

UNITED STATES, Appellee

v.

Reginold D. Allison, Mess Management Specialist Seaman  
U.S. Navy, Appellant

No. 05-0235

Crim. App. No. 200000637

United States Court of Appeals for the Armed Forces

Argued February 23, 2006

Decided August 9, 2006

ERDMANN, J., delivered the opinion of the court, in which GIERKE, C.J., and EFFRON and BAKER, JJ., joined. CRAWFORD, J., filed a separate opinion concurring in part and dissenting in part.

Counsel

For Appellant: Lieutenant Commander Jason S. Grover, JAGC, USN (argued).

For Appellee: Lieutenant Mark H. Herrington, JAGC, USN (argued); Captain Glen R. Hines, USMC, and Commander Charles N. Purnell, JAGC, USN (on brief).

Amicus Curiae for Appellant: Derrien A. Bonney (law student) (argued); Phyllis C. Smith, Esq. (assistant professor) (on brief) - for the Florida A&M University College of Law.

Military Judge: Peter J. Straub

This opinion is subject to revision before final publication.

Judge ERDMANN delivered the opinion of the court.<sup>1</sup>

Mess Management Specialist Seaman Reginald D. Allison was charged with fleeing apprehension, rape, assault with a means likely to produce grievous bodily harm, assault with a dangerous weapon, assault upon a police officer, and burglary with intent to commit rape in violation of Articles 95, 120, 128, and 129, Uniform Code of Military Justice (UCMJ), 10 U.S.C. §§ 895, 920, 928, 929 (2000). At a general court-martial he was acquitted of assault on a police officer but convicted of fleeing apprehension, assault consummated by a battery (choking), assault consummated by a battery with a knife, burglary with intent to commit rape, and rape. He was sentenced to a reduction in grade to E-1, forfeiture of all pay and allowances, confinement for eight years, and a bad-conduct discharge. The convening authority approved the findings and sentence which were then affirmed by the United States Navy-Marine Corps Court of Criminal Appeals. United States v. Allison, No. NMCCA 200000637, 2004 CCA LEXIS 257, \*32-33 (N-M. Corps Ct. Crim. App. Nov. 24, 2004) (unpublished).

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<sup>1</sup> We heard oral argument in this case at Florida A&M University College of Law as part of the Court's "Project Outreach." See United States v. Mahoney, 58 M.J. 326, 347 n.1 (C.A.A.F. 2003). This practice was developed as part of a public awareness program to demonstrate the operation of a federal court of appeals and the military justice system.

A witness may testify as an "expert" on a particular subject matter only if the military judge determines that the witness is qualified based on his or her "knowledge, skill, experience, training, or education" regarding that subject. Military Rule of Evidence (M.R.E.) 702. The first granted issue addresses whether the military judge abused his discretion in allowing two government witnesses who were otherwise qualified as DNA analysis experts to testify as to the statistical significance of that analysis. The second granted issue addresses whether Allison's due process rights were violated by an appellate review that took 1,867 days from trial to the issuance of a decision by the Navy-Marine Corps Court of Criminal Appeals.<sup>2</sup> We hold that the military judge did not abuse his discretion in allowing the expert witnesses to testify as to the statistical significance of the DNA analysis. We further conclude that Allison is not entitled to any relief as a result of the delay in his appellate processing.

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<sup>2</sup> We granted review of the following issues:

- I. WHETHER THE GOVERNMENT'S TWO DNA EXPERTS, MR. Y AND MISS J, WERE WHOLLY QUALIFIED AS EXPERTS IN FORENSIC DNA ANALYSIS, TO INCLUDE EXPERTISE IN THE FREQUENCY OF OCCURRENCES FOR PARTICULAR DNA SAMPLES.
- II. WHETHER APPELLANT'S DUE PROCESS RIGHTS WERE VIOLATED WHEN IT TOOK MORE THAN FIVE YEARS FOR THE ARTICLE 66 REVIEW BY THE COURT BELOW TO BE COMPLETED.

I. Expert Qualification

Background

The charges against Allison arose from events that occurred in the early morning hours of November 8, 1998. A man broke into the room of Yeoman Third Class (YN3) RR and assaulted and raped her. He then strangled her until she was unconscious. Yeoman Third Class RR was acquainted with Allison and testified that during the assault she recognized Allison's eyes through the ski mask he wore. She also testified that she recognized his voice when he threatened her. Allison's defense at trial was that he was not the perpetrator of the rape and that it was a case of mistaken identity.

In addition to YN3 RR's identification of Allison, a condom containing semen was found on the floor of YN3 RR's room following the rape. Two DNA experts, Mr. Y and Miss J, conducted DNA testing on the semen in the condom and Allison's blood. Both experts found that the DNA in the two items was a match.

Before trial a hearing pursuant to Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), was held regarding the admissibility of the DNA evidence. At that hearing Mr. Y testified to his almost thirty years as a forensic serologist and his background and qualifications for conducting polymerase chain reaction (PCR) and restriction fragment length

polymorphism (RFLP) DNA testing. He also testified regarding the procedures involved in PCR and RFLP testing, as well as the processes by which statistical analysis of the results of those tests is made.

In response to questions from defense counsel regarding his training in statistical DNA analysis, Mr. Y testified that he had attended three different workshops on the subject. He testified that he knew "how to calculate the frequency of occurrence values for the loci that we use at the laboratory." He explained that he did his calculations using a method provided by the National Research Council (NRC)<sup>3</sup> giving guidance on "how frequency of occurrence values should be calculated." He also explained that the database used in his calculations was provided by a company called PerkinElmer Inc.<sup>4</sup> and he explained how that database was developed by testing individuals from certain racial groups.

Defense counsel objected that Mr. Y was not qualified as an expert in PCR, RFLP or statistical analysis. The military judge

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<sup>3</sup> Mr. J testified that the National Research Council (NRC) is a part of the National Academy of Sciences and has issued several reports on the reliability of DNA testing. He also stated that the method of calculation provided by NCR is widely accepted and used by a number of laboratories in calculating statistical frequencies.

<sup>4</sup> PerkinElmer Inc.'s Life & Analytical Sciences division "provides drug discovery, genetic screening and chemical analysis instrumentation, reagents and services for scientific research and clinical applications."  
<http://las.perkinelmer.com/About+Us/default.htm>.

found that Mr. Y was qualified as an expert in PCR and RFLP analysis and informed the defense counsel that "the genetics merely goes to an argument you can bring out in front of the members." Mr. Y went on to testify about PCR and RFLP testing and its use and acceptability in the scientific community. Defense counsel again questioned him on his knowledge and understanding of population genetics and statistical analysis. While Mr. Y testified that he was not a population geneticist, he was able to explain the racial distinctions made by the database upon which he relied and explained the limitations of the database when confronted with a person of mixed race. He also explained that he relied on NCR "confidence intervals" which provided a "range in frequency of occurrence values that you say with . . . that size of a data base that you have, if you went out and took that data base again, you would have a 95 percent confidence that you would get numbers between these values."

Following the Daubert hearing, the military judge ruled that "the underlying principles and techniques used in DNA profiling, specifically PCR and RFLP testing, are sound and reliable and [DNA profiling] is sufficiently reliable to warrant its use in the courtroom." In so holding, the military judge also found:

Counsel's argument that a statistician is needed in this determination is misspent.

The statistical analysis required is based on data bases and formulas provided by statisticians. The expert testified he attended several workshops in the use of these formulas giving him the ability to -- to make the calculations. If anything, this may be just grist for cross-examination.

At trial Mr. Y testified again regarding his qualifications in DNA testing, his curriculum vitae (CV) was admitted, and the military judge recognized him as an expert in "the field of forensic serology and forensic DNA analysis . . . ." The defense renewed its earlier objection to Mr. Y's testimony regarding the DNA statistical analysis based on the fact that Mr. Y was not a population geneticist. The objection was overruled by the military judge.

Consistent with his DNA testing report, Mr. Y testified that there was a match between the DNA in the condom and Allison's DNA, and that the frequency of selecting an unrelated individual at random from the population having this profile is approximately 1 in 3.9 billion for a Caucasian and 1 in 17 million for an African American.<sup>5</sup> Mr. Y also explained how the numbers that made up the frequencies were calculated and stated

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<sup>5</sup> Mr. Y also testified, consistent with his report, that there was a match between the non-sperm DNA found in the condom, blood found on a knife that was also found in Yeoman Third Class (YN3) RR's room, and YN3 RR's DNA, and that the "frequency of selecting an unrelated individual at random from the population having this profile is approximately" 1 in 3 million for a Caucasian and 1 in 1.6 million for an African American.

that in fact the numbers given in his report were "conservative."<sup>6</sup>

Miss J was called to testify as a forensic serologist and a DNA examiner with fourteen years of experience. In support of her qualifications the Government offered her CV which reflected that she had taken courses in statistics and had participated in training regarding statistics in DNA analysis. The defense objected to her qualification as an expert based on her lack of advanced degrees and because she was not a population geneticist. That objection was also overruled by the military judge.

Miss J testified about the DNA testing process and that she had conducted RFLP testing on the DNA samples. She concluded that the DNA from the semen in the condom matched Allison's DNA. Her report which summarized these test results was also admitted. That report stated that "[t]he estimated probability of finding this profile in an unrelated person is: 1 in 3 quadrillion in the U.S. Caucasian population, 1 in 900 trillion in the African American population and 1 in 40 trillion in the U.S. Hispanic population." Miss J also testified regarding

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<sup>6</sup> Mr. Y explained that the calculations were "conservative" "because you're not using any -- any rare event to -- to make that calculation[,] and because they had tested thirteen loci overall, "and the frequency of occurrence values for those were calculated independently. In other words, one did not affect the other."



these statistical probabilities and explained that these numbers were conservative ones.

On cross-examination, defense counsel questioned Miss J regarding her understanding of the database that formed the basis for her statistical analysis. Miss J testified that in developing these numbers she relied upon a database provided by the Federal Bureau of Investigations, and that this database was developed by testing between 300 and 750 people. She stated that like the database relied upon by Mr. Y, the database she relied upon was broken down by racial groups. Defense counsel also questioned Miss J regarding her knowledge of statistics in general. Miss J testified that the method she followed came from the NRC and was based on recommendations from a number of lawyers and statisticians.

#### Discussion

A witness may testify as an "expert" on a particular subject matter only if the military judge determines that the witness is qualified based on his or her "knowledge, skill, experience, training, or education" regarding that subject. M.R.E. 702. The facts or data that an expert relies upon in a particular case may be referenced before the trial and if of a type "reasonably relied upon by experts in the particular field in forming opinions or inferences", the data need not be admissible in order for the opinion to be admitted. M.R.E. 703.

"The military judge has broad discretion as the 'gatekeeper' to determine whether the party offering expert testimony has established an adequate foundation with respect to reliability and relevance." United States v. Green, 55 M.J. 76, 80 (C.A.A.F. 2001). A military judge's decision regarding the qualifications of an expert witness is reviewed by this court for abuse of discretion. See United States v. Billings, 61 M.J. 163, 166 (C.A.A.F. 2005).

In United States v. Youngberg, 43 M.J. 379, 386 (C.A.A.F. 1995), we held that DNA testing was sufficiently reliable and "is admissible at courts-martial if a proper foundation is laid." The defendant in Youngberg also argued at trial that "there is a lack of general acceptance of the statistical approach which quantifies the significance of an alleged match.'" Id. at 387 n.9. We rejected that argument, and followed the United States Court of Appeals for the Tenth Circuit which held that "'statistical probabilities are basic to DNA analysis and their use has been widely researched and discussed.'" Id. at 387 (quoting United States v. Davis, 40 F.3d 1069, 1075 (10th Cir. 1994)). Like the underlying DNA analysis, this statistical evidence also is admissible at court-martial so long as a proper foundation is laid.<sup>7</sup>

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<sup>7</sup> Where, as here, the scientific evidence being offered is not novel, the proponent of the evidence needs to show only that the proffered expert relied upon sufficient facts or data, used

We begin our analysis by concluding that evidence of statistical probabilities is not only "basic to DNA analysis,"<sup>8</sup> but also essential to the admissibility of that analysis. In this regard, we follow the state courts which have held that without evidence of statistical frequencies, DNA evidence is meaningless and would not be admissible. See, e.g., People v. Coy, 620 N.W.2d 888, 898-99 (Mich. Ct. App. 2000) (concluding that "some qualitative or quantitative interpretation must accompany evidence of a potential match"); United States v. Yee, 134 F.R.D. 161, 181 (N.D. Ohio 1991) (holding that "[w]ithout the probability assessment, the jury does not know what to make of the fact that the patterns match"); State v. Cauthron, 846 P.2d 502, 516 (Wash. 1993) ("Testimony of a match in DNA samples, without the statistical background or probability estimates, is neither based on a generally accepted scientific theory nor helpful to the trier of fact."); see also M.R.E. 401 (requiring evidence be logically relevant).

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reliable principles and methodology and possessed sufficient knowledge, skill, experience, training, or education. M.R.E. 702. If the opposing party then wishes to challenge admissibility of the proffered evidence based on the data or methodology relied upon, that party has the opportunity to do so. See United States v. Billings, 61 M.J. 163, 166 (C.A.A.F. 2005).

<sup>8</sup> United States v. Davis, 40 F.3d 1069, 1075 (10th Cir. 1994).

Allison does not challenge the qualifications of Mr. Y and Miss J with respect to their expertise in DNA analysis, but he argues that they lacked the necessary qualifications in populations genetics to be allowed to testify as to the statistical frequency analysis. Although statistical probabilities may be "basic to DNA analysis," Davis, 40 F.3d at 1075, it does not necessarily follow that all experts qualified to give testimony on DNA analysis will be qualified to testify regarding statistical frequencies. Nor does it necessarily follow, however, that a witness must be an expert population geneticist to explain and testify about the methodology and calculations used to determine the statistical probability of a match between two DNA samples.

The record reflects that Mr. Y and Miss J had received training in DNA statistical analysis and both had considerable experience in conducting that analysis. Mr. Y testified that he had attended three different workshops on statistical analysis of DNA evidence, and that he knew "how to calculate the frequency of occurrence values for the loci that we use at the laboratory." Miss J's CV reflected that she had taken courses in statistics and had participated in training regarding statistics in DNA analysis. Both experts responded to questions regarding their statistical conclusions and their understanding of the databases upon which their calculations relied. The

testimony also established that the method of calculation utilized in the analysis had been developed by statisticians and was widely accepted.

We therefore conclude that the military judge did not abuse his discretion in allowing the witnesses to testify regarding the statistical frequencies establishing the relevance of the DNA evidence. There was sufficient evidence from which the military judge could determine that Mr. Y and Miss J possessed the "knowledge, skill, experience, training, or education" to testify about the databases upon which they relied, their method of calculation, and the results of their statistical frequency determinations. M.R.E. 702.

## II. Appellate Delay

In analyzing whether appellate delay has violated the due process rights of an accused we first look at whether the delay in question is facially unreasonable. United States v. Moreno, 63 M.J. 129, 136 (C.A.A.F. 2006). If it is, then this court examines and balances the four factors set forth in Barker v. Wingo, 407 U.S. 514, 530 (1972): (1) the length of the delay; (2) the reasons for the delay; (3) the appellant's assertion of the right to timely review and appeal; and (4) prejudice. See Moreno, 63 M.J. at 135-36; United States v. Jones, 61 M.J. 80, 83 (C.A.A.F. 2005); Toohey v. United States, 60 M.J. 100, 102 (C.A.A.F. 2004). If we conclude that an appellant has been

United States v. Allison, No. 05-0235/NA

denied the due process right to speedy post-trial review and appeal, "we grant relief unless this court is convinced beyond a reasonable doubt that the constitutional error is harmless."

United States v. Toohey, 63 M.J. \_\_ (24) (C.A.A.F. 2006).

Whether an appellant has been denied the due process right to a speedy post-trial review and appeal, and whether constitutional error is harmless beyond a reasonable doubt are reviewed de novo. United States v. Cendejas, 62 M.J. 334, 337 (C.A.A.F. 2006) (constitutional error); United States v. Kreutzer, 61 M.J. 293, 299 (C.A.A.F. 2005); United States v. Rodriguez, 60 M.J. 239, 246 (C.A.A.F. 2004) (due process); United States v. Cooper, 58 M.J. 54, 58 (C.A.A.F. 2003) (due process).

As a general matter, we can dispose of an issue by assuming error and proceeding directly to the conclusion that any error was harmless. See United States v. Gorence, 61 M.J. 171, 174 (C.A.A.F. 2005) (any error in permitting evidence of preservice drug use was harmless); United States v. Lovett, 59 M.J. 230, 234 (C.A.A.F. 2004) (assuming error in admitting hearsay, the error was harmless); United States v. Bolkan, 55 M.J. 425, 428 (C.A.A.F. 2001) (any error in defense counsel's concession that a punitive discharge was an appropriate punishment was harmless). Similarly, issues involving possible constitutional error can be resolved by assuming error and concluding that the error is harmless beyond a reasonable doubt. See United States

United States v. Allison, No. 05-0235/NA

v. Cuento, 60 M.J. 106, 111 (C.A.A.F. 2004) (assuming that there was error and that the error was of constitutional dimension, error was harmless beyond a reasonable doubt); see also United States v. Saintaude, 61 M.J. 175, 183 (C.A.A.F. 2005) (court need not determine whether counsel's performance was constitutionally deficient where it can determine that any such error would not have been prejudicial). Thus, in cases involving claims that an appellant has been denied his due process right to speedy post-trial review and appeal, we may look initially to whether the denial of due process, if any, is harmless beyond a reasonable doubt.

Assuming that the delay of over five years to complete Allison's appeal of right denied him his right to speedy review and appeal, we proceed to assess whether that error was harmless beyond a reasonable doubt. In determining whether relief is warranted for a due process denial of speedy review and appeal, we will consider the totality of the circumstances in the particular case. Having considered the entire record, the fact that we have found no merit in Allison's other issue on appeal, and considering all the circumstances of this case, we conclude that this error was harmless beyond a reasonable doubt and no relief is warranted.

DECISION

The decision of the United States Navy-Marine Corps Court of Criminal Appeals is affirmed.



CRAWFORD, Judge (concurring in part and in the result):

While I agree with the majority as to the disposition and analysis of Issue I and the affirmance of the United States Navy-Marine Corps Court of Criminal Appeals, I write separately to disassociate myself from this Court's analysis of Issue II, which is based on its prospective rule set forth in United States v. Moreno, 63 M.J. 129, 135-41 (C.A.A.F. 2006), and its misapplication of the Barker v. Wingo, 407 U.S. 514, 530 (1972), test. See Moreno, 63 M.J. at 144 (Crawford, J., concurring in part and dissenting in part).