THE INDIGENT CRIMINAL DEFENDANT, DNA EVIDENCE AND THE RIGHT TO AN EXPERT WITNESS: A COMPARISON OF THE REQUIREMENTS OF DUE PROCESS IN *STATE v. DUBOSE* AND *HARRIS v. STATE*

I. INTRODUCTION

Since 1987, when DNA evidence was first used in criminal trials,[1] intense controversy has surrounded its use.[2] Courts have battled over the admissibility of DNA test results on various grounds.[3] Scientists and legal commentators have written a myriad of articles either attacking or defending the testing process and the evaluation of the results.[4] The debate has even, at times, involved personal, politically charged attacks on some of the foremost experts in the field.[5]

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[1] *See* Anthony Pearsall, Note, *DNA Printing: The Unexamined "Witness" in Criminal Trials*, 77 CAL. L. REV. 665, 666 (1989).

[2] *See generally* Marjorie M. Shultz, *Reasons for Doubt: Legal Issues in the Use of DNA Identification Evidence*, *in* DNA ON TRIAL: GENETIC IDENTIFICATION AND CRIMINAL JUSTICE 19 (Paul R. Billings ed., 1992); J. Clay Smith, Jr., *The Precarious Implications of DNA Profiling*, 55 U. PITT. L. REV. 865 (1994) (exploring ramifications of widespread DNA testing on all members of public); Janet C. Hoeffel, Note, *The Dark Side of DNA Profiling: Unreliable Scientific Evidence Meets the Criminal Defendant*, 42 STAN. L. REV. 465 (1990) (urging restraint in acceptance of DNA evidence in light of its unproven and novel status).

[3] *See generally* United States v. Two Bulls, 918 F.2d 56 (8th Cir. 1990) (holding DNA evidence admissible, but must include showing of testing procedures); Commonwealth v. Curnin, 565 N.E.2d 440 (Mass. 1991) (holding that admissibility of DNA evidence should consider acceptance and inherent rationality of testing process); People v. Castro, 545 N.Y.S.2d 985 (1989) (deciding that DNA evidence admissible when use generally accepted scientific tests performed properly); State v. Pierce, 597 N.E.2d 107 (Ohio 1992) (finding that the reliability of DNA evidence goes to its weight, not admissibility, but evidence can argue about reliability to trier of fact); State v. Cauthron, 846 P.2d 502 (Wash. 1993) (deciding that DNA evidence admissible even though statistical background or probability statistics not included).

[4] *See generally* Richard C. Lewontin & Daniel L. Hartl, *Population Genetics in Forensic DNA Typing*, 254 SCIENCE 1745 (1991); William M. Shields, *Forensic DNA Typing as Evidence in Criminal Proceedings: Some Problems and Potential Solutions*, *in* PROCEEDINGS FROM THE THIRD INTERNATIONAL SYMPOSIUM ON HUMAN IDENTIFICATION 1 (1992); William C. Thompson & Simon Ford, *The Meaning of a Match: Sources of Ambiguity in the Interpretation of DNA Prints*, *in* FORENSIC DNA TECHNOLOGY 93 (Mark Farley & James Harrington eds., 1991).

[5] *See generally* Rorie Sherman, *DNA Is on Trial Yet Again*, NAT'L L.J., Mar. 16, 1992, at 1. In United States v. Yee, 134 F.R.D. 161 (1991), the defense attorneys accused the prosecution experts of bias and conflicts of interest. These accusations were widely publicized. *See* Sherman, *supra*, at 1.

Now the dust is finally beginning to settle in the aftermath of what commentators have referred to as the "DNA war."[6] Leaders on opposing sides of the DNA controversy recently published a joint article in which they agreed that many of their points of contention have now been resolved.[7] Currently, every state now accepts DNA evidence in some form and for some purpose.[8] Skirmishes still arise, however, over the admissibility of specific tests and methods of presentation. For the most part, however, proponents of the use of forensic DNA evidence have won the "DNA war."[9]

Now that admissibility is no longer the central issue in the DNA debate, courts must confront other issues relating to the use of DNA evidence. The developing consensus as to admissibility of DNA evidence masks systemic problems with its use, which courts virtually have ignored in the heat of the "DNA war."[10] Many of the problems with the use of DNA evidence previously noted by commentators are still valid, and will remain so regardless of whether the evidence is admissible.[11]

Some of the most troubling problems concern defendants' due process rights. DNA typing is not only a highly probative form of evidence, but one which can be severely prejudicial to the defendant.[12] In a society which increasingly turns to science to solve its problems, the prospect of a scientific, and therefore "indisputable," method of determining truth is quite attractive.[13] Accordingly, de-

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[6] *See* William C. Thompson, *Evaluating the Admissibility of New Genetic Identification Tests: Lessons from the "DNA War,"* 84 J. CRIM. L. & CRIMINOLOGY 22, 22 (1993).

[7] *See* Gina Kolata, *Two Chief Rivals in the Battle Over DNA Evidence Now Agree on Its Use*, N.Y. TIMES, Oct. 27, 1994, at B14.

[8] As of 1994, only three states — Massachusetts, Alabama and California — barred the use of DNA testing evidence. *See* People v. Wesley, 633 N.E.2d 451, 467 (N.Y. 1994) (Kaye, C. J., concurring). Now, however, even these dissenting states have admitted such evidence, at least under selective conditions. *See* Dubose v. State, 662 So.2d 1189 (Ala. 1995); *See also* People v. Wilds, 40 Cal. App. 4th 166 (1995); Commonwealth v. Lanigan, 641 N.E.2d 1342 (Mass. 1994). Some other jurisdictions allow testimony stating that a DNA test did not exclude the defendant, but bar any statistical evidence of a match. *See Wesley*, 633 N.E.2d at 467. The *Wesley* court noted that Arkansas, Arizona, Delaware, Minnesota, Nebraska, New Hampshire, New Mexico, and Wyoming are such jurisdictions. *See id.* at 467 n.23.

[9] *See* Kolata, *supra* note 7, at B14.

[10] Shultz, *supra* note 2, at 44.

[11] Some of the problems most frequently mentioned by commentators are privacy concerns connected with obtaining DNA samples and keeping DNA databases, concerns regarding reliability and accuracy in laboratory processes and their results, and due process concerns regarding the defendant's right to an adequate defense against this potentially prejudicial form of evidence. *See generally* Smith, *supra* note 2, at 865.

[12] *See* David A. Gass & Marjorie M. Shultz, *An Analysis of Decisional Law Governing the Use of DNA Evidence, in* DNA ON TRIAL: GENETIC IDENTIFICATION AND CRIMINAL JUSTICE 43 (Paul R. Billings ed., 1992).

[13] *See* Philip L. Bereano, *The Impact of DNA-based Identification Systems on Civil Liberties, in* DNA ON TRIAL: GENETIC IDENTIFICATION AND CRIMINAL JUSTICE 119, 120 (Paul R. Billings ed., 1992).

spite the many criticisms which scientists and legal experts leveled against the use of DNA evidence, it still carries "an aura of mystic infallibility"[14] for jurors and even for judges.[15] For this reason, as well as for others, "[s]ecuring the services of experts to examine evidence, to advise counsel, and to rebut the prosecution's case is probably the single most critical factor in defending a case in which novel scientific evidence is introduced."[16]

Arguably due process requires the state to provide an indigent defendant with an expert in any case involving complex scientific evidence.[17] The rationale for such a rule in cases involving DNA evidence, however, is particularly strong. DNA evidence is highly probative, far surpassing most other forms of forensic evidence.[18] Additionally, testing and evaluation of DNA involves an extremely complex process that a layperson cannot easily understand.[19] Consequently, both courts and juries rely heavily on the opinions of experts. A defendant, therefore, cannot mount an adequate defense without access to his own expert testimony in a case where DNA evidence plays a central role.

The tendency of courts and juries to accept the strong, even extravagant, claims of DNA experts regarding the reliability of the DNA testing process exacerbates an indigent defendant's problem in defending against DNA evidence.[20] In most cases only the prosecution presents expert testimony in regard to the DNA evidence, which the court is likely to accept without serious question. Courts could mitigate this problem by determining that expert witnesses are necessary for a successful defense in cases in which DNA is central. Unfortunately, although most states have created provisions allowing indigent defendants to have an expert provided to them, that right has several limitations.

First, in all jurisdictions the trial court has discretion to determine whether an indigent defendant can have an expert appointed for him.[21] Trial courts are gen-

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[14] United States v. Jakobetz, 747 F. Supp. 250, 255 (D. Vt. 1990).

[15] *See* Dubose v. State, 662 So.2d 1156, 1185-87 (Ala. Crim. App. 1993), *aff'd*, 662 So.2d 1189 (Ala. 1995); State v. Harris, 866 S.W.2d 583, 586 (Tenn. Crim. App. 1992) (holding DNA evidence admissible due to its extreme reliability).

[16] Christopher G. Shank, Note, *DNA Evidence in Criminal Trials: Modifying the Law's Approach to Protect the Accused from Prejudicial Genetic Evidence*, 34 ARIZ. L. REV. 829, 867 n.268 (1992).

[17] *See* Ake v. Oklahoma, 470 U.S. 68 (1985) (holding that when a defendant shows sanity to be a significant factor in the case, due process requires the state to provide the defendant access to a psychiatrist).

[18] *See* Jeffrey Baird, *Forensic DNA in the Trial Court 1990-1992: A Brief History*, *in* DNA ON TRIAL: GENETIC IDENTIFICATION AND CRIMINAL JUSTICE 65 (Paul R. Billings ed., 1992).

[19] *See* Cathleen C. Herasimchuck, Note, *A Practical Guide to Admissibility of Novel Expert Evidence in Criminal Trials Under Federal Rule 702*, 22 ST. MARY'S L.J. 181, 228 (1990).

[20] *C.f. Harris*, 866 S.W.2d at 587 (finding that reliable expert testimony strongly influenced admission of DNA evidence). *See also* Jonathon J. Koehler, *Error and Exaggeration in the Presentation of DNA Evidence at Trial*, 34 JURIMETRIC J. 21, 23 (1994).

[21] *See* Michael J. Yaworsky, Annotation, *Right of Indigent Defendant in State Criminal*

erally reluctant to appoint an expert for an indigent defendant without a strong showing of need.[22] A strong showing of need can be a very difficult burden for the defendant to meet.[23] Second, some courts that allow the appointment of an expert witness only pay part of the cost.[24] Additionally, appellate courts are generally deferential to the decisions of trial courts, and in many cases will find that the trial court's decision was not in error, or at most was only "harmless error."[25]

Part II of this Note provides background information on the legal system's difficulty in providing expert witnesses to indigent defendants. Part III examines reasons why an expert witness is necessary to present an adequate defense. Part IV analyzes *Dubose v. State* and *State v. Harris*, two cases which concern the limits of a defendant's due process right to an expert witness. Part V presents a proposal to allow criminal defendants access to DNA experts in cases in which DNA evidence will be at issue. This Note concludes that state courts should adopt a balancing test in determining when this right is implicated, similar to the test that the Supreme Court set out in *Ake v. Oklahoma*.

II. BACKGROUND ISSUES — THE DIFFICULTY OF AND NEED FOR EMPHASIS ON PROVIDING EXPERT WITNESSES TO INDIGENT DEFENDANTS

A. *Admissibility Standards Do Not Eliminate Need for an Expert Witness*

Most courts struggling with DNA evidence, have focused primarily on whether DNA meets the standards for admissibility.[26] Admissibility tests, however, are not an adequate barrier to protect defendants from the negative impact of DNA evidence. Under the two major admissibility standards, the *Frye*[27] and

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Case to Assistance of Chemist, Toxicologist, Technician, Narcotics Expert, or Similar Non-medical Specialist in Substance Analysis, 74 A.L.R.4th 388 (1993).

[22] *See* Margaret Berger, *Procedural Paradigms for Applying the* Daubert *Test*, 78 MINN. L. REV. 1345, 1359 (1994). Studies show that courts rarely grant requests for expert witnesses. *See id.*

[23] *See infra* Parts II.C. & III.B.3.

[24] *See In re* Application of Larry Lee Jobe, 477 N.W.2d 723 (Minn. Ct. App. 1991) (remanding reduced payment of expert fees for determination of "reasonable compensation").

[25] *See* Yaworsky, *supra* note 21, at 394-97. The "harmless error" rule states that an appellate court will not overrule a decision which is made within the trial court's discretion, even when it is legally in error, unless that error caused actual harm to the defendant. *See* Chapman v. California, 386 U.S. 18, 22 (1967) (holding that the state did not show beyond a reasonable doubt that evidence contributed to the defendant/petitioner's conviction).

[26] *See* Gass & Shultz, *supra* note 12, at 59.

[27] Frye v. United States, 293 F. 1013 (D.C. Cir. 1923). The *Frye* test has two prongs which the court must consider when deciding on the admissibility of scientific evidence: (1) Is the theory generally accepted in the scientific community?; and (2) Are there existing techniques or experiments capable of producing reliable results and which are generally accepted within the scientific community? *See id.* at 1013.

Daubert[28] tests, any questions about the accuracy of the DNA testing process in the relevant case go to the weight, not the admissibility of the evidence.[29] Admissibility standards, therefore, are not an absolute barrier to inaccurate and unreliable evidence.[30]

Under pre-*Daubert* tests, because accuracy concerns went to the weight of the evidence, many courts ignored such factors as laboratory and technician error rates in determining the admissibility of evidence.[31] This problem may exist under the *Daubert* test as well.[32] Factors that affect the accuracy of the results in a particular case, however, most directly implicate due process rights.[33] The theoretical reliability of the DNA testing process used would be no consolation to a defendant falsely convicted because the DNA results in his case were corrupted by contamination or human error.[34]

Admissibility standards place a heavy burden on juries because they must make the ultimate determination as to the weight given to DNA evidence. Arguably, a jury cannot discharge its duty successfully without access to *all* relevant evidence.[35] If doubts exist, no matter how slight, as to the accuracy or the proper interpretation of DNA test results, then the jury must have the opportunity to learn about such doubts, if it is to render a just decision.[36] Courts cannot rely upon the prosecution, usually the proponent of the evidence, to present such doubts.[37] If the defense cannot obtain an expert witness, then it also cannot present these doubts effectively.[38] Indigent defendants, who rarely have access to an

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[28] Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 (1993). The *Daubert* holding, based on the Federal Rules of Evidence, superseded the traditional *Frye* standard in federal court. *See* Lawrence B. Ebert, Frye *After* Daubert: *The Role of Scientists in Admissibility Issues as Seen Through Analysis of the DNA Profiling Cases*, 1993 U. CHI. L. SCH. ROUNDTABLE 219; *See also* Berger, *supra* note 22 at 1349. Because the *Daubert* decision does not apply to state courts, it is unclear how soon, if ever, state courts will abandon the *Frye* test in favor of *Daubert*. *See* Richard D. Friedman, *The Death and Transfiguration of* Frye, 34 JURIMETRIC J. 133, 134 (1994).

[29] *See* Berger, *supra* note 22, at 1358; *See also* Ebert, *supra* note 28, at 251.

[30] The admissibility test used in Alabama, and referred to by the Alabama Supreme Court in *Dubose v. State*, is a modified *Frye* test that takes into account the possibility for error in the particular case. *See* Dubose v. State, 662 So.2d 1189, 1996 (Ala. 1995). Despite this more stringent standard, the court found that an expert was necessary to the defendant. *See id.* at 1198.

[31] *See* Berger, *supra* note 22, at 1358. Berger argues that the *Daubert* test gives accuracy and reliability factors more weight than did *Frye*. *See id.* However, Lawrence Ebert disagrees, however, arguing that judges are ill-equipped to evaluate accurately the scientific validity of evidence. *See* Ebert, *supra* note 28, at 230-31.

[32] *See* Ebert, *supra* note 28, at 251.

[33] *See id.* at 230.

[34] *See* Kolata, *supra* note 7, at B14.

[35] *See* Shultz, *supra* note 2, at 38, 39.

[36] *See id.*

[37] *See infra* Parts II.B & III.B.2.

[38] *See infra* Part III.

expert witness, in most cases, will not have any meaningful way of presenting evidence of possible doubts about the integrity of DNA results.[39] In cases where the jury does not receive such potentially exculpatory information, the defendant is denied his due process rights.

B. Ake v. Oklahoma *and a Defendant's Due Process Right to an Expert Witness*

The Supreme Court's opinion in *Ake v. Oklahoma*[40] provides the legal basis for the defendant's due process right to an expert witness. In *Ake*, a jury convicted the defendant of two counts of murder and two counts of shooting with intent to kill.[41] The court sentenced Ake to death.[42] Because of Ake's bizarre behavior prior to the trial, the court ordered that he be examined for competency.[43] The director of the psychiatric hospital where Ake was committed informed the court that the defendant was not competent.[44] Six weeks later, while Ake had been taking an anti-psychotic drug, the psychiatrist reexamined Ake and concluded that Ake was competent.[45]

A psychiatrist never examined Ake to determine his sanity at the time he committed the crimes.[46] Ake's attorney requested the court to allow another psychiatrist to examine Ake to determine if he had been sane at the time of the crimes, because insanity was to be his only defense.[47] The court denied the motion, stating that Ake had no constitutional right to an expert witness.[48]

At trial, neither side offered testimony on the issue of Ake's sanity at the time of the crimes.[49] Ake had no way to present such evidence since he did not have an expert to examine him and the prosecution's psychiatrists had not examined him to determine the defendant's sanity at the time of the crimes.[50] Therefore, it was impossible for Ake to present sufficient evidence to raise a reasonable doubt in the minds of the jury about his sanity at the time of the crimes.[51] The issue presented to the Supreme Court was whether Ake had the right to have a psychiatrist provided by the state to assist him in his defense.[52]

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[39] *See* Dubose v. State, 662 So. 2d 1156, 1180 (Ala. Crim. App. 1993); *See also* State v. Harris, 866 S.W.2d 583, 584 (Tenn. Crim. App. 1992) (holding DNA evidence admissible due to its extreme reliability).

[40] 470 U.S. 68 (1985).

[41] *See id.* at 72.

[42] *See id.*

[43] *See id.* at 71.

[44] *See id.*

[45] *See id.*

[46] *See id.* at 72.

[47] *See id.*

[48] *See id.*

[49] *See id.*

[50] *See id.*

[51] *See id.* at 73.

[52] *See id.* at 70.

The Supreme Court's opinion in *Ake* started from the premise that no defendant should be denied the assistance necessary to a fair trial due simply to his or her poverty.[53] The Court stated that "a criminal trial is fundamentally unfair if the State proceeds against an indigent defendant without making certain that he has access to the raw materials integral to the building of an effective defense."[54]

In determining the necessary "raw materials," the Court used a three-part test,[55] balancing (1) the private interests that the state's actions would affect, (2) the state's interest that would be affected by providing the safeguard, and (3) the probable value of the additional or substitute procedural safeguards sought, and the risk of an erroneous deprivation of the affected interest if those safeguards are not provided.[56] In regard to the first factor, the Court emphasized that the private interest in the accuracy of criminal procedures is "almost uniquely compelling," as evidenced by the multitude of safeguards that are already in place to protect this interest.[57]

In weighing the second factor, the Court rejected the State's government interest argument, finding that the defendant's interest in a fair trial outweighed any financial burden incurred by the state in providing a competent psychiatrist at trial.[58] In addition, the Court reasoned that the state had no legitimate interest in a strategic advantage over the defendant at trial, particularly if that advantage might cast doubt on the accuracy or procedural fairness of the verdict.[59]

The Court further concluded that the probable value of an expert witness to the defendant was very high, stating that a psychiatrist may be crucial to the defendant's defense in a trial where insanity is the central issue, since the psychiatrist can assist the jury in understanding evidence relating to a defendant's mental state.[60] At minimum, a psychiatrist testifying for the defense could demonstrate to the jury that differences of opinion among psychiatrists exist, thereby allowing the jury to make the most accurate determination of the issues.[61]

The Court decided that in demonstrating that a psychiatrist is necessary, a defendant must make a threshold showing that the issue of insanity would be a significant factor at trial.[62] With this requirement, the Court intended to restrict the right to a psychiatric expert to those cases in which it is necessary to a fair trial.[63]

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[53] *See id.* at 76.
[54] *Id.* at 77.
[55] *See id.*
[56] *See id.*
[57] *Id.* at 78.
[58] *See id.* at 79.
[59] *See id.*
[60] *See id.*
[61] *See id.* at 81.
[62] *See id.* at 82.
[63] *See id.* at 83.

Although the *Ake* holding was limited to providing a right to a psychiatrist at trial, the Court's reasoning for requiring access to an expert applies as strongly to cases involving DNA evidence. The "uniquely compelling" private interest in a fair trial remains sufficiently high as to warrant procedural safeguards regardless of the form of the evidence. Furthermore, because of DNA evidence's high probative value and combined with the potential for error in the evaluation process, the defendant arguably is denied a fair trial in the absence of a right to a DNA expert.

The government interest in a case in which the defendant requests a DNA expert is the same as that dismissed by the Court in *Ake*. In both instances, the only government interest involved is conservation of a state's financial resources. Moreover, although a DNA expert may be more costly to a state than a psychiatrist,[64] the risk of error if an expert is not provided can be correspondingly greater as well.

The value of the safeguard of providing a DNA expert to indigent defendants, and the risk of error if the safeguard is not provided are both high in cases involving DNA evidence, for reasons which this Note will discuss.[65] Therefore, the rationale of *Ake* applies equally well to DNA cases as to cases involving a psychiatrist.

II. REASONS DEFENDANTS NEED AN EXPERT TO COMBAT DNA EVIDENCE

A. *Reliability of Testing Procedures*

Despite the widespread acceptance of forensic DNA typing results, the issue of reliability of test results remains hotly debated. Although forensic laboratories are now undergoing accreditation and conducting proficiency tests,[66] thereby allaying many of the concerns of early critics,[67] the possibility of laboratory error is still a divisive issue. The FBI laboratory, for instance, claims to have a 100% accuracy rate, based upon six proficiency tests.[68] One expert in the field, however, questions the results of such proficiency tests, which are not independently validated.[69] Further, a critic estimates that even with no mistakes in six consecutive tests, the FBI laboratory could have an actual error rate of up to thirty percent.[70]

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[64] Evidence suggests that the fees and expenses for a DNA expert can range between $10,000 and $30,000. *See* Dubose v. State, 662 So. 2d 1156, 1172 (Ala. Crim. App. 1993).

[65] *See infra* Part II.

[66] *See* Kolata, *supra* note 7, at B14.

[67] *See id.*

[68] *See id.*

[69] *See id.* (quoting Dr. Laurence Mueller, a geneticist at the University of California at Irvine).

[70] *See id.* (quoting Dr. Coyne, a population geneticist at the University of Chicago).

B. *Potential Bias of Expert Witnesses*

Commercial laboratories have a strong interest in the success of their products and process in court.[71] This legitimate commercial interest, however, creates significant incentives for expert witnesses to attempt to disguise any potential errors in the testing process, creating an inherent possibility of bias in their trial testimony.[72]

Unfortunately, the problem of bias is not confined to commercial laboratories and witnesses but can extend also to state or federal government experts.[73] This potential for bias is illustrated most disturbingly in the developing case of Fred Zain, the serologist who allegedly produced fraudulent test results over a period of eighteen years in West Virginia and Texas.[74] When courts began to question his fraudulent results in West Virginia, it was his "pro-prosecution" reputation which helped him get a job in Texas.[75]

Admittedly, Zain's case is extreme. Outright falsification of results, while not unique to Zain's case,[76] is a prevailing problem. A more subtle and more difficult problem to resolve is the tendency of any expert witness to exhibit bias in assuming the accuracy of his own testing procedures and test results.[77] Such a bias may or may not be conscious, and in most cases, merely demonstrates that a tester has a good-faith belief in his own competence and the reliability of his laboratory's procedures.[78] This tendency, though natural, can have the undesirable effect of causing the tester to overstate his case.

In the absence of an opposing expert to point out such fallacies, the apparently factual nature of an expert's conclusions and assurances is likely to overwhelm the jury. This comparatively innocent, or "good faith," bias is ordinarily harmless in the adversarial court system, as cross-examination and an expert to rebut the testimony can expose most fallacies.[79] However, in DNA evidence cases in which the defendant is unable to retain an expert, the defense attorney

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[71] *See* Dubose v. State, 662 So. 2d 1156, 1185 (Ala. Crim. App. 1993); *see also Ex parte* Perry, 586 So. 2d 242, 251 (Ala. 1991).

[72] *See Dubose*, 662 So. 2d at 1185.

[73] *See* Sherman, *supra* note 6, at 1.

[74] *See* Stacey McKenzie & John Hanchette, *Crime Lab Chemist Sought by Texas Rangers on New Indictment*, GANNET NEWS SERV., July 27, 1994.

[75] *Id.*

[76] *See id.*

[77] *See* Ebert, *supra* note 28, at 231.

[78] Even in cases where expert witnesses know of potential problems with their testing processes or results, they likely will not be willing to risk their reputations by divulging such problems. Experts' protection of their own reputations and that of their laboratories can be as significant a motivating factor as commercial interests. For example, in United States v. Yee, 134 F.R.D. 161 (1991), an FBI expert, Dr. Caskey, allegedly evidenced conflicts of interest in his testimony for the state at trial. *See id.* at 203; *see also* Ricardo Fontg, Comment, *DNA Fingerprinting: A Guide to Admissibility and Use*, 57 MO. L. REV. 501, 529-30 (1992).

[79] *See* Shank, *supra* note 16, at 867-68.

may not be able to cross-examine effectively, and definitely will not be able to present direct testimony in rebuttal.[80]

C. *Difficulty in Proving Need for an Expert Witness*

Proving the need for an expert witness presents a significant difficulty in defending an indigent accused in case involving DNA evidence. Defendants may have to meet stringent standards to show their need for an expert witness.[81] Making this threshold showing may be difficult for a defense attorney who possesses few resources and little knowledge of DNA evidence.

The indigent defendant most likely must rely on the assistance of the public defender for legal representation. In the average case, a public defender must mount a defense under severe constraints on time and resources.[82] Thus a public defender may not be able to educate himself adequately regarding the scientific principles of DNA and the controversies surrounding DNA evidence.[83] Without this information, the attorney will not be able to explain how an expert would be useful, much less identify any available experts.

Even a knowledgeable attorney may find it difficult to demonstrate a defendant's need for a DNA expert because he may not be able to show that DNA evidence is necessary to the theory of his defense.[84] Denying access to a DNA expert can severely hamper a full and complete defense, as the defense theory of the case may change over the course of investigation. DNA evidence may not be important in the beginning, but may become central to subsequent defense theories.

In addition, even where the defense attorney possesses adequate knowledge, the judge may not allow the attorney to make a motion for an expert *ex parte*.[85] Thus, in making such a motion the defense attorney may have to divulge the defense's theory prematurely to the prosecutor.[86]

D. *Difficulty in the Pre-trial Admissibility Hearing*

In a pre-trial admissibility hearing, the proponent of DNA evidence has the initial burden of proving that the lab conducted the tests properly.[87] Once the

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[80] *See infra* Parts II.E.1 & II.E.2.

[81] *See* State v. Harris, 866 S.W.2d 583, 585 (Tenn. Crim. App. 1992); *see also* Ake v. Oklahoma, 470 U.S. 68, 82-83 (1985).

[82] *See* Stephen J. Schulhofer & David D. Friedman, *Rethinking Indigent Defense: Promoting Effective Representation through Consumer Sovereignty and Freedom of Choice for All Criminal Defendants*, 31 AM. CRIM. L. REV. 73, 85 (1993).

[83] *See* Dubose v. State, 662 So. 2d 1189, 1196 (Ala. 1995)

[84] For instance, in *State v. Harris*, a rape case, the court reasoned that the defendant might want to use the defense of consensual sex, in which case the DNA evidence would not be central. *See Harris*, 866 S.W. 2d at 586.

[85] *See Dubose*, 662 So. 2d at 1188.

[86] *See id.*

[87] *See id.*

proponent meets this burden, the defense must prove that the court should suppress the evidence.[88] If a defendant does not have an expert witness, however, the court cannot expect the defendant to meet this burden.[89] For example, in *People v. Castro*,[90] the defense needed five experts to meet this burden of proof.[91]

Another reason defendants need access to expert witnesses in the admissibility hearing is the role of this hearing in correcting errors in the testing and evaluation process.[92] Several examples have arisen where an adversarial admissibility hearing caused the tester to re-evaluate and correct its processes or its results.[93]

E. *Difficulties at Trial*

The complexity and technical vocabulary associated with DNA evidence make it difficult, if not impossible, for a defense attorney to defend adequately against DNA evidence without access to an expert witness.[94] There are several reasons for this. One is the tendency of a jury to make a decision based on the impressive nature of the expert witness's credentials and the complexity of his technical testimony, regardless of whether they believe the expert or even understand the evidence.[95] DNA evidence is complex and beyond the understanding of the average juror,[96] so jurors depend on experts to explain and interpret scientific evidence. Therefore, when only one party has access to expert testimony, that party likely will unduly sway the jury.[97]

1. Cross-examination

Defense attorneys who are not well-versed in the scientific principles involved in the DNA testing process have a very difficult time conducting an effective cross-examination.[98] Effectively explaining the possibilities for error and misin-

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[88] *See id.*

[89] *See id.*

[90] 545 N.Y.S.2d 985 (1989). *Castro* involved a heated debate over the admissibility of DNA evidence. *See generally id.* Finally the court excluded the evidence because of the testing lab's failure to follow accepted scientific techniques. *See id.*

[91] *See Dubose*, 662 So. 2d at 1188.

[92] *See id.*

[93] *Id.* (citing *Castro*, 545 N.Y.S.2d at 997-98; Caldwell v. State, 393 S.E.2d 436, 443-44 (Ga. 1990))

[94] *See* Hoeffel, *supra* note 2, at 517 ("[I]ll equipped cross-examiners, the tendency of jurors to be awed by the cutting-edge technology and unimpressed by the nitpicking of the defense . . . increase the difficulty of a successful attack on the DNA profiling technique.").

[95] *See* Herasimchuck, *supra* note 19, at 229. *But see id.* at 225 (noting that while "[s]cientific evidence impresses lay jurors, it does not necessarily follow that jurors are incapable of assessing its true value in a specific context").

[96] *See Hoeffel, supra* note 2, at 225

[97] *See Dubose*, 662 So. 2d at 1196-97.

[98] *See* Shank, *supra* note 16, at 867 n.268; *see also* Paul C. Gianelli, *The Admissibility*

terpretation that exist in any field of science requires a significant degree of understanding.[99]

The defense attorney may not recognize several important factors that bear on the accuracy of the DNA testing results during cross-examination unless an expert witness points them out.[100] One such factor is the meaning of the numbers presented as statistical evidence.[101] Juries tend to assume that if the prosecution expert presents a number such as "1,000,000 to 1," that is an indication that the defendant probably is the donor of the sample, and is therefore guilty.[102] In reality, such numbers merely represent the statistical probability that a *randomly-selected* member of the *relevant population* will have a matching pattern of DNA.[103]

In addition, studies of mock juries have shown that jurors often cannot evaluate accurately statistical evidence.[104] When confronted with different forms of evidence with different error rates, jurors often ignore the error rates and rank weaker and less accurate evidence as high as they would rank strong evidence.[105] By grounding the defense attorney in these realities, the expert can help the attorney to dispel such jury misconceptions.[106]

Another factor which the defense is unlikely to be able to challenge without an expert is the level of accuracy of the laboratory which performed the test.[107] Evidence of laboratory error rates is seldom introduced at trial because the prosecution will not elicit such testimony and the defense rarely has enough knowledge to do so.[108] An expert witness can significantly assist the defense attorney in this area by alerting him to potential problems with accuracy, and advising him as to what questions to ask on cross-examination.[109]

2. Direct Testimony

Even intelligent and informed cross-examination, however, may not ade-

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of Novel Scientific Evidence: Frye v. United States, a Half-Century Later, 80 COLUM. L. REV. 1197, 1243 (1980) (concluding that "[s]ecuring the services of experts to examine evidence, to advise counsel, and to rebut the prosecution's case is probably the single most critical factor in defending a case in which novel scientific evidence is introduced").

[99] *See* Shank, *supra* note 16, at 868 (discussing the importance of allowing the defendant adequate time to review and assess discovered material).

[100] *See id.* at 865-66.

[101] *See id.* at 865.

[102] *See id.* Literature on DNA evidence frequently discusses this phenomenon, known as the "prosecutor's fallacy." *See id.*

[103] *See* Thompson, *supra* note 6, at 61.

[104] *See* Shank, *supra* note 16, at 865-66.

[105] *See id.* at 866.

[106] *See id.* at 867.

[107] *See id.* at 865.

[108] *See id.*

[109] *See id.* at 867.

quately rebut the prosecution's case.[110] Without direct testimony it is often difficult, if not impossible, to convince the fact-finder that potential problems exist with the DNA testing process.[111] This is especially true in the face of strong affirmative testimony by the prosecution.[112] The attorney, no matter how well-informed, cannot serve as a witness in the case.[113] Even if he could, he could not give opinion testimony.[114] Therefore, even a knowledgeable attorney often cannot present an effective case without an expert witness.[115]

Relying solely on cross-examination of the prosecution witness to present the defendant's case severely limits the defense attorney's ability to point out potential problems and errors in the testing procedures or results.[116] The attorney can merely hope, through skillful questions, to elicit damaging admissions from the prosecution witnesses.[117] If the defense lawyer does not receive the "right" answer from the prosecution witness, however, she cannot use any damaging information to which she may have access.[118]

When the defense attorney has access to an expert witness, the defense witness can present direct testimony to rebut the prosecution's witness. At the very least, this demonstrates to the jury that grounds exist for reasonable differences of opinion even among experts.[119] At best, an effective expert witness given the right guidance could expose and nullify inaccurate or misleading prosecution evidence.[120]

III. THE RESPONSES OF COURTS IN *Dubose v. State* and *State v. Harris*

Dubose v. State[121] and *State v. Harris*[122] are examples of two very different approaches courts take to the issue of providing expert witnesses to indigent defendants in DNA cases. The approach of the *Dubose* court is fact-oriented and based on the real-life problems which a defendant faces when confronted with DNA evidence.[123] The approach of the *Harris* court, on the other hand, is heavily slanted toward legal analysis, and seems to use the law as a convenient

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[110] *See* Gass & Shultz, *supra* note 12, at 43.

[111] *See Dubose*, 662 So. 2d at 1196; *See also Harris*, 866 S.W.2d at 586.

[112] *See* Gass & Shultz, *supra* note 12, at 43 n.2. *See also* Andrews v. State, 533 So. 2d 841 (Fla. Dist. Ct. App. 1988); Smith v. Deppish, 807 P.2d 144 (Kan. 1991); Cobey v. State, 559 A.2d 391 (Md. 1989).

[113] *See* MODEL RULES OF PROFESSIONAL CONDUCT Rule 3.7 (1993).

[114] *See* FED. R. EVID. 701.

[115] *See* Shank, *supra* note 16, at 868.

[116] *See* Hoeffel, *supra* note 2, at 524.

[117] *See id.*

[118] *See* Hoeffel, *supra* note 2, at 869.

[119] *See* State v. Dubose, 662 So. 2d 1189, 1199 (Ala. 1995).

[120] This has happened repeatedly at the pre-trial admissibility hearing stage. *See supra* Part III.B.4.

[121] 662 So. 2d 1189 (Ala. 1995).

[122] 866 S.W.2d 583 (Tenn. Crim. App. 1992).

[123] *See Dubose*, 662 So. 2d at 1169-89.

method of dodging these problems.[124]

A. *Dubose v. State*

In *Dubose v. State* a jury convicted the defendant of raping, sodomizing and murdering a young girl as she was coming home from the church where she worked as a janitor.[125] Police found the girl in her car with the string of her sweatpants around her neck, apparently strangled.[126] The court sentenced the defendant to death.[127]

DNA evidence was central to the case.[128] Despite this, the trial court denied the defense's motion requesting an expert witness to assist in defending against the DNA evidence.[129] The prosecutor informed the defense attorney early on that the state would use DNA evidence at trial.[130] Both sides considered the DNA evidence critical.[131] The defendant's attorney, however, was initially unable to convince the court to declare the defendant indigent because he had managed to raise enough money to pay his attorney.[132]

About eight months after his arrest, the defendant requested that the court declare him indigent, and grant him funds for an expert witness.[133] The court held off the decision on the motion for an expert until it determined whether the defendant qualified as indigent.[134] If the court did not find Dubose indigent, then the issue of an expert witness would be irrelevant.[135] In the end, the court denied the motion requesting a declaration of indigence.[136]

The court further refused to allow the defense attorney to file a motion for an expert *ex parte*.[137] The defense attorney was unwilling to give the prosecution such an opportunity to preview the defendant's case.[138] After the denial of the request for an expert the defense repeatedly requested that the sealed envelope containing an affidavit in support of the motion for an expert be included in the record for appeal.[139] The court also denied this request.[140]

After the court tried and convicted him, the defendant attached the affidavit to

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[124] *See Harris*, 866 S.W. 2d at 585-86.
[125] *See Dubose*, 662 So. 2d at 1158.
[126] *See id.* at 1159-60.
[127] *See id.* at 1158.
[128] *See id.* at 1184.
[129] *See id.* at 1189.
[130] *See id.* at 1167.
[131] *See id.* at 1180.
[132] *See id.* at 1176-77.
[133] *See id.* at 1168.
[134] *See id.* at 1169.
[135] *See id.*
[136] *See id.* at 1170.
[137] *See id.* at 1169.
[138] *See id.*
[139] *See id.* at 1170.
[140] *See id.*

his motion for a new trial.[141] The Alabama Criminal Appeals Court reversed the trial court, finding the defendant indigent, and ordered that the state provide him with an expert witness.[142] The Alabama Supreme Court subsequently upheld the appeals court decision.[143] Both the appeals court and the state supreme court opinions focused on the defendant's difficulty in defending against DNA evidence without the services of an expert witness.[144]

B. *Reasons the* Dubose *Court Held That a DNA Expert Witness for the Defense Is Necessary to Satisfy Due Process*

1. Questions Regarding Reliability of Testing Results

The prosecution argued to the appeals court in *Dubose* that DNA typing results are no more prejudicial than fingerprints, and therefore, defendants should not have a greater right to their own expert witnesses in DNA cases than they would in cases where fingerprints are evidence.[145] The Alabama Court of Criminal Appeals flatly rejected this argument, finding the comparison between DNA typing and fingerprinting inappropriate.[146] Fingerprinting, the court pointed out, is a technique so reliable that it is the subject of judicial notice.[147] DNA testing, on the other hand, is a novel technique which was introduced rapidly into court, without sufficient testing.[148]

The appeals court also questioned the use of the term "DNA fingerprinting" because comparing DNA testing to the long accepted principles of fingerprinting gives it an undeserved aura of accuracy in the eyes of jurors.[149] Because the original testing of the defendant's tissue occurred when the technology of forensic DNA typing was in its infancy, questions of reliability are still relevant.[150]

2. Potential Bias of Prosecution Witnesses

Another significant factor for the appeals court in *Dubose* was the potential bias of the prosecution's witnesses.[151] The court pointed out that Lifecodes, a commercial laboratory with an obvious commercial interest in the courtroom success of their product, performed the tests.[152] At the time of the trial,

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[141] *See id.* at 1175.

[142] *See id.* at 1189.

[143] *See id.* at 1190.

[144] *See id.* at 1176-87; 1196-98.

[145] *See id.* at 1184.

[146] *See id.* at 1184-85 (citing Hoeffel, *supra* note 2, at 456 n.3; William C. Thompson & Simon Ford, *DNA Typing: Acceptance and Weight of the New Genetic Identification Tests*, 75 VA. L. REV. 45, 53 n.46 (1989)).

[147] *See id.* at 1184.

[148] *See id.* at 1185.

[149] *See id.* at 1184.

[150] *See* Ebert, *supra* note 28, at 239.

[151] *See Dubose*, 662 So. 2d at 1185.

[152] *See id.*

Lifecodes projected earnings of up to $100 million by 1995.[153] Therefore, in an attempt to impress and convince the jury, the expert witnesses from Lifecodes presented the evidence in a biased manner, which the appeals court called "misleading" and "overly simplistic."[154]

3. Difficulty in Proving Need for an Expert Witness

Dubose illustrates how difficult it is for the defense to demonstrate the need for its own expert DNA witness. The case record is replete with evidence that the defense attorney made an admirable effort to defend his client against the DNA evidence. He made at least two motions for a declaration of indigency,[155] persistently renewed his request for an expert witness,[156] and made several unsuccessful attempts to get a sealed envelope containing an affidavit supporting his request for an expert into the record.[157]

The defense attorney, however, refused to present this last request in the presence of the prosecution, because he was not willing to divulge the substance of his case prematurely. The court refused to hear the request *ex parte*.[158] The result was a deadlock, and the trial court denied the defense motion for an expert witness.[159]

Moreover, Peter Neufeld, the attorney who wrote the affidavit which the defense attorney attempted to present to the trial court, is one of the country's foremost criminal defense lawyers for cases involving DNA evidence. Without this affidavit the appeals court probably would not have overturned the trial court's decision.[160] It is highly unlikely that the defense attorney with his limited knowledge, could himself have written this affidavit specific enough to meet the court's standard of proof.[161]

4. Difficulty in Pre-Trial Admissibility Hearing

Another concern of the appeals court in *Dubose* was the breakdown of the adversarial system in the pre-trial admissibility hearing.[162] The court cited several prominent cases which demonstrate that an admissibility hearing is invalid without an expert to represent the defense viewpoint.[163] The court pointed out at least two reasons for requiring defense experts in DNA admissibility hearings.[164] The

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[153] *See id.*
[154] *See id.*
[155] *See id.* at 1169, 1172.
[156] *See id.*
[157] *See id.* at 1169-70.
[158] *See id.* at 1169.
[159] *See id.*
[160] *See id.* at 1183.
[161] *See id.* at 1179.
[162] *See id.* at 1187-88.
[163] *See id.* at 1187.
[164] *See id.* at 1188.

first is the acute need for the defense to counter the credible testimony of the state's witnesses.[165] The other reason is the role the hearing plays in correcting errors in the testing and evaluation process.[166] The appeals court's opinion pointed to several examples where an adversarial admissibility hearing caused the tester to re-evaluate and correct its processes or results.[167]

5. Difficulty at Trial

a. Cross-examination

Dubose graphically illustrates the problems a defense attorney is likely to have with cross-examination. Because the court denied funds to the defense attorney to hire an expert witness, he was forced to proceed with cross-examination without adequate knowledge of DNA evidence and the testing procedure.[168] The prosecution witnesses dazzled the jury with their simple and appealing explanation of the DNA typing process and the theory behind it.[169]

The defense attorney's cross-examination, on the other hand, was lengthy, "nitpicking" and confusing.[170] Several times, jurors requested that the judge ask the attorney to stop his cross-examination because they "understood the evidence even if the attorney didn't."[171] Finally, the judge called the defense attorney to the bench and told him that it was unclear where his questions were leading.[172] The prosecutor accused the defense attorney of intentionally appearing ignorant in order to bolster his claim for an expert witness.[173] It was clear from the jury's reaction to the cross-examination that they unquestioningly had accepted the Lifecodes testimony.[174] Because the Lifecodes witnesses had so thoroughly convinced the jurors, the defense's attempts to cast doubt on the testimony during cross-examination simply irritated them.[175]

The appeals court found that the defense attorney's lack of an expert witness had made it impossible for him adequately to refute the prosecution's expert testimony.[176] The court pointed out that the DNA typing process is extremely complex, involves some 200 steps, and is prone to error.[177] The jury, however, had gained the impression from Lifecode's skillful but misleading testimony that the

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[165] *See id.*
[166] *See id.*
[167] *See id.* at 1187-88.
[168] *See id.* at 1185-87.
[169] *See id.*
[170] *See id.* at 1186.
[171] *Id.* at 1185.
[172] *See id.*
[173] *See id.* at 1185-86.
[174] *See id.* at 1186.
[175] *See id.* at 1185-86.
[176] *See id.* at 1186-87.
[177] *See id.* at 1186.

process is essentially simple and straightforward.[178] The defense attorney designed his cross-examination questions to demonstrate the possibilities for error in the process. Without a DNA expert to guide him, however, his questions only made him appear ignorant and incompetent in the eyes of the judge, the prosecutor, and worst of all, the jury.[179]

Moreover, defense attorneys have difficulty discovering and presenting the potential weaknesses of the evidence.[180] *Dubose* presents a telling example of this problem. The only resources the defense attorney could discover to help him attack the experts were several newspaper and scientific articles questioning the reliability of DNA evidence.[181] He attempted introduce these during his cross-examination.[182] The court ruled, however, that although he could present learned treatises on the subject, he could not present articles.[183] Since these articles were his only ammunition, he was unable to rebut the prosecution's strong testimony.

b. Direct Testimony

The Alabama Supreme Court's opinion in *Dubose* pointed out the defense's need for direct expert testimony to present an effective case.[184] Expert testimony at trial on behalf of the defense would have obviated the attorney's need to resort to magazine articles criticize DNA testing processes. In addition, a defense witness's testimony would have helped counteract the misleading testimony of Lifecodes' witnesses.

C. *State v. Harris*

State v. Harris involved rape and aggravated rape.[185] The defendant was the victim's supervisor at her custodial job in a hospital.[186] Shortly after she began working at the hospital, the defendant followed her to a deserted wing of the building and subsequently raped her.[187] A jury convicted the defendant at trial and he appealed to the Tennessee Court of Criminal Appeals.[188] The appeals court upheld the trial court's verdict and denial of defense's request for an expert witness to assist in defending against the DNA evidence.[189]

DNA evidence was central in *Harris*.[190] The defense requested the court to

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[178] *See id.*
[179] *See id.* at 1185-86.
[180] *See* Hoeffel, *supra* note 2, at 524.
[181] *See Dubose*, 662 So. 2d at 1174.
[182] *See id.*
[183] *See id.*
[184] *See id.* at 1197.
[185] *See* State v. Harris, 866 S.W.2d at 583 (Tenn. Crim. App. 1992).
[186] *See id.* at 584.
[187] *See id.*
[188] *See id.* at 583.
[189] *See id.*
[190] *See id.* at 586.

provide him with an expert witness to help him refute the state's evidence, but the trial judge denied his request.[191] Agent Dwight Adams from the FBI and Dr. A.G. Kasselburt, a professor at Vanderbilt Medical School testified for the prosecution.[192] Because the defense did not have access to an expert witness, the prosecution's expert testimony was the only DNA testimony presented.[193]

Despite, or perhaps because of, this disparity in expert resources, and notwithstanding the Supreme Court's rationale in *Ake v. Oklahoma*,[194] the Tennessee Court of Criminal Appeals held that due process does not require the state to provide an expert to an indigent defendant in non-capital cases.[195] *State v. Harris* illustrates several of the legal arguments which courts make to deny defendants the right to have an expert witness provided to them. While it is clear that the court relied mainly on Tennessee precedent to arrive at its decision, it at least made an attempt to distinguish the case from *Ake v. Oklahoma*, which the defense cited.

The *Harris* court used precedent as an easy way to duck the inconvenient problem of expert witnesses. The crux of the court's decision was that Tennessee common law[196] and statutory law[197] do not require the state to provide an expert to an indigent defendant in a non-capital case. It cited several Tennessee cases that stand for this proposition. All of these cases, however, were decided before the advent of forensic DNA typing.[198] Unlike the *Dubose* courts,[199] the *Harris* court made no apparent attempt to deal with the unique problems posed by the use of DNA evidence in the courtroom. The court's reasoning suggests that, like the *Dubose* trial court, it viewed DNA typing essentially no differently than fingerprinting or any other type of forensic science.[200]

1. The Attempt by the Tennessee Court of Criminal Appeals to Distinguish *Harris* from *Ake*

In *Harris*, the Tennessee Court of Criminal Appeals held that *Ake* was inapplicable because *Ake* was a capital case and *Harris* was not.[201] No support exists

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[191] *See id.* at 585.

[192] *See id.* at 586.

[193] *See id.*

[194] 470 U.S. 68 (1985). *See supra* Part II.a.

[195] *See Harris*, 866 S.W.2d at 585.

[196] *See id.*

[197] *See* TENN. CODE ANN. 40-14-207(b).

[198] *See Harris*, 866 S.W.2d at 585. The Court cited State v. Williams, 657 S.W.2d 405, 411 (Tenn. 1983); Graham v. State, 547 S.W.2d 531, 536 (Tenn. 1977); and State v. Chapman, 724 S.W.2d 378, 380 (Tenn. Crim. App. 1986).

[199] *See supra* Part III.A-B.

[200] *See Harris*, 866 S.W.2d at 585. For example, the court cited State v. Evans, 710 S.W.2d 530, 534 (Tenn. 1985), a non-capital case involving a ballistics expert in which the court denied the defense request for an expert witness. *See Harris*, 866 S.W.2d at 585.

[201] *See Harris*, 866 S.W.2d at 585.

for this distinction.[202] The *Harris* court found several additional distinguishing factors to support its departure from Ake.[203]

a. Probable Usefulness of an Expert Witness

The first factor the court used to distinguish *Harris* from *Ake* was the usefulness of an expert.[204] In *Ake*, the *Harris* court reasoned, the defendant's sanity was a central issue, and the utility of a psychiatrist's expert opinion was obvious, whereas in *Harris*, the role the DNA evidence was to play at trial was uncertain.[205] Therefore, it was difficult for the court to judge whether an expert would be useful.[206] This distinction is inapplicable to DNA evidence because an expert in DNA cases is always useful, if not necessary.[207] For the reasons mentioned above, it is virtually impossible to present an adequate defense against such evidence without access to an expert.[208]Additionally, because identity was a crucial issue in the case, the DNA evidence was necessarily central due to its high probative value.[209] As such it met the *Ake* threshold test requiring that the issue for which an expert was requested constitute a "significant factor" for the defense at trial.[210]

Courts should not require defendants to meet a high standard of proof to show the need for a DNA expert. A high standard may be very difficult for a defendant to meet,[211] and is unnecessary in the context of DNA evidence.[212] Unless the evidence is obviously peripheral to the case, the court should safely assume the necessity of an expert.

b. Level of Involvement of Expert

The second factor the *Harris* court used to distinguish *Ake* was the expert's level of involvement in the case.[213] In *Ake*, the defendant requested only a psychiatric evaluation, but in *Harris*, the defendant requested funds to hire his own expert.[214] Presumably, the *Harris* court reasoned that hiring his own expert would allow the defendant significantly broader assistance than *Ake* mandated,

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[202] *See* Paul C. Giannelli, *"Junk Science": The Criminal Cases*, 84 J. CRIM. L. & CRIMINOLOGY 105, 124 (1993).

[203] *See Harris*, 866 S.W.2d at 585.

[204] *See id.*

[205] *See id.*

[206] *See id.*

[207] *See supra* Parts II & III.B.

[208] *See supra* Part II.

[209] *See Harris*, 866 S.W.2d at 586.

[210] *See* Ake v. Oklahoma, 470 U.S. 68, 82-83 (1985).

[211] *See supra* Parts II.C & III.B.3.

[212] *See supra* Part II.

[213] *See Harris*, 866 S.W.2d at 585.

[214] *See id.*

since DNA experts can provide many types of assistance at all stages of the judicial process.

Under a due process analysis, this argument is irrelevant. The purpose of due process is to provide what the defendant needs for a fair trial.[215] There is no difference in principle between a necessary medical evaluation of the defendant and the provision of an expert to assist him in planning and carrying out his defense.[216] In addition, the only argument the state can advance for denying assistance is conserving state funds, an interest which the *Ake* opinion found was outweighed by the defendant's right to a fair trial.[217]

The *Harris* court misread *Ake* by concluding that it only required an examination by a psychiatrist.[218] *Ake* requires not only an expert examination, but "a psychiatrist's assistance . . . to help determine whether [the insanity] defense is viable, to present testimony, and to assist in preparing the cross-examination of the State's psychiatric witnesses."[219] *Ake*'s emphasis on these and other functions that a defense expert can perform indicate that the Supreme Court contemplated much more expert involvement than the *Harris* opinion suggests.[220]

c. The Presence of a Prosecution Expert

The *Harris* court also attempted to distinguish *Ake* on the basis of the presence of a prosecution expert. The court reasoned that in *Ake*, neither the prosecution nor the defense presented any evidence as to the defendant's sanity, whereas in *Harris*, competent experts testified to the reliability of the DNA evidence.[221]

This argument is sound only if one has a blind belief in the infallibility of science and scientists. In no other legal context do courts reason that because one party produces evidence, that the other party need not present its own evidence on that issue. Presumably, courts assume that the evidence will be uniformly interpreted because of its scientific nature. This reasoning is inconsistent with scientific reality, however. Experts in DNA evidence disagree strongly on material issues relating to the interpretation and significance of DNA evidence.[222] Therefore, the presence of an expert for the prosecution makes the defendant's need for his own expert more, not less, acute.[223] Indeed, courts have found defense counsel ineffective in cases in which they relied solely upon prosecution experts.[224] Additionally, the use of one expert by both parties, is contrary to the

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[215] *See Ake*, 470 U.S. at 76.

[216] *See* State v. Dubose, 662 So. 2d at 1189, 1193-94 (Ala. 1995).

[217] *See Ake*, 470 U.S. at 78.

[218] *See Harris*, 866 S.W.2d at 585.

[219] *Ake*, 470 U.S. at 69.

[220] *See id.* at 80.

[221] *See Harris*, 866 S.W.2d at 585.

[222] *See supra* Part I.

[223] *See* Gass & Shultz, *supra* note 12, at 43, 44.

[224] *See* United States v. Gessel, 531 F.2d 1275, 1279 (5th Cir. 1976); *see also* Curry v. Zant, 371 S.E.2d 647, 648 (Ga. 1988).

function of the adversarial system.[225] An expert who testifies for one party generally presents evidence favorable only to that party, not to the other.[226]

It appears that the *Harris* court merely accepted the experts' testimony at face value, as did the jury in *Dubose*.[227] The FBI's expert witness testified that it was impossible for the RFLP technique[228] to yield a false positive, that is, a result incriminating an innocent person.[229] This theory has been disproved many times,[230] however, due to the numerous ways that lab techniques, human error, and subjective tests may corrupt the process.[231] At the very least, the court should have maintained a healthy skepticism regarding the bias of the expert after he made extravagant claims for his laboratory.

2. Impossible Standard for Future Defendants

The most serious weakness of *Harris* is the standard the court sets for future cases.[232] Although the court cites *Ake* to justify its own "threshold showing,"[233] the threshold showing in *Ake*[234] is very different from that proposed in *Harris*.[235] The *Ake* standard requires a defendant to show that an expert is necessary to rebut evidence which will be a "significant factor" in the trial.[236] Defendants in almost all trials involving DNA evidence are likely to meet this standard because DNA evidence is relevant only for proving identity. Therefore, when the state uses DNA evidence to identify the defendant as the perpetrator of the crime and the defendant contests his involvement, DNA evidence necessarily will be significant.[237]

Harris, however, imposes a significantly more difficult standard requiring a defendant to show denial of due process.[238] By setting such a standard, *Harris* makes it virtually impossible for an indigent defendant in a non-capital case to demonstrate the need for an expert. A future defendant in Harris's position is forced, as the court states, to make a "threshold showing of denial of due pro-

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[225] *See* Gass & Schultz, *supra* note 12, at 22.

[226] *See* Friedman, *supra* note 28, at 135.

[227] *See* State v. Harris, 866 S.W.2d 583, 589-87 (Tenn. Crim. App. 1992).

[228] Restriction Fragment Length Polymorphism, or RFLP, is a complex, multi-step method of processing DNA evidence which is used by two of the major DNA testing laboratories. *See Ex Parte* Perry, 586 So. 2d 242, 2476 (Ala. 1991).

[229] *See Harris*, 866 S.W.2d at 587.

[230] *See* State v. Bloom, 516 N.W.2d 159, 162 (Minn. 1994).

[231] *See* Aviam Soifer & Miriam Wugmeister, *Mapping and Matching DNA: Several Legal Complications of "Accurate" Classifications*, 22 HASTINGS L.J. 1, 21-23 (1994).

[232] *See Harris*, 866 S.W.2d at 585-86.

[233] *Id.* at 585.

[234] Ake v. Oklahoma, 470 U.S. 68, 82-83 (1985).

[235] *See Harris*, 866 S.W.2d at 585-86.

[236] *See Ake*, 470 U.S. at 82-83.

[237] *See* Herasimchak, *supra* note 19, at 229-30.

[238] *See Harris*, 866 S.W.2d at 585.

cess."[239] He cannot make such a showing, however, because *Harris* also held that denial of an expert witness in a non-capital case does not violate due process.[240] Thus, the *Harris* standard is circular and virtually impossible for any future defendant to meet.

Even if a defendant can distinguish his case from *Harris*, it will be difficult to convince a court that *Harris* is inapplicable because its holding is based on law, not facts. The *Harris* court concluded that Tennessee law does not require the state to provide an expert to an indigent defendant in a non-capital case.[241] Therefore, no arguments are likely to convince a court to require appointment of a DNA expert witness to indigent defendants in non-capital cases.

D. *Ake v. Oklahoma as a Model*

Harris' weaknesses become more apparent when the cases is examined in light of the Supreme Court's decision in *Ake v. Oklahoma*.[242] *Ake* rests upon a three-pronged balancing test.[243] The three factors the Court considered were as follows: (1) the private interest that will be affected by the state's actions; (2) the state's interest affected if the safeguard is provided; and (3) the probable value of the additional procedural safeguards sought and the risk of an erroneous deprivation of the affected interest if those safeguards are not provided.[244] The Court concluded that (1) the "private interest in the accuracy of a criminal proceeding that places an individual's life or liberty at risk is almost uniquely compelling,"[245] (2) the state's interest in denying the defendant the requested assistance was "not substantial" when compared to factors (1) and (3),[246] and (3) the risk of an inaccurate determination of the issues was very high without the assistance of an expert.[247]

Although the balancing test played a central role in *Ake*, neither *Dubose* nor *Harris* considered the test. Application of the *Ake* balancing test would have produced better results in *Harris*. *Ake* does not require a defendant to meet a high standard of proof of need in order to obtain the services of an expert.[248] Rather, *Ake* requires a judge to determine whether the private due process interest outweighs the state interest in preserving state resources on the facts of each case.[249] This standard avoids grounding the success of the defendant's request upon the defense counsel's knowledge.[250] *Ake* places the responsibility for under-

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[239] *Id.* at 586.
[240] *See id.*
[241] *Id.* at 585.
[242] 470 U.S. 68 (1985).
[243] *See id.* at 77.
[244] *See id.*
[245] *Id.* at 78.
[246] *See id.* at 82.
[247] *See id.* at 77.
[248] *See id.* at 78-80.
[249] *See id.*
[250] *See supra* Parts II.C & III.B.3.

standing the issues relating to the evidence on the trial court rather than the defendant.[251] One reason for this approach is that courts generally have greater resources than defendants for unearthing information necessary to understand the nature of the defendant's need.

IV. PROPOSAL

In all likelihood, providing expert witnesses to indigent defendants in DNA cases will probably become an increasingly acute problem as the use of DNA evidence increases. Defendants need universal standards addressing their rights to an expert witness as soon as possible. Given the inherent complexities of DNA evidence, the *Ake* balancing test appears to be a sensible, if not necessary solution.

The balancing test places the burden of weighing a defendant's need for an expert against state interests on the trial court.[252] With the *Ake* balancing test, courts retain the discretion to grant the request for an expert witness, but the test give courts guidance as to the weight to be given to the various factors.[253] Therefore, the *Ake* test provides more protection for the defendant's interests. Additionally, courts are more likely to have the resources to be well informed on the pertinent issues than are poorly-equipped public defenders.

Second, courts should implement a rebuttable presumption that an expert will be necessary when DNA evidence is central to the case, without making a distinction between capital and non-capital cases. Courts should require defendants to show only that DNA evidence is important to the prosecution's case and therefore to the defense as well. This should be an easy showing for any defendant so long as the defendant knows that the prosecution will use DNA evidence their case. Because DNA evidence is relevant only to show identity,[254] in any case where the defendant contests identity, the evidence will be significant.

As an additional safeguard, the court should not require the defense to present its requests for an expert in the presence of the prosecution because this allows the prosecution an unfair preview of the defendant's case.[255] Finally, defendants should not have to allege specific ways in which an expert would be useful.[256] It is extremely difficult for the average defense counsel to do so without the aid of someone with specialized knowledge of the subject.[257] In other words, the defense needs an expert to demonstrate the usefulness of an expert.[258] By adopting the *Ake* balancing test — presuming the need for a DNA expert, permitting the defendant to make *ex parte* requests for an expert, and adopting a less stringent

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[251] *See Ake*, 470 U.S. at 77.

[252] *See id.*, at 83.

[253] *See id.* at 78-80.

[254] *See* Smith, *supra* note 2, at 868.

[255] *See supra* Part III.B.3.

[256] *See supra* Parts II.C & III.B.3.

[257] *See id.*

[258] *See id.*

standard of showing a defendant's need for an expert witness — courts can ensure and protect defendants' due process rights.

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