
STATEMENT OF FACTS

Vanessa Place

INTRODUCTION

Karen K. and her husband were kidnapped by two men at gunpoint; Karen was sexually assaulted a number of times by both men, who were later joined by a third assailant. Karen's husband was kept in the bed of their truck most of the time, though he was periodically taken out to drive to various locations. Danny Gilles was apprehended, identified by Karen and her husband as one of the two original assailants, and convicted. Karen and her husband positively identified another person in appellant's live lineup as the second perpetrator, and could not conclusively identify appellant in a photo lineup or in court. Appellant's mother and half-brother testified appellant was home the night of the attack. Based on a mixed DNA sample taken from Karen, prosecution experts testified the probability that a random person other than appellant contributed to the mixed source sample was 1 in 260 million.

PROSECUTION CASE

On February 15, 1999, a little after 10:00 p.m., Karen K. and her husband, Alejandro, were parked in their truck in a lot off Ventura Boulevard. Alejandro was in the driver's seat, Karen in the passenger's. As they sat, two men approached: one came to the driver's side window, the other to the passenger's side. The man at the driver's window was big, heavy, the other tall and skinny.¹ The big one had a gun. (RT 438-442, 536-538) The big guy said he wanted money; handing over a few quarters,² Karen and her husband said they had no other money. Coming around

¹ In a previous hearing, Karen referred to "the big guy" and "the skinny guy." (RT 442)

² Alejandro testified he gave the men forty or sixty dollars, plus about ten dollars in quarters, and his wallet. (RT 538-539, 580)

to the passenger's side, the big guy opened the door and told Karen to get in the back seat. The big guy took the passenger's seat, the skinny guy got in the back. (RT 442-444) As the truck began to move, the skinny guy told Karen not to worry, that everything would be all right. Karen responded, "please don't hurt me because I am pregnant." The skinny guy assured her that she would not be hurt because they just wanted money. (RT 445-446, 540)

The big guy told Alejandro to drive to the bank, and park behind the building. After Alejandro got out of the truck to withdraw more money from the ATM, the skinny guy touched Karen's breasts and vagina, and the big guy touched her vagina. Karen was scared because the big guy had a gun.³ (RT 446-448, 519-520, 539-541, 563) Alejandro returned to the truck, and gave the big guy sixty dollars.⁴ The big guy became angry at the amount, saying, "this is all you have?" Alejandro asked if the men were going to leave them alone, the big guy said no, and hit Alejandro in the face with the gun. Alejandro was bleeding as he drove the group away from the bank. (RT 449-450, 492-493, 520-521, 542-544)

The big guy directed Alejandro to a dark residential neighborhood, escorted him to the bed of the truck, then returned to the cab.⁵ The big guy and the skinny guy began touching and kissing Karen. The skinny guy told her to suck his penis; she did. The skinny guy also put his penis in her vagina, put his fingers in her vagina, and put his penis in her behind.

³ Karen testified she gave her jewelry to the big guy around this time. (RT 465) Alejandro testified she gave them the jewelry before driving to the bank. (RT 539)

⁴ At Gilles's trial, Karen testified Alejandro gave Gilles fifty dollars from the ATM. (RT 520-521) Alejandro testified he was unable to withdraw money, and returned empty-handed. When he returned, he saw Karen's head angled towards the skinny guy's lap; the guy's pants were down to his knees. (RT 542-544)

⁵ Alejandro was laying on his back in the bed of the truck; he couldn't see what was going on in the cab, but heard Karen ask if he was okay, and felt the truck shaking. They were parked for forty-five minutes to a hour. (RT 546-548, 565, 584)

The big guy had her suck his penis, and penetrated her vagina and anus with his penis. Each man effected each act more than once. Periodically, Karen would lean over the front seat to suck the big guy's penis while the skinny guy put his penis in Karen's behind; then the positions would be reversed, and she would suck the skinny guy's penis while being penetrated by the big guy. The episode lasted over an hour. (RT 450-457, 545, 565)

At some point, Alejandro was brought back into the truck to drive to another area,⁶ where the sexual assaults resumed: Karen sucked the skinny guy's penis, the skinny guy put his penis in her butt and vagina, and ejaculated in her vagina. (RT 457-459, 545) Another car drove up, and a short man in a red sweater changed places with the big guy; Karen sucked his penis as the skinny guy penetrated her behind, and the big guy waited outside the truck. The big guy, the skinny guy, Alejandro and Karen then left that area, driving to a new neighborhood, the third man following in his car. (RT 459-462, 551) They parked, and everyone got out of the truck.⁷ Karen was naked. The skinny guy told Karen that she wanted to go home with him, but Karen said she couldn't leave her little girl. The big guy said something inaudible to Karen, then told her to come closer. She did, and he hit her in the face, saying "Did you hear what I said?" Karen said she had, and the three men left in the car, throwing the truck keys away. (RT 461-462, 552, 557, 567)

As soon as the men left, Alejandro sat up; he and Karen ran to a nearby house, banging at the door until a woman let them in. Someone then called the police. (RT 463, 552-553, 601)

⁶ The skinny guy moved to the front passenger seat for the drive; the big guy went to the back seat with Karen. Alejandro did not notice any sexual activity at the time. (RT 548-549) At the new location, Alejandro was ordered to lie face down in the truckbed. At this point, Alejandro vaguely remembered a third person appearing. He again felt the truck shaking "a little bit." Alejandro thought they were at the new area for about fifteen minutes. (RT 549-551, 565-566, 84)

⁷ Alejandro rode in the truckbed; they stopped at this final location for a few minutes, until Alejandro heard someone say, "Come on T," a couple of times. The big guy then told Alejandro they were going to let them go. (RT 551-552)

A patrol unit responded to the radio dispatch at 12:21 a.m.; the officers found Alejandro and Karen waiting on someone's front lawn.⁸ Alejandro's cheek was bleeding. Karen was crying, saying she'd been raped, was pregnant, and did not want to lose the baby. A black jean jacket, a white shoe, an ink pen, five tissues, a keyring and keys were recovered at the scene: the shoe was Karen's, the keyring and keys were Alejandro's. (RT 609-612, 619-620, 647-649, 673-676, 953-955, 979-980, 985, 1154-1156) Alejandro remembered one of the men throwing a tissue out of the truck while they were parked in the dark neighborhood. Karen did not. (RT 521-522, 584, 957) The officers escorted the couple to the hospital to be examined; while at the hospital, Karen told police she'd initially been raped by two men: the big guy and the skinny guy.⁹ The big guy had a weapon, both men sexually assaulted her. Karen said the skinny guy kissed her, put his arm around her, his hand inside her clothes, fondled her breasts, forced her to orally copulate him twice, and to engage in repeated vaginal sex and one episode of anal sex. (RT 613-618, 622, 630-631, 649-650, 668, 683)¹⁰ Karen told police the men positioned her over the car seat so that as the skinny guy was vaginally/anally penetrating her, she was orally copulating the big guy sitting in the front of the car. (RT 618-619) Both men

⁸ A television crew arrived first; the camera lights were on, but the crew did not interfere with the investigation. (RT 670-671, 990-991)

⁹ Karen described the big guy to police as a "male black, approximately 200 pounds, wearing dark gray sweater and black jeans." The skinny guy was described as "a male black, approximately 130 pounds, no height. Hooded gray sweatshirt, with black jeans." (RT 622, 626-627, 641) After this testimony, appellant stood in the courtroom at counsel's request. (RT 630) Alejandro described the heavier man as a black male, about 5'10" or 5'11", 200 pounds, and identified him as either "the one with the braids" or the "one who had the gun"; the thinner man was described as about the same height, 130 or 140 pounds. (RT 660-663, 679-682)

¹⁰ Based on Alejandro's narration of events, the officers reconstructed the mileage from start to the Bank of America as 1.1 miles, from the bank to the freeway area as .4 of a mile, from the freeway area to the Ventura Club, 1.6 miles, from the Ventura Club to where Alejandro and Karen were left, .4 of a mile; the total mileage was approximately 3.5 miles. (RT 650-653, 685)

ejaculated. (RT 620, 639-640) After the assaults were over, the skinny guy said to Karen: "I liked it. It was very good. You're not going to tell the cops, right? Are you sure you don't want to leave your husband and come with us?" According to Karen, she answered, "No, thank you. I have a child waiting at home for me." (RT 620-621)

Alejandro told police he was in the truckbed most of the time, and was unable to see what was going on in the cab. The truck was moving and swaying, and the domelight went on from time to time. (RT 663-665, 669) At one point, Alejandro heard the big guy say, "Come on T, come on T," and "I'm going to drive, I'm going to drive." To "Come on, T," Alejandro heard someone respond, "Wait. I haven't finished yet." (RT 665-668)

A sexual assault examination was done on Karen: she had a suction-type bruise on the right side of her neck, and scratches on her back and lower legs. Her anus was extremely swollen, there were multiple deep lacerations at the interior base, some of which were bleeding. These sort of "fairly severe" rectal injuries appeared to be the result of multiple attempts at penetration with blunt-force type pressure. (RT 703-704, 707-710, 732) Both labia majora and minora were extremely swollen and red; there were small abrasions at the posterior fourchette, and a bruise on the hymen, also indicative of forced intercourse. (RT 711-713) Karen told the nurse three men assaulted her: one characterized alternatively as "fat," "the big guy," "the large one," and the "one with the gun,"¹¹ the second described as "skinny," "tall and slender," and the third, who was described as having a medium build. All three were black males, about 25 years old. Karen said she was assaulted vaginally, anally, and was forced to orally copulate her assailants. The "skinny" one was involved in multiple instances of each type of assault; Karen indicated she was assaulted by the skinny guy and the big guy

¹¹ Karen told the nurse the big guy weighed between 250 and 300 pounds. She did not estimate the weight of the skinny guy. (RT 751-752)

simultaneously about four or five times over the course of the two hour attack. At one point, Karen sat facing the skinny guy as they had intercourse. Karen said the skinny guy penetrated her “very deep” and ejaculated during most all of the three types of encounters, she first thought the big guy had not ejaculated, then decided he had.¹² (RT 714-720, 742) Karen also reported she’d had intercourse with her husband within 72 hours of the assaults. (RT 730)

Before the rape kit could be taken, Karen went to the bathroom, wiped herself with toilet paper, rinsed out her mouth, and washed her face. This could have resulted in the loss of evidence. Sample swabs were taken from Karen’s vaginal canal, her external genitals, of a vaginal lavage and an aspirate, from her breasts, and from the hickey. The samples were placed in an evidence envelope along with Karen’s clothes and given to police. (RT 727, 729, 732, 736-738, 743-746, 748-751, 754) The rape kit was given to the officer in an 18”x 12” white envelope; the officer could not recall whether it was sealed. The patrol officer gave the envelope to another officer at the Van Nuys station who was to book the item into property. (RT 525-530, 633-636, 677-678, 683-684, 686-687, 922-926)

Appellant’s wife testified appellant and Danny Gilles had been friends since high school. In January, 1999, appellant, his wife, and Gilles still socialized with their circle of high school friends. Appellant and Gilles also frequently did things on their own. (RT 850-852, 860-861, 863-864) Danny Gilles was arrested on March 29, 1999; appellant was arrested that April. (RT 941, 961)

PRIOR SEX OFFENSES

Jacquie B.

On September 7, 1996, Jacquie B. went to visit her Marine boyfriend, Stephen Chasen, who was stationed at Camp

¹² Karen told the nurse that the big guy had problems penetrating her as well as ejaculating when orally copulated; he was frustrated, “sweating and getting upset.” (RT 719)

Pendleton. Appellant was Chasen's roommate in the Bachelor Enlisted Quarters. (RT 766-767, 785-787, 803, 867) Jacquie spent the night with Chasen in the barracks, appellant was not there. At about 4:00 a.m., Chasen left; Jacquie expected him to return sometime the following evening, and thought she would be alone until then. (RT 768)

Jacquie went back to sleep. Around 7:00 a.m., appellant¹³ touched Jacquie's arm, waking her, then tried to crawl into bed with her. Jacquie curled against the wall with the blanket. Appellant, who was nude, tried to pull the blanket away, saying he just wanted to see. (RT 769-774, 785, 788, 796, 802) Jacquie said no, and scratched appellant's side with her fingernail as she pushed him away. (RT 774-775, 790) Appellant put his arm around Jacquie's neck, his hand over her mouth, pulled her back, and threw her onto the bed, flipping her onto her stomach, then on her back. Jacquie continued saying "no." Appellant told Jacquie he would kill her if she screamed, moved his hand from her mouth and spread her legs apart. Initially unable to penetrate her, appellant spit on his hand, lubricated himself, and put his penis in her vagina. (RT 775-777, 791-792) Jacquie was still protesting and pushing; at some point, appellant stopped, went to the bathroom, then to his bed. Jacquie remained on the other bed, crying. At around 9:30 a.m., after she thought appellant had fallen asleep, Jacquie got up, took a shower, made her boyfriend's bed, and left.¹⁴ (RT 777-778, 784, 792-794, 797)

Jacquie drove to the beach. (RT 804) On her way, she passed through a guard station, but did not report the rape because the military "always stick together..." She didn't call 911 because

¹³ Jacquie testified appellant looked "similar" to the man who attacked her, describing her assailant as 6', fairly thin, and African-American. All she could remember about the perpetrator's face was that it was thin. (RT 772-774)

¹⁴ On cross-examination, Jacquie said she left the barracks around 8:45 a.m. and drove around the beach awhile, trying to decide if she wanted to go on the beach or not. (RT 819, 828)

she wasn't "prepared for that at that time." She didn't call her father because she "didn't want to add to his problems" of his job. Jacquie's father is a 19-year veteran LAPD officer. (RT 805, 820-822, 831-832) Jacquie went to Carrows. (RT 804, 829) Two hours later, Jacquie met Chasen at the base Burger King. Chasen said, "Oh, I see you met my roommate," Jacquie said she had, but didn't like him very much. Chasen asked why; Jacquie said "nothing." (RT 778, 795, 798, 803-805, 820, 827) Chasen persisted; after Jacquie repeatedly told Chasen "nothing," she said she would have appellant killed, then told Chasen what happened. After talking to Chasen, Jacquie reported the incident to the military police. (RT 779-780, 792, 795, 799)

Jacquie had visited Camp Pendleton fifteen to twenty times before the incident. Some of the visits were to see Chasen, some to tag along with her sister, who had a boyfriend there. Jacquie has dated one other Marine. (RT 825-826)

When arrested, appellant had a scratch mark on his right side, beneath the rib cage. (RT 869-872)

Melanie T.

Appellant and his wife had a mostly consensual sexual relationship. (RT 855) However, during one encounter in August, 1995, when appellant said he wanted to have sex, his wife said they could try, though it was painful because she'd had a Cesarean section less than six weeks earlier. As they were having sex, Melanie told appellant it was hurting her and asked if he would stop. Appellant asked if she could wait until he finished; she said she couldn't, but appellant did not stop. Melanie tried to push him off her, hitting him. Appellant pinned Melanie's legs with his legs and pinned her arms with his hands while continuing to penetrate her. (RT 855-856, 859) Appellant told his wife she had to wait until he was finished "this time." During the incident, Melanie was bleeding from her vagina. (RT 857, 860)

Melanie told a Marine “agent” about the episode when she was interviewed a year later, she recanted because she did not want to cause her children to lose their father. (RT 858-859)

THE IDENTIFICATION

The Eyewitness Identification

Alejandro identified Danny Gilles as the big guy at a live lineup two months after the attack. Afterwards, he identified appellant as the skinny guy in a photographic lineup; in his written remarks, Alejandro said, “I think it is No. 3, but his hair is different.” Alejandro did not identify appellant as the skinny guy at a live lineup, identifying another person as the perpetrator. At trial, when asked if he saw the skinny guy in the courtroom, Alejandro said he was “not really sure,” but that appellant looked “a little” like the guy. (RT 553-554, 568-573, 576-579, 595, 927-929, 937-939, 946, 974, 976, 990) When asked again, Alejandro said he was “not really too sure,” appellant was the skinny guy. (RT 580)

Karen identified Gilles the big guy at a live lineup and appellant as the skinny guy from a photographic lineup six to eight weeks after the incident. In her written remarks, Karen indicated appellant “looks like the second guy, that he did not have a moustache and his hair was longer.”¹⁵ She wasn’t sure it was the perpetrator. A year later, Karen was unable to identify appellant at a live lineup. (RT 465-467, 470-471, 475-478, 499-500, 503, 522-523, 531-532, 940, 947-948, 951, 974, 977) At trial, Karen identified out appellant as the skinny guy, noting that she was “not sure” it was the same man, and that one of the reasons she pointed to appellant was that he was in the courtroom. When the prosecutor asked how she was able to identify appellant as the skinny guy, Karen said “Because I know it’s him. I have—

¹⁵ Both Alejandro and Karen identified No. 3 in the photographic lineup. (RT 571, 949-950)

I could see. He looks like him a little.”¹⁶ When the prosecutor asked if she was sure, she repeated, “I’m not sure it’s him.”¹⁷ (RT 468-470, 521) When defense counsel asked if she was certain appellant was the skinny guy, Karen said she was “not certain.” There were no other defendants in the courtroom; Karen had also seen appellant sitting at counsel table during a pretrial hearing.¹⁸ (RT 471-472, 496, 508-510)

During the incident, the truck’s interior light came on several times while the skinny guy was next to Karen. They looked at each other for more than an hour: Karen got a “good” look at the man, and tried to memorize his face. (RT 513-516, 522, 533) Alejandro got a better look at the big guy than the skinny guy. (RT 581-588)

A police sketch artist composed sketches of two suspects based on Alejandro and Karen’s descriptions, meeting with them between an hour and a half to two and a half hours each, revising the drawings as directed. (RT 904, 909-915) The resulting sketch of the thinner suspect showed no facial hair; in the photo lineup, appellant had a distinctive goatee and moustache. That photograph was taken on February 24, 1999, nine days after the rape. (RT 914-915, 967, 978)

Physical Identification Evidence

None of the perpetrators wore gloves. At some point, the back

¹⁶ Karen said appellant had similar eyes and hair as the skinny guy, and was skinny. (RT 471, 532)

¹⁷ Asked if the person identified in the photo lineup was the skinny guy, Karen testified she was not sure; asked if she was sure when she selected the photo, she said yes, and agreed her memory had been better at that time. On cross-examination, Karen said she wasn’t positive “it was him or not” when she picked appellant out of the photo lineup. (RT 487-488, 498, 530-531) Karen worked with a police sketch artist a few weeks after the incident: the sketch bore “a resemblance” to the skinny guy. Alejandro thought the sketch looked “pretty similar” to the perpetrator, but thought Karen was “a little bit more better” in describing the man to the sketch artist. (RT 493-495, 575, 585-586, 596-597) Karen had no problems identifying Downy as the big guy. (RT 523-525)

¹⁸ Karen “didn’t think” that helped her identify appellant. (RT 511)

window was opened by one of the assailants. The assailants opened and closed the truck doors at various times; the big guy drove the truck, and the skinny guy may have grabbed the door handle to get into the back. (RT 534-535, 582-583, 592-595) The truck was taken to a police garage to be searched for fingerprint and other physical evidence, including hair and fiber samples. (RT 987-988, 1156-1158) Fingerprints were lifted from nine areas of the truck: eight of the sets belonged to Alejandro, and one was unattributed. None of the fingerprints matched appellant. (RT 1158, 1184-1189)

The DNA Evidence

DNA is found in every nucleated cell, packaged into chromosomes. Humans have 23 pairs of chromosomes, one member of each pair from the mother, and one from the father. Most human DNA is the same, and encodes such universals as the ability to breathe, digest, and see. A small percentage of DNA differs from individual to individual, and it is at those points DNA is forensically examined. (RT 1234)

The purpose of DNA testing is to exclude people based on the DNA structure at thirteen different genetic loci: at each location, it is possible to exclude those who do not share the type of DNA found on the forensic sample.¹⁹ (RT 1235, 1330-1332, 1338) In PCR testing, particular regions of DNA are targeted, multiple copies made, and the thirteen loci examined. This process is performed on DNA extracted from the material in question, on DNA extracted from the victim's standards, the suspect's standards, and any additional convenient standards. (RT 1246-1247, 1249, 1316, 1321)

Stutter is a common technical artifact of PCR testing; stutter peaks can resemble alleles. There is a subjective component to reading the data on the electropherogram promulgated

¹⁹ It is theoretically possible to examine additional loci which might then exculpate a suspect. (RT 1290-1291, 1298-1299, 1329-1331, 1339-1341)

by the capillary electrophoresis instrument. (RT 1310-1311, 1321) A study conducted by Dr. Henry Lee of the Connecticut Department of Public Safety found that three of the six forensic laboratories participating in the study were able to identify the major contributor in only 40% of the mixed source samples. (RT 1323-1326)

The recovered tissues and rape kit in appellant's case were analyzed for DNA evidence by an LAPD criminalist using a D.Q. alpha poly marker test.²⁰ (RT 980, 985-987, 1007, 1020-1021, 1160, 1399) The kit samples and tissues were screened for the presence of sperm: sperm was found on two of the tissues, a cloth cutting, and the vaginal, vaginal lavage, and external genital samples. Those samples were subject to comparative DNA analysis with blood samples taken from Alejandro, Karen, Danny Gilles, and appellant. (RT 1020-1022, 1024-1025, 1040-1041, 1056-1057, 1072, 1075-1078, 1106-1107, 1127-1128, 1132-1145, 1151-1154, 1159-1160, 1165-1166, 1177-1181, 1401, 1403-14)

Appellant's sperm cells were not found on any of the tissue samples, or on the cloth cutting. Nor were Alejandro or Gilles's sperm cells on the tissues. There were epithelial cell fractions in the vaginal sample which were consistent with Karen. (RT 1057-1058) Both appellant and Karen could have been contributors to the sperm cell fraction found in the vaginal sample: separation was imperfect, leaving a mixed sample. (RT 1057-1059, 108) The vaginal lavage sample contained epithelial cells consistent with Karen and a mixture of sperm cells consistent with Karen, Alejandro, and appellant. (RT 1059-1060) Epithelial cells in the external genital swab were consistent with Karen, the sperm cells consistent with appellant. (RT 1060-1061) Because of the mixed nature of the vaginal and vaginal lavage samples, useful statistical analysis could not be performed. Though still a mixture, the external genital sample was subject to a random match probability calculation to determine the percentage of the

²⁰ Which tested six loci and is no longer used. (RT 1399-1400)

population who share certain genetic markers. Approximately 1 in 6,500 individuals exhibit the genetic markers as were found in the external genital sample.²¹ (RT 1061-1062, 1065-1066, 1079-1082, 1087, 1095-1096)

Further DNA analysis was performed on the external genital sample by Cellmark, a private laboratory which subjected the sample to more sophisticated testing via the Profiler Plus and Cofiler kits.²² (RT 1010, 1067-1069, 1088-1091, 1240, 1251) The Cellmark report indicated the sample contained a nonsperm fraction and a sperm fraction. The nonsperm fraction matched Karen's genetic profile, the sperm fraction showed a mixture of male and female DNA. The DNA types were consistent with Karen; appellant "would not be excluded" as one of the DNA sources from the sperm fraction. (RT 1069-1071, 1241, 1243-1245, 1251, 1254, 1275-1277, 1316-1317) According to the initial Cellmark report, approximately 1 in 39 quadrillion unrelated individuals would share such a genetic profile. (RT 1256-1257, 1267) The calculations were based on an FBI database of 200 African-Americans, and the statistical extrapolation of the frequency of certain genetic markers. (RT 1258-1259, 1268, 1292-1295)

Cellmark performed a second statistical analysis based upon its shift from the two databases supplied by Perkins-Elmer to three databases provided by an FBI-authored article published in the *Journal of Forensic Science*. (RT 1270-1272, 1332-1333) The theta value used by Cellmark was also changed from .03 to a more conservative .05, as requested by the State.²³ (RT

²¹ Perkins-Elmer Applied Biosystems was the manufacturer of the test kit as well as the source of the statistical data used by the LAPD. The statistical data was based on the FBI study. (RT 1082-1083)

²² The original Cellmark test was run on October 20, 1999; the samples were reamplified on October 22, 1999 because no size data was obtained from the first amplification. (RT 1311-1312, 1314)

²³ Cellmark also adjusted its RFU (relative fluorescent units) threshold level from 40 to 60, to reduce the amount of background clutter in their tests. (RT 1308-1309)

1272-1274) Based on the new databases, approximately 1 in 29 quadrillion individuals would share these same genetic markers; using the smaller theta value, the ratio was 1 in 45 quadrillion. (RT 1274-1275) At certain loci, it was more difficult to remove the presumptive victim DNA types, so the analyst pulled out Karen's types at a predominant number of loci, then examined what was left, calculating frequencies off those loci. No loci excluded appellant as a contributor. (RT 1277, 1282) Absent any assumption as to the contributors' identities, a mixed calculation may be performed to assess the frequency of any combination of contributors to the DNA types found in the sperm fraction sample. Using a mixture calculation in this case, the ratio was 1 in 260 million unrelated African-American individuals. (RT 1278-1282, 1283, 1285)

The population of Los Angeles County is just over nine and a half million; there are about 930,000 African American residents. (RT 1014, 1019-1020) The LAPD laboratory does not keep statistics on lab error. (RT 1114)

DEFENSE CASE

In January, 1999, appellant was living with his mother, Ruth Thompson, in a San Gabriel apartment. On January 22nd, there was a fire in the apartment; appellant, his mother, and appellant's wife and children moved into a Pasadena motel for five or six days before going to stay with a friend of Thompson's, Jesse Walters. (RT 1437-1439, 1452) Appellant's family lived in Walters's apartment until February 13th, when Walters brought some people home from a bar. The family spent that night in a motel, then appellant and his mother moved in with Thompson's other son, Earl Wright, staying in his Altadena home until February 24th. Wright lived with his wife and children,²⁴ and **because he had to get up early for work, Wright closed the house**

²⁴ There was not enough room for appellant's wife and children; they stayed with his mother-in-law for some time, then perhaps moved in with his brother-in-law. (RT 1451-1453, 1476, 1478-1479)

at 11:00 p.m., locking the doors and setting the security alarm. Wright also kept a watchdog outside at night. (RT 1441-1444, 1447-1448, 1467-1470, 1472, 1480, 1483-1484) Appellant did not know the code to Wright's alarm. (RT 1484-1485)

On February 15th, appellant drove his mother to a doctor's appointment in the morning, then returned to Wright's house. That evening, everyone stayed home: Thompson was up all night doing laundry, appellant was either watching television or playing computer games. (RT 1446-1447, 1449-1450, 1453, 1471) Appellant did not leave the house: if he had gone out, he could not have come back around 1:00 or 2:00 a.m. because the doors would have been locked, and neither Thompson nor Wright let appellant inside after hours during his ten-day stay. To get to his bedroom, Wright had to pass the living room couch where appellant slept; appellant was in the living room every night at 11:00 or 11:30 p.m., when Wright went to bed, and on the couch in the morning when Wright went to work.²⁵ (RT 1447-1448, 1470-1476, 1479-1480, 1482-1483) Wright did not know Danny Gilles, or know if appellant spent time with anyone named Joe. (RT 1479)

Thompson was not sleeping nights because of the nighttime apartment fire: her hair had been burned, and she had a tremendous amount of cleaning up to do.²⁶ (RT 1453-1454, 1459-1460)

DNA EVIDENCE

Laurence Mueller has a doctorate in ecology from the University of California, Davis, and is a professor in the Department of Ecology and Evolutionary Biology at UC Irvine, where he works in the field of population genetics. (RT 1510-1511) **Mueller** has testified as a defense expert on population

²⁵ Twice during appellant's stay, he called Wright at 10:00 or 10:30 p.m., saying he needed a lift from the bus stop. On both occasions, Wright and appellant were inside the house by 11:00 p.m.. (RT 1472-1473)

²⁶ Wright did not remember his mother begin up and about. (RT 1476)

genetics and statistical issues in DNA typing in over one hundred cases. (RT 1513, 1596) Mueller testified forensic DNA analysis can be broken down into two fields: (1) molecular genetics, which concerns itself with the extraction, patterning, and comparison of DNA samples, and (2) population genetics, which describes the relative rarity of the patterns so discerned. The only conclusion which may properly be reached when comparing DNA is whether an individual may or may not be excluded as a contributor to another sample. (RT 1514-1516)

Mueller reviewed the Cellmark materials promulgated in appellant's case, including the lab reports and the data supporting those reports. (RT 1516-1517, 1641-1642) Mueller testified it was "unusual"²⁷ that the lab failed to separate sperm from nonsperm cells in the evidence sample; Cellmark identified two sources for the sample: epithelial cells (nonsperm) and sperm cells. There had to be more than one contributor to the sperm fraction, and though the genetic patterns were consistent with appellant and the victim, this wasn't an exclusive interpretation of that evidence. (RT 1517, 1519-1521, 1637-1638) Had the sperm fraction been successfully extracted, only sperm cells, not a mixture, would have remained in the fraction. Mixed samples are subject to different analysis than single-source samples, from the number of genetic markers which will appear in a profile to the possible genetic combinations which would explain those markers. (RT 1522-1523, 1574)

In appellant's case, seven of the thirteen²⁸ loci were ambiguous. Assuming there were just two contributors to the sample,²⁹ three alleles/patterns should be discerned. For example, locus

²⁷ This extraction failure occurs in approximately one-third of sexual assault cases due to technological limitations. (RT 1638-1639)

²⁸ The D.Q. Alpha Poly Marker test kit tests six genetic markers which are different from the 13 loci examined by the Profiler Plus and COfiler kits. (RT 1610-1611)

²⁹ This is a big assumption: there is no way to determine how many contributors donated to a particular mixture: a minimum of two may be hypothesized, but there is no upper limit. (RT 1528)

D21S11 contains alleles from at least two contributors: the 29 and the 31.2 allele can be attributed to Karen, and the 28 allele to the assailant. However, the assailant's second loci is undeterminable; therefore, either (a) the assailant has a pair of 28 allele, (b) the assailant has one 28 and one 29 allele, or (c) the assailant has a 28 and a 31.2 allele. Under the last two hypotheses, the victim and assailant's alleles would overlap, creating the impression of a single allele. There is no way to determine which of these three scenarios accounts for the three allele at locus D21S11.³⁰ (RT 1526-1532, 1596-1598)

In terms of profiling, there is a significant statistical difference between the differential extraction successfully isolating a contributor and one based on assumptions imposed upon an undifferentiated mixed sample. (RT 1603-1607) People's Exhibit No. 45, the report yielding the 1 in 260 million ratio, appropriately incorporated the possible permutations of the product rule in a mixed source sample. (RT 1607-1608, 1610) Mueller's own calculations resulted in a 1 in 550 million ratio. (RT 1609, 1625-1626)

The product rule is a population genetics theory that estimates the probability of identifying one individual from a given source population. The product rule has two components, both necessary for its validity: the Hardy-Weinberg law, which predicts the frequency of occurrence of the variants at a single genetic marker, and linkage equilibrium, which enables the frequencies of each genetic marker to be multiplied with one another to create a single value representing the frequency of the entire collection of loci. Linkage equilibrium depends on the relationship between genes, so that a genotype found at one locus would be a reliable predictor of the genotype which

³⁰ Mueller's testimony was interrupted at this point by a hearing to determine his expertise in reading electropherograms; the court found the witness was not an expert in that area, but did not order the previous testimony stricken. (RT 1550-1551) Mueller later testified before the jury that he'd had no formal training in forensic DNA testing or DNA data interpretation. (RT 1576-1577)

would be found at another locus. Because of racial variants in the linkage equilibrium,³¹ the product rule does not uniformly apply, and is not uniformly accepted.³² Cellmark used the product rule in its analysis; the components of the rule need be tested every time they are applied to new genetic markers or populations. (RT 1555-1557, 1560-1562)

The databases employed by Cellmark are those propounded by the FBI and Perkins-Elmer, maker of the Profiler Plus/COfiler kits. Both used 200 individuals in each self-identified racial group culled from “convenience samples”: blood banks, research labs, etc.. Mueller testified these were not valid databases because such databases should be constructed from diverse random samples rather than concentrated geographic and demographic populations, and those who donate blood or participate in research studies do not randomly represent the polis. (RT 1557-1560) Mueller had tested the linkage equilibrium in the Perkins-Elmer, Genescreen and Washoe County African-American databases, and found problems with those calculations; the FBI and Minnesota B.C.A. databases showed no similar defects. (RT 1583-1585)

A defendant may be erroneously matched with an evidence sample either because there was another contributor to the DNA whose profile is the same or similar to the defendant, or because the lab has incorrectly found a similarity to the sample.

³¹ If linkage equilibrium does not hold, there is no way of telling how this failure would affect the product rule, *ie.*, whether the resulting ratio would be too large or too small. In any event, it would be wrong. (RT 1562-1563)

³² The 1996 National Research Council altered the product rule by recommending the insertion of a theta factor in the calculations to account for sub-populations but had no other substantive problem with its application. The theta factor acts as a corrective for certain Hardy-Weinberg issues; it does not cure the same problems on the linkage equilibrium side—where the Council assumed there would be no significant departure. (RT 1577-1580) The theta factor was set at a variable .01 to .03, given a homozygous genotype: the larger the theta factor, the more conservative the estimate. The theta factor used in People’s Exhibit No. 42 was .03; the theta factor used in People’s Exhibit No. 44 was .05, a difference which may or may not be significant, depending on the database being used. (RT 1580-1583)

(RT 1563) Lab error may be statistically accounted for by determining, via proficiency tests, how often a lab misattributes samples; Cellmark had two instances of false matches, both occurring around 1988 and 1989: the first involved a mislabeled vial, the second remained unexplained. As other laboratories have made similar mistakes, it is the frequency of overall error that is significant. The NRC recommends evidence from forensic laboratories include estimates of lab error rates based on proficiency tests. Lab error rate is equally as significant as the final calculations in determining whether to rely on a particular analysis. (RT 1564-1566, 1629, 1631-1632)

In terms of Cellmark's error rate, there was a 1995 or 1996 San Diego case in which Cellmark's initial report matched the defendant to the evidence, and the match was later disproved. There are at least three other instances of false matches involving other laboratories, one by the Philadelphia crime lab, one by the Minnesota Bureau of Criminal Apprehension, the third concerning the incorrect assignment of paternity. (RT 1566-1569) Lab error may more directly affect the product rule from a statistical standpoint: for example, one of the people in a Florida database was wrongfully identified as two separate individuals, and the FBI database also includes a sample duplication. In the FBI incident, the Bureau matched only 12 of 13 loci, mistyping the 13th loci as a match. (RT 1569-1570) With regards to Cellmark, Mueller estimated an error rate of 1 in 400 to 500 cases. (RT 1564-1566, 1574, 1586-1581)

REBUTTAL

Dr. Mueller put the likelihood of a half-sibling³³ having a similar genetic profile as the assailant in this case as 1 in 1.1 trillion. (RT 1659-1660)

³³ It was stipulated that Thompson has three sons: appellant, Leon Wright and Rone Robert: Wright and Robert are appellant's half-brothers. (RT 1667)