed to appreciate the differences between the sperm samples and the epithelial samples. It is true that ReliaGene and Orchid Cellmark produced results that are much weaker statistically than some of the results obtained by Chu. Applicant sees this difference in the strength of the results as indicating that the DNA evidence shows the link to applicant to be less substantial than previously thought, while the State chalks up this difference to the loss of alleles caused by a quantitative decline in the sample. Neither position is correct. The difference in the statistical strength of the results is a consequence of the fact that different samples are at issue. Chu relied upon the sperm samples at trial, and Bromwich's statistical calculation of 1 in 232,000 was undoubtedly based upon the sperm samples. The results obtained by the outside labs were for the inferior epithelial samples. For the epithelial samples, it appears that the outside labs obtained stronger results than Chu obtained, and discovered additional alleles possessed by applicant that were not previously discovered in the HPD testing. Although we do not entirely agree with the State's reasoning, we agree that the subsequent test results tend to confirm applicant's guilt.

In assessing whether the consumed DNA material constituted "potentially useful" evidence, we consider the likelihood that a defense expert would have produced exculpatory results if given the opportunity to test sperm and epithelial portions of the original liquid DNA extract. We conclude

that the likelihood of an exculpatory result is small, though not zero. Although Bromwich criticized Childs-Henry's lack of documentation and would have preferred that she run more definitive tests for semen, he did not suggest that she obtained an incorrect result, or that any flaw existed in her analysis that would have undermined the validity of Chu's results. As we have explained, Bromwich found that Chu had "developed clean, interpretable profiles" that were "good quality and clear results from potentially difficult forensic evidence samples." Bromwich calculated a 1 in 232,000 random match probability for the African-American population that was "relatively strong" given the nature of the sample. We also note that it is virtually impossible for applicant's DNA to have contaminated the original test results because the swab DNA was typed before applicant was even a suspect.

Nevertheless, in a city the size of Houston, a 1 in 232,000 probability raises the possibility that a handful of people might perhaps be included in the DNA results. A defendant in applicant's position would hope that testing by a defense expert would detect additional alleles inconsistent with the defendant's DNA profile. And given the now-tarnished reputation of the HPD Crime Lab, a defendant might even hope that a defense expert would obtain dramatically different results, revealing some unknown malfeasance by the lab.

The re-testing by ReliaGene and Orchid Cellmark tend to undercut any such hopes, as the re-testing has produced results consistent with applicant's DNA. But, while contamination of the original HPD test results with applicant's DNA is a virtual impossibility, it is possible that contamination could have occurred later, in time to skew the re-testing results. Dr. Johnson believed that to be a possibility, Orchid Cellmark's "unknown person" result for one of the epithelial samples may be an example of contamination, and the HPD Crime Lab's act of forwarding an incorrect reference sample to ReliaGene hardly inspires confidence. The possibility of contamination may

also be increased somewhat by the fact that the tubes were seemingly empty, with relevant Crime Lab personnel believing that the evidence had been consumed, so the HPD Crime Lab may not have had as much incentive to maintain the integrity of the evidence.

Given the paucity of authority and the brevity of the pronouncements regarding whether evidence is even "potentially useful," we are not certain whether an inquiry into potential usefulness would include looking at other evidence at trial tending to show that the defendant was guilty and, therefore, that DNA testing by a defense expert would not likely yield exculpatory results. The background portion of this opinion outlines the substantial, persuasive evidence of applicant's guilt aside from the DNA test results, and we will discuss this evidence in connection with the ineffective assistance of counsel claim later in this opinion. This inculpatory evidence would further support a conclusion that the likelihood of exculpatory results from defense DNA testing was slim.

Nevertheless, we refrain from deciding whether the consumed DNA evidence in this case meets a threshold showing of potential usefulness. That the likelihood of exculpatory results was slim is a factor that may be taken into account when assessing the existence or absence of bad faith. Where exculpatory results were unlikely, an inference can be drawn that the DNA analyst was probably not acting with the intent to deprive the defendant of exculpatory evidence when he destroyed the sample. A threshold showing of potential usefulness may be a worthy concept to apply in a future case; we simply decide here to move on to the question of bad faith.

b. "Bad Faith"

The habeas court's finding of "bad faith" is based in part upon what we have already recognized to be an inaccurate definition. "Bad faith" is more than simply being aware that one's action or inaction could result in the loss of something that is recognized to be evidence. As the

cases we have discussed show, bad faith entails some sort of improper motive, such as personal animus against the defendant or a desire to prevent the defendant from obtaining evidence that might be useful. Bad faith cannot be established by showing simply that the analyst destroyed the evidence without thought, or did so because that was the common practice, or did so because the analyst believed unreasonably that he was following the proper procedure.

No evidence in this case suggests that Childs-Henry or Chu acted in bad faith. Chu specifically stated in his affidavit that his consumption of the evidence was not the result of a desire to prevent additional testing. The habeas court was not required to believe that affidavit, but to find bad faith, a finder of fact must do more than simply disbelieve proffered evidence of good faith: There must be some evidence from which an inference of bad faith can be drawn. There is no such evidence here. Neither analyst has been shown to have any animus against applicant—applicant was not even a suspect at the time testing was conducted. Nor is there any evidence that the analysts were aware of any impropriety in their own conduct, such as a history of falsifying test results.[132] The Bromwich Report explained that the failures in the HPD Crime Lab were the result of a lack of training and of the isolation of the DNA section of the Crime Lab from the forensic community, not the actions of "rogue analysts."

The habeas court gave three reasons for finding bad faith. First, it concluded that the analysts must have been aware of a law that was enacted but not yet effective. But the history of Article 38.39 reveals that the statute was not enacted until after the HPD Crime Lab's DNA testing in this

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[132] *Cf. Boyle v. Johnson*, 93 F.3d 180, 185-87 (5th Cir. 1996) (referring to accusations that Ralph Erdmann had falsified autopsies and committed perjury in prior cases); *State v. Clifford*, 328 Mont. 300, 321 n.4, 121 P.3d 489, 503 n.4 (2005) (referring to Erdmann and Fred Zain as examples of experts who misstated, altered, or falsified results).

case. The legislation was originally introduced on January 17, 2001.[133] The bill passed the Senate on February 19, 2001, and passed the House in an amended version on March 22, 2001.[134] After the bill was sent to a conference committee, it passed both houses of the Legislature on April 3, 2001.[135] The bill was signed by the Governor on April 5, 2001, and made effective immediately.[136] As we explained earlier, the DNA from the swab samples was typed on February 20, 2001. We find no basis for the habeas court's conclusion that the analysts were aware of this impending legislation.

Regarding the FBI and NRC recommended standards, we agree that the HPD Crime Lab's analysts should have been aware of them. But given the lack of training and the isolation of the crime lab from the forensic community, it is questionable whether the analysts were actually aware of them. Even if they were, there is no evidence to suggest that they believed that the standards regarding preservation of a sample would apply in this case.

When Childs-Henry discarded the original swabs, there were redundant samples of DNA. Although it would have been better to retain the original swabs, the existence of redundant samples would appear to satisfy the FBI and NRC guidelines.

The evidence is clear that, unlike Childs-Henry, Chu understood that his work would consume all of the remaining sample. The habeas court cited Chu's explanation that he had to consume the sample due to the small amount of DNA, but Chu further testified at trial to conducting

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[133] Texas Legislature Online History, Bill: SB 3, Legislative Session: 77(R), Council Document: 77R 1805 GWK-F.

[134] *Id.*

[135] *Id.*

[136] *Id.*

a cross analysis of the swabs, which could not have occurred unless he tested the material from both swabs, which in turn would require consuming all of the sample. As the Bromwich Report explains, Chu made a mistake in testing samples from both swabs. He should have saved one of the epithelial samples and one of the sperm samples for later testing, which could have been conducted by another DNA lab. But the Bromwich Report does not suggest that Chu's failure to do so was anything other than a mistake.

Finally, though we accept that the habeas court can, from its own recollection, recount common practices within that court, we cannot accept the habeas court's conclusion that the HPD Crime Lab analysts must have been aware of a practice in Harris County regarding any notification that evidence would be consumed in testing. As an example of this practice, the habeas court cited the signed acknowledgment arising in the instant habeas proceedings regarding Orchid Cellmark's anticipated testing. This document, executed years after the public disclosure of serious problems with the HPD Crime Lab, is not particularly probative of the practice followed before these problems came to light. Further, given the trace amounts of DNA and ReliaGene's use of a buffer solution, ReliaGene's testing could have destroyed any remaining sample. At the very least, Pineda's affidavit suggests that ReliaGene's testing could have been expected to degrade the sample further, resulting in a further loss of alleles for any subsequent testing. Yet, there was no acknowledgment regarding ReliaGene's anticipated testing.

Moreover, we see a practical problem with the idea that analysts should have notified the prosecutor of the possible consumption of the evidence in this case. HPD's DNA testing was conducted, and the liquid extract was consumed, before there were any suspects. Whatever the practice of the Harris County Criminal District Courts, there was no defense attorney for the District

Attorney's Office to notify at the time DNA testing was conducted. Given the lack of training received by the HPD Crime Lab's DNA analysts, nothing in the record suggests that Childs-Henry and Chu were aware of any need to notify the District Attorney's Office before consuming the sample, especially since no prosecution was pending.

B. Perjury/False Testimony Claim

1. *The Parties' Arguments and the Habeas Court's Findings*

Applicant claims that Chu's statistical frequency estimate constituted "false testimony" and "possible perjury" by a prosecution witness in violation of the Fourteenth Amendment to the United States Constitution. To support his claim, applicant relies upon statements in the Bromwich Report, a letter from Orchid Cellmark, and statements made by Dr. Johnson in her habeas affidavit. From the Bromwich Report, applicant cites statements that Chu's statistical frequency estimate was "incorrect and misleading" and based upon a practice that was "extremely flawed." Applicant characterizes Orchid Cellmark's statistical frequency estimate of 1 in 255 for African-Americans as "the true statistical frequency for black persons." And applicant cites Dr. Johnson's statements that Chu's trial testimony was "completely unsupported scientifically" and "patently false," as well as her statement that a mixture of DNA "cannot possibly statistically match only one person."

Finding in the State's favor on this claim, the habeas court concluded: "Because the State did not knowingly use false or perjured testimony at trial, the applicant failed to show that he was denied Due Process under the Fourteenth Amendment to the United States Constitution."[137]

Applicant argues in his brief that "logic suggests that . . . if the DNA found on the evidence

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[137] The habeas court cited *Ex parte Castellano*, 863 S.W.3d 476, 480 (Tex. Crim. App. 1993); *Mooney v. Holohan*, 294 U.S. 103, 112 (1935); and *Pyle v. Kansas*, 317 U.S. 213, 216 (1942).

was a mixture of more than one person's DNA, then it could not have come from only one person." Applicant then echoes statements from the Bromwich Report and from Dr. Johnson to the effect that Chu's testimony was "contradictory, incorrect, misleading, completely inappropriate . . . , internally contradictory . . . , unsupported scientifically" and "patently false." Applicant contends that Chu, an agent of the State, committed perjury and that the prosecutor unknowingly presented Chu's false testimony. Applicant also argues that the testimony was harmful because DNA is powerful evidence and Chu's scientific conclusion was dramatic and cast doubt on all of the defensive evidence as well. Applicant also points to Orchid Cellmark's 1 in 255 estimate and the Bromwich Report's 1 in 232,000 estimate as differing from Chu's claim that no one on Earth but applicant could have committed the crime.

The State counters that Chu's testimony was not perjury because no evidence shows that Chu had an intent to deceive or knew that his statistical calculations were false. Characterizing Chu's calculations as "false" or "arguably false," the State contends that applicant is required to show by a preponderance of the evidence that the testimony contributed to his conviction or punishment and that he did not do so. The State discusses a great deal of the evidence introduced at trial and concludes that "ample evidence," aside from Chu's testimony, demonstrates applicant's guilt.

2. *Preservation of Error*

Applicant made no complaint about the alleged falsity of Chu's testimony at trial. There is at least a question regarding whether applicant has forfeited his complaint as a result.[138] This question is complicated by the fact that the State has a continuing "duty to correct 'false' testimony

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[138] *See Estrada v. State*, 313 S.W.3d 274, 288 (Tex. Crim. App. 2010).

whenever it comes to the State's attention."[139] Without expressing any opinion on the preservation of error question, we will address the merits.

3. *The Law*

How we categorize applicant's claim is crucial to determining the standard of materiality or harm to be applied.

(a) *Knowing use of perjured testimony - direct appeal*

A prosecutor who procures a conviction through the knowing use of perjured testimony violates due process:

> [Due process is violated] if a State has contrived a conviction through the pretense of a trial which in truth is but used as a means of depriving a defendant of liberty through a deliberate deception of court and jury by the presentation of testimony known to be perjured. Such a contrivance by a State to procure the conviction and imprisonment of a defendant is as inconsistent with the rudimentary demands of justice as is the obtaining of a like result by intimidation.[140]

A conviction is considered to have been procured through the use of perjured testimony if the perjured testimony is material. The standard of materiality for a prosecutor's knowing use of perjured testimony is the harmless error standard articulated in *Chapman v. California*:[141] the evidence is material (and harmful) unless it can be determined beyond a reasonable doubt that the testimony made no contribution to the defendant's conviction or punishment.[142] This most favorable

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[139] *Id.* at 31.

[140] *Mooney*, 294 U.S. at 112.

[141] 386 U.S. 18 (1967).

[142] *Ex parte Fierro*, 934 S.W.2d 370, 372-73 (Tex. Crim. App. 1996).

materiality or harm standard is available to a defendant on direct appeal.[143]

(b) *Knowing use of perjury - habeas corpus*

On habeas corpus, the standard of harm that must be satisfied to obtain relief may be more burdensome to the defendant than the standard of materiality that must be satisfied to establish a due process violation.[144] In *Ex parte Fierro*, we determined that, where the habeas applicant "had the opportunity to discover the basis of his claim in time to advance it at trial or in a motion for new trial," he must show "by a preponderance of the evidence that the error contributed to his conviction or punishment."[145] In other words, we employed the normal standard on habeas review, with the burden on the applicant.[146]

Where the habeas applicant lacked such an opportunity, we left open the possibility that he might "avail himself of the *Chapman* harmless error standard."[147]

(c) *Unknowing use of perjured testimony - habeas corpus*

We have recently held that due process may be violated by a prosecutor's unknowing use of perjured testimony.[148] In *Ex parte Chabot*, the applicant had no prior opportunity to discover the basis for his claim that DNA evidence proved that the State's witness had perjured himself.[149] In

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[143] *Id.* at 373.

[144] *Id.* at 373-74.

[145] *Id.* at 374-75, 374-75 n.10.

[146] *See id.* at 372.

[147] *Id.* at 375 n.10.

[148] *Chabot*, 300 S.W.3d at 771-72; *see also Ex parte Carmona*, 185 S.W.3d 492 (Tex. Crim. App. 2006).

[149] *Chabot*, 300 S.W.3d at 770.

discussing what harm standard to employ under those circumstances, we said, "[W]e see no reason for subjecting the two types of errors [knowing versus unknowing use of perjured testimony] to different standards of harm."[150] That is, the preponderance of the evidence standard applies, on habeas review, to either the knowing or the unknowing use of perjured testimony.

Chabot did not settle the question left open in *Fierro* regarding whether a more favorable standard of harm may apply to the knowing use of perjured testimony that the habeas applicant had no prior opportunity to discover. Rather, *Chabot* does not appear to have taken into account the caveat in *Fierro*, and so *Chabot* simply stands for the proposition that the preponderance of the evidence standard is appropriate for the unknowing use of perjured testimony that the habeas applicant had no prior opportunity to discover.[151] It remains unsettled whether a more favorable standard might be available to a defendant in the "knowing use" context.

(d) *False testimony as opposed to perjured testimony*

In *Estrada v. State*, we held on direct appeal that false testimony that was not perjury resulted in a due process violation when there was "a fair probability that [the] death sentence was based upon . . . incorrect testimony."[152] In that case, the State's witness gave inaccurate testimony about the prison classification system but was not aware of the inaccuracy.[153] The jury sent out a note

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[150] *Id.* at 771.

[151] The Second Circuit has suggested that the unknowing use of perjured testimony violates due process if a stronger showing of materiality or harm is made than is required by the *Chapman* standard. *Sanders v. Sullivan*, 863 F.2d 218, 225-26 (2d Cir. 1988).

[152] 313 S.W.3d at 287.

[153] *Id.* at 286-87.

regarding the very subject matter of this testimony.[154] It was later determined that the testimony was inaccurate, and the State confessed error on direct appeal.[155] In sustaining the defendant's contention, we held that his complaint was not forfeited because the defendant "could not reasonably be expected to have known that the testimony was false at the time that it was made."[156]

(e) *False testimony in the actual innocence context*

Finally, we observe that our "actual innocence" jurisprudence could encompass a claim on habeas that involved newly discovered evidence that a witness's testimony was false.[157] Under that jurisprudence, the habeas applicant must show "by clear and convincing evidence that, presented with both the inculpatory evidence at trial and the newly discovered or available evidence of innocence, no reasonable juror would have convicted him."[158]

4. *The Present Case*

To obtain the most favorable standard of materiality or harm that might possibly apply, applicant must show that the State knowingly used perjured testimony and that he did not have an opportunity to discover the perjury in time to present a claim at trial or in a motion for new trial (or perhaps on appeal). No one has contended in this case that the prosecutors were aware that there was

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[154] *Id.*

[155] *Id.*

[156] *Id.* at 288.

[157] *See Ex parte Elizondo*, 947 S.W.2d 202 (Tex. Crim. App. 1996) (recantation of trial testimony).

[158] *Ex parte Chavez*, 213 S.W.3d 320, 322 (Tex. Crim. App. 2006).

any problem with Chu's statistical frequency estimate.[159] Nevertheless, we treat perjured testimony as knowingly used if the witness was a member of the "prosecution team."[160] To obtain review under the most favorable standard of materiality or harm, then, applicant must at least show: (1) that Chu was a member of the prosecution team, (2) that Chu committed perjury, and (3) that applicant did not have an opportunity to discover the perjury in time to present his claim at an earlier proceeding.

In Texas, the crime of perjury is committed if "with intent to deceive and with knowledge of the statement's meaning" a person makes a false statement under oath or unsworn declaration.[161] In connection with a claim regarding the knowing use of perjured testimony, the First Circuit relied upon federal law defining perjury as "the willful intent to provide false testimony, rather than as a result of confusion, mistake, or faulty memory."[162] The Fifth Circuit, however, has eschewed "the strict legal definition of perjury" and found "perjury" within the meaning of the prohibition against its knowing use when witnesses "did not candidly respond to the defense counsel's questions."[163]

But regardless of the precise contours of the meaning of "perjury" for the purpose of determining a due process violation, applicant has not demonstrated that Chu committed perjury in this case. The habeas court found against applicant on this claim, so we review the evidence deferentially in the State's favor. Nothing in the record before us suggests that Chu intended to

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[159] The Supreme Court has suggested that the *knowing* use of "false" testimony is treated the same as the knowing use of perjured testimony. *United States v. Bagley*, 473 U.S. 667, 678, 679 n.8 (1985) (discussing *Napue v. Illinois*, 360 U.S. 264 (1959)).

[160] *Fierro*, 934 S.W.2d at 372 ns.2, 3.

[161] TEX. PENAL CODE §37.02(a).

[162] *United States v. Tavares*, 93 F.3d 10, 14 (1st Cir. 1996).

[163] *United States v. Carter*, 566 F.2d 1265, 1270 (5th Cir. 1978).

provide false testimony or to deceive, or that he was less than candid in his testimony. In other words, we have no reason to believe that Chu thought his testimony was inaccurate. The Bromwich Report indicates that Chu's method of calculating the statistical frequency estimate, though extremely flawed, was the HPD Crime Lab's usual practice. The Bromwich Report did not suggest that HPD analysts were committing perjury every time they testified to their usual calculations in court. As we have pointed out, the report said that the problems with the HPD Crime Lab were due to poor training and not to rogue analysts. There is ample support for a finding that Chu did not commit perjury, consistent with the habeas court's conclusion that the State did not knowingly use perjured testimony. Because Chu did not commit perjury, applicant's claim does not fall within *Fierro*'s caveat regarding knowing-use-of-perjury claims that could not have been presented previously. We again leave open that question.[164]

For habeas corpus proceedings involving the unknowing use of perjured testimony, the harm standard would be preponderance of the evidence, as we have stated above. Applicant would not be entitled to a more favorable standard for the unknowing use of false (but not perjured) testimony. The preponderance of the evidence standard is less favorable to applicant than the standard employed in analyzing an ineffective assistance of counsel claim under *Strickland v. Washington*.[165] As explained below, applicant fails to meet the prejudice prong of *Strickland*. This means that

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[164] It is at least questionable whether Chu was a member of the prosecution team and whether applicant lacked the opportunity to discover the perjury at trial or in motion for new trial proceedings. Given our conclusion that there was no perjury, we need not address these issues.

[165] 466 U.S. 668, 693 (1984) ("[A] defendant need not show that counsel's deficient conduct more likely than not altered the outcome in the case . . . . The result of a proceeding can be rendered unreliable, and hence the proceeding itself unfair, even if the errors of counsel cannot be shown by a preponderance of the evidence to have determined the outcome.").

applicant's false evidence claim must also necessarily fail.

C. Ineffective Assistance of Counsel

1. *The Parties' Arguments and the Habeas Court's findings*

In his application, applicant contends that defense counsel Greenlee performed deficiently in failing to hire a forensic or DNA expert. Applicant further claims that, had defense counsel hired an expert: (1) Chu's statistical analysis would have been revealed at trial as false, (2) the jury would have been made aware that Chu violated the standard of care in his profession when he consumed all of the DNA evidence, and (3) defense counsel would have been able to obtain the same type of testing that was later conducted by ReliaGene and Orchid Cellmark. Applicant also contends that Greenlee performed deficiently by failing to object to the DNA test results on the basis of Chu's consumption of the sample, by failing to move for a continuance after Childs-Henry testified that there was liquid extract sample remaining so that DNA testing could then occur, and by failing to adequately cross-examine Childs-Henry and Chu at trial.

In his brief, applicant also points to Greenlee's lack of prior experience in DNA matters and suggests that he could not possibly conduct a proper investigation without the help of an expert. He also argues that there was no good reason for Greenlee to forgo an expert witness who could have enhanced the defense trial strategy of emphasizing the unfairness of the lab's consumption of all of the DNA evidence. Applicant also contends that there were many areas of possible impeachment of the State's experts that were not raised at trial. Applicant also describes as "inexplicable" Greenlee's failure to move for a continuance when Childs-Henry indicated that DNA extract still existed.

Regarding the prejudice prong of *Strickland*, applicant contends that, had counsel performed

properly, the following information would have been learned and used at trial: (1) that Chu's statistical frequency estimate was illogical and false, (2) that the HPD Crime Lab's consumption of the entire sample was unnecessary and improper, (3) that the quality of Childs-Henry's testing for semen was poor, and (4) that obtaining DNA profiles from a mixture was fraught with difficulty. Applicant contends that this information would have changed "the entire complexion of the case."

The State counters that Greenlee made strategic decisions with plausible bases after a thorough investigation. The State points to various acts by defense counsel and his articulated strategies. This discussion by the State essentially rehashes the habeas court's findings.

The court found that Greenlee's testimony at the evidentiary hearing was credible. The court found that Greenlee had a good working relationship with the prosecutors, who provided him with whatever information he requested, and had free access to the State's files and evidence. It also found that Greenlee had no reason to doubt Glaeser's representation that the DNA evidence had been consumed, with nothing left for an independent analysis. The court found that Greenlee's decision to proceed without an expert was based on a strategy of arguing to the jury the unfairness of being denied an opportunity to conduct independent testing. The court found that this strategy was formulated after a thorough investigation that included consulting at least one other defense attorney.

The court also pointed to Greenlee's strategy of cross-examining the crime scene officer, Verbitskey, to show that he was not qualified to collect the swabs from the victim's cheek and may have exposed the evidence to contamination. The court found that defense counsel's cross-examination of Childs-Henry was strategically designed to show that she was results-oriented, could not describe the protocol and procedures she followed in performing the DNA extraction, and could not confirm that she followed the proper steps in the proper order during the procedure. The court

also found that Greenlee's cross-examination of Childs-Henry elicited what Greenlee perceived to be the beneficial testimony that only a "sloppy chemist" would consume all of the evidence in performing a DNA analysis. And the court found that defense counsel cross-examined Chu with a strategy toward "demonstrating that Chu had consumed all of the DNA evidence without regard for the fact that the defense was denied an opportunity to conduct independent DNA testing." The court further found that Greenlee believed that his cross-examination succeeded in this purpose and that he did not need a consulting expert to accomplish that end.

The court also found that defense counsel emphasized in closing argument that the defense was unfairly denied the opportunity to conduct independent DNA testing and that the jury should not accept the DNA results solely on the word of the State's witnesses.

The court further found that defense counsel did not move to suppress the DNA test results because he did not believe he had a valid legal basis for doing so. The court also found that Greenlee was surprised by Childs-Henry's testimony that there was DNA sample remaining, that Greenlee explored this issue with the prosecutor and the State's witnesses, and that Greenlee determined that there was in fact no DNA sample left to test. And the court found that the problems with the HPD Crime Lab did not become public knowledge until November 2002. The court further found that, against counsel's advice, applicant made an intelligent, knowing, and voluntary decision to testify. The court found that Greenlee believed that the negative consequences of applicant's decision to testify outweighed the negative impact of the DNA evidence.

Based upon its own independent recollection of the trial, the court found that Greenlee's cross-examination of HPD Crime Lab personnel was "effective trial strategy in that it was aggressive, probing, confrontational and effective" regarding an attack on the HPD Crime Lab

protocol. The court also found that Greenlee's decisions—not to retain a consulting expert, not to pursue independent DNA testing, and not to seek a continuance—"were all made after a thorough investigation and were reasonable trial strategy." The court echoed this particular finding in its conclusions of law, and the court also concluded that applicant failed to show that the trial court would have committed error in denying a motion to suppress the HPD Crime Lab's DNA test results.

2. *Deficient Performance*

Strickland prescribes a two-part test for determining whether a defendant has been constitutionally deprived of effective assistance of counsel: (1) deficient performance, and (2) prejudice.[166] Deficient performance means that "counsel made errors so serious that counsel was not functioning as the 'counsel' guaranteed the defendant by the Sixth Amendment."[167] To establish deficient performance, "the defendant must show that counsel's representation fell below an objective standard of reasonableness."[168] When trial counsel does not conduct a complete investigation, his conduct is "reasonable only to the extent that reasonable professional judgments support the limitations on investigation."[169]

Despite the habeas court's findings, the record raises serous issues with respect to Greenlee's performance. One reason Greenlee gave for declining to hire an expert was that the expert might validate the procedures followed by the HPD Crime Lab in this case. But defense counsel could have initially hired an expert for consulting-only purposes, to be designated later as a testifying

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[166] 466 U.S. at 687.

[167] *Id.*

[168] *Id.* at 688.

[169] *Wiggins v. Smith*, 539 U.S. 510, 533 (2003) (internal quotation marks omitted).

expert if the expert's opinions turned out to be favorable. In *Williams v. State*, a case decided years before applicant's trial, we recognized that an indigent defendant was entitled to make his request for funds to hire an expert witness in an *ex parte* hearing.[170] The rationale underlying our holding was the need to protect the confidentiality of the defendant's work product.[171] In *Skinner v. State*, decided the same year as *Williams*, we explained that an expert's "comments about the strengths and weaknesses of the defense theory" were covered by the work product doctrine.[172] *Williams* also quoted a Fifth Circuit discussion that emphasized the need to treat monied and indigent defendants equally:

> The government should not be able to obtain a list of adverse witnesses in the case of a defendant unable to pay their fees when it is not able to do so in the cases of defendants able to pay witness fees. When an indigent defendant's case is subjected to pre-trial scrutiny by the prosecutor, while the monied defendant is able to proceed without such scrutiny, serious equal protection questions are raised . . . .[173]

A defendant with the resources to hire his own expert could hire someone on a consulting-only basis without the State ever discovering that he had done so.[174] Under *Williams* and *Skinner*, an indigent defendant has the same capability.

In choosing to forgo an expert, defense counsel elevated the importance of his own personal

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[170] 958 S.W.2d 186, 194 (Tex. Crim. App. 1997).

[171] *Id.*

[172] 956 S.W.2d 532, 538-39 (Tex. Crim. App. 1997).

[173] *Williams*, 958 S.W.2d at 193 n.8 (quoting *United States v. Meriwether*, 486 F.2d 498, 505-506 (5th Cir. 1973)).

[174] *See Pope v. State*, 207 S.W.3d 352, 365-66 (Tex. Crim. App. 2006) (citing *Williams* and observing that a "simple solution" to the possibility that a prosecutor could comment on the existence of a defense expert is that a party can "investigate first, consult second, designate third").

investigation of DNA science. We will not discount the possibility that an attorney with no prior knowledge of DNA matters may become sufficiently knowledgeable through his own diligent sifting of the scientific literature, without the aid of an expert. But it is apparent in this case that Greenlee was not able to acquire sufficient knowledge on his own. Had he done so, he would have known that the HPD Crime Lab failed to adhere to accepted practices when it consumed all of the DNA evidence, and he would have understood that Chu's statistical frequency estimate was probably incorrect. Even without an expert of his own, Greenlee could have at least cross-examined Chu with relevant scientific literature—such as the FBI and NRC standards—regarding the desirability of retaining a portion of the DNA evidence for additional testing.[175] Defense counsel could have pointed out, through questioning and argument, that two of the tubes of DNA material were redundant and did not have to be tested. That Greenlee did none of these things shows that he was probably ill-equipped to research the field without expert assistance.

Even so, defense counsel should have conducted an investigation that was diligent enough to reveal that he needed the help of an expert in preparing for trial and cross-examining witnesses. In 2001, a variety of investigative tools existed that would have enabled Greenlee to determine that he needed an expert witness, including: an informal pre-hiring consultation with an expert, consultation with knowledgeable defense attorneys, continuing legal education, use of a medical library, and use of the internet. Although Greenlee consulted other attorneys, we cannot conclude that doing so was sufficient investigation in this case given the fact that Greenlee still lacked much understanding of DNA science.

And expert testimony would probably have given a boost to the defense beyond what could

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[175] *See* TEX. R. EVID. 803(18) ("Learned Treatises" exception to the hearsay rule).

have been accomplished through cross-examination. A live expert could have explained that the FBI and NRC guidelines were not followed when Chu consumed virtually the entire sample in this case, and an expert could have testified to the flaws in Chu's statistical frequency calculation and given a more accurate calculation of the random match probability. A defense expert's testimony on these subjects would have been likely to carry more weight with a jury than cross-examination alone. Cross-examination may render unnecessary the presentation of one's own expert, especially if the cross-examination aggressively exploits learned treatises,[176] but that did not happen in this case.

Greenlee did bring up the unfairness of consuming the DNA evidence, but Chu's rejoinder was that the sample size was so small that it had to be used up. The defense's cross-examination of Chu gave the jury no reason to think that Chu's effective consumption of the entire sample was anything other than an unfortunate but unavoidable circumstance.

The only evidence that potentially attacked Chu's explanation was the testimony elicited from Childs-Henry that the entire sample could be consumed if the chemist was sloppy. But Childs-Henry also said that the entire sample could be consumed if it was too small, which was consistent with Chu's explanation. And while Childs-Henry indicated that the sample was large enough to have some left for re-testing, the credibility of that assessment was undermined by her error in believing that some sample still remained. Defense counsel did a creditable job of impeaching Childs-Henry with her inability to explain her own procedures; her mistake regarding the existence of any remaining sample, though a surprise, impeached her credibility as well.

However, we reject applicant's contention that Greenlee was deficient in failing to move for a continuance after Childs-Henry's testimony that DNA material remained to be tested. The

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[176] *See id.*

evidence at trial (as well as the habeas proceedings) was that Childs-Henry was simply mistaken in her belief that there was liquid extract remaining. We do not think her testimony at trial fairly raised the notion that there might be trace amounts of DNA adhering to seemingly empty tubes. To the extent that her testimony suggested that there should have been DNA material remaining, that conclusion was one that Greenlee should have drawn prior to trial, and we have already concluded that Greenlee was deficient in that regard.

3. Prejudice

Having found deficient performance, we turn to the question of prejudice. The prejudice prong of *Strickland* requires showing "a reasonable probability that, but for counsel's unprofessional errors, the result of the proceeding would have been different."[177] "A reasonable probability is a probability sufficient to undermine confidence in the outcome."[178] It is not enough that counsel's errors could have had "some conceivable effect on the outcome of the proceeding," but a defendant does not have to show that counsel's deficient conduct "more likely than not altered the outcome of the case."[179] This usual standard for showing prejudice is not always sufficient, however. If the proceeding was "rendered neither unreliable nor fundamentally unfair" by counsel's deficient performance, then the prejudice question can be answered in the negative to prevent the defendant from obtaining a "windfall."[180]

As we explained in connection with his *Youngblood* claim, applicant would not have been

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[177] 466 U.S. at 694.

[178] *Id.*

[179] *Id.* at 693.

[180] *Lockhart v. Fretwell*, 506 U.S. 364, 366 (1993).

entitled to the suppression of the DNA test results. Had counsel conducted a proper investigation, an attack might have been made on the quality of Childs-Henry's testing, but there is no indication that such an attack would do anything to undermine the validity of Chu's results, which were based upon his own testing. Defense counsel would have been able to introduce evidence that consuming the entire sample was bad laboratory practice, but there is no indication that the test results themselves flowed from any flawed practices. To the contrary, Bromwich characterized Chu's work as generating "good quality and clear results" and developing "clean, interpretable profiles." And a jury would still be confronted with the fact that the genetic typing occurred before applicant even became a suspect—eliminating the possibility of contamination from applicant's own DNA.

Had defense counsel conducted a proper investigation, he would have been able to introduce evidence that Chu's statistical frequency estimate was flawed, and he would have been able to introduce a correct estimate in line with Bromwich's calculations: e.g. a random match probability for the African-American population of 1 in 232,000. A probability of 1 in 232,000 is still quite low, although, with a city the size of Houston, it might allow for the possibility of a handful of other people matching the test results.

But when a 1 in 232,000 random match probability is combined with the other evidence introduced at applicant's trial, there is no reasonable probability of a change in outcome. The victim picked both applicant and his car out of separate lineups. Although the victim could not or did not identify applicant via closed-circuit television at trial, the victim indicated that he was positive when he picked applicant out of a pretrial lineup, and the circumstances surrounding that pretrial identification (the victim's smile when the camera panned on applicant) further reinforces the identification. A composite sketch drawn from the victim's descriptions was consistent with

applicant's appearance. The exterior and interior of applicant's house, along with his yard, were consistent with the descriptions given by the victim to law enforcement. Purple clothing found in applicant's house and car were also consistent with the victim's prior descriptions, as was a dark baseball cap recovered from applicant's car. The color of the interior of applicant's car was consistent with the victim's description, and the exterior of the car was damaged in a way that was consistent with the victim's brother's description. And the bottle of orange cocoa butter lotion found in applicant's house matched the victim's description of "orange grease" used by the perpetrator.

At trial, E.T. identified from photographs various items that looked like items he encountered when he was kidnapped: the outside of applicant's house, the brown couch, the purple clothes, and a Houston Oilers cannister. E.T. pointed to circles on applicant's sidewalk that he recognized.

Applicant's defensive evidence was not helpful. His alibi was full of holes. Although electronic monitoring established that applicant arrived home at 3:07 p.m., that arrival time did not exclude him as the perpetrator. The family members who attempted to establish an alibi gave testimony that was inconsistent with each other and with their own prior statements, resulting in estimates for applicant leaving the Savage residence ranging from 1:30 to 3:30 p.m. The prosecution effectively exploited David Savage's testimony that he saw applicant on television on February 12th, at which time applicant was not a suspect, but the composite drawing was being shown. Finally, applicant himself stated that the victim was taken to an apartment "before he come to my house." It is not apparent how this could be taken as anything other than an inadvertent admission that the child was at applicant's house.

The jury also heard applicant's refusal to acknowledge responsibility for any of the offenses he had already been convicted of. And applicant's testimony, some of which was evasive, showed

his disregard for the geographical-limitation conditions of his parole and his numerous violations of those conditions.

Applicant's testimony also suggested his own consciousness of guilt, as he advanced implausible explanations in an attempt to distance himself from evidence that tended to link him to the crime: He denied owning the cocoa butter lotion—saying that he must have taken it from his brother's room and that it was owned by his brother's sister. And applicant denied that his car was damaged on February 11th, claiming that the police must have caused the damage while the car was in their custody. And he accused parole officer Butler of lying about the conditions of his parole. All of the evidence shows a very strong case against applicant, even when Bromwich's criticisms of the HPD Crime Lab's conduct are taken into account.[181]

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[181] Although not argued by applicant, a position could perhaps be taken that applicant might not have testified or might not have insisted on the parole officers' testimony absent Greenlee's deficient performance on the DNA matters. Such an argument would not change our conclusion with respect to prejudice for at least three reasons. First, even accepting Bromwich's criticisms, and even without the testimony of applicant or his parole officers, the evidence so strongly supports conviction that we would not find a reasonable probability that the outcome would be different. Second, effectively presenting Bromwich's criticisms to the jury would not change the apparent need for an alibi, so we cannot find a reasonable probability that applicant would have refrained from testifying or would have refrained from insisting on the testimony of his parole officers. Third, even if it could be shown that applicant would not have testified, it would be unclear whether he could avoid the incriminating effects of his testimony under the prejudice prong of *Strickland*. The Seventh Circuit and the Supreme Court of Indiana have suggested that, under *Lockhart v. Fretwell*, a defendant's own incriminating testimony, at least where it was gratuitous, can defeat a finding of prejudice. *United States v. Parker*, 609 F.3d 891, 895-96 (7th Cir. 2010) ("Parker has only himself to blame for admitting under oath to a quantity of drugs he now disputes."); *Smith v. State*, 689 N.E.2d 1238, 1248 (Ind. 1997) (At sentencing, defendant testified that "he was no longer claiming that he did not molest his daughter." Having "admitted that his trial testimony to the contrary was not truthful," the defendant could not "on appeal make a credible argument that the result of his trial was unjust and unreliable."). No one forced applicant to testify that the complainant was taken to his house, that the cocoa butter lotion found at his house was not his, that one of his parole officers lied, that applicant had no regularly scheduled reporting date, or that he did not commit the sex offenses for which he had been previously convicted.

Finally, we conclude that the new test results from ReliaGene and Orchid Cellmark do not alter the prejudice analysis in applicant's favor. It is not a foregone conclusion that an "effective" attorney would have sought further testing upon discovering the errors committed by the HPD Crime Lab in this case.[182] Even so, we have already explained, in connection with the *Youngblood* discussion, that the test results from ReliaGene and Orchid Cellmark were not exculpatory, but rather tended to incriminate applicant.

III. CONCLUSION

For the reasons outlined above, we reject applicant's *Youngblood*, perjury/false statement, and ineffective assistance of counsel claims.[183] We deny relief.

Delivered: September 29, 2010
Publish

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[182] *See Skinner v. State*, 293 S.W.3d 196, 202-03 (Tex. Crim. App. 2009) ("counsel explained that he did not ask for testing because he was afraid the DNA would turn out to be appellant's").

[183] Applicant also advanced two claims in his habeas application that we did not file and set: a claim of actual innocence and a *Brady* claim. Various aspects of our discussion defeat these claims as well. We reject these claims without further comment.