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Scientific Evidence - Part I

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SCIENTIFIC EVIDENCE — PART I

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Scientific evidence plays an important role in criminal trials. The forensic chemist, the pathologist, the questioned document examiner, and the fingerprint expert are frequently encountered in criminal practice. Moreover, the use of scientific evidence in criminal prosecutions is expanding. In the past decade courts have faced the difficult task of ruling on the admissibility of evidence derived from a vast array of newly ascertained or applied scientific principles. The following list is but a sample:

neutron activation analysis, State v. Holt, 17 Ohio St.2d 81, 246 N.E.2d 365 (1969); U.S. v. Stifel, 433 F.2d 431 (6th Cir. 1970), *cert. denied*, 401 U.S. 994 (1971).

sound spectrometry (voiceprints), State v. Olderman, 44 Ohio App.2d 130, 336 N.E.2d 442 (1975); U.S. v. Addison, 498 F.2d 741 (D.C. Cir. 1974).

trace metal detection, State v. Daniels, 37 Ohio App.2d 4, 305 N.E.2d 497 (1973); People v. Lauro, 91 Misc.2d 706, 398 N.Y.S.2d 503 (1977).

ion microprobic analysis, U.S. v. Brown, 557 F.2d 541 (6th Cir. 1977).

psychological stress evaluation, State v. Smith, 31 Md. App. 106, 355 A.2d 527 (1976).

scanning electron microscopic analysis, People v. Palmer, 80 Cal. App.3d 239, 145 Cal. Rptr. 466 (1978).

remote sensing evidence, U.S. v. Kilgus, 571 F.2d 508 (9th Cir. 1978).

bitemark comparisons, People v. Marx, 54 Cal. App.3d 100, 126 Cal. Rptr. 350 (1975); People v. Milone, 43 Ill. App.3d 385, 356 N.E.2d 1350 (1976).

In addition, prior rulings on the admissibility of scientific evidence have been challenged. In some cases, previously rejected evidence, such as polygraph examinations, has gained admissibility. *See* State v. Souel, 53 Ohio St.2d 123, 372 N.E.2d 1318 (1978) (admissible upon stipulation); U.S. v. Riding, 350 F. Supp. 90 (E.D. Mich. 1972). In other cases, some well-accepted scientific techniques have been rejected. *See* State v. Aquilera, 25 Crim. L. Rptr. 2189 (1979) (radar evidence); State v. Vail, 274 N.W.2d 127 (Minn. 1979) (marihuana tests).

Scientific evidence is especially difficult to use (and to rebut) because most attorneys lack the requisite backgrounds in science and technology. Perhaps more importantly, some "experts" also lack such backgrounds. This article examines some of the major legal issues associated with the use of scientific evidence. Part II, which will appear in the next issue of the Reporter, will focus on particular forensic techniques, such as voiceprints, gunshot residue tests, polygraph examinations, and bitemark comparisons.

FOUNDATIONAL REQUIREMENTS

The reliability of evidence derived from a scientific principle or theory depends upon the following factors: (1) the validity of the underlying principle, (2) the validity of the technique applying that principle, and (3) the proper application of the technique on a particular occasion.

Validity of the Principle and the Technique

The first two factors — the validity of the underlying principle and the validity of the technique applying that principle — are critical when considering the admissibility of evidence derived from a *novel* scientific procedure. Both factors involve a question of relevancy. *See* Strong, *Questions Affecting the Admissibility of Scientific Evidence*, 1970 U. Ill. L. F. 1, 14. If, for example, everyone's voice is not unique, the results of voiceprint analysis would not tend to establish the identity of a speaker. Or, if fear of detection does not produce certain physiological reactions, the results of polygraph examinations would not tend to establish whether the subject of the examination was truthful or not.

Although most courts do not distinguish between the validity of the underlying scientific principle and the technique's successful application of that principle, two distinct issues are present. A court, for example, could accept the underlying premise of voiceprint identification (voice uniqueness) but not the voiceprint technique. Similarly, the underlying psychologi-

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cal and physiological principles of the polygraph could be acknowledged without endorsing the proposition that an examiner can detect deception by means of the polygraph technique.

The validity of the theory and the technique can be established in several ways. First, expert testimony concerning the validity of a particular technique could be introduced. Second, if a technique has been sufficiently established, a court could take judicial notice of the technique's validity, thereby relieving the offering party of the burden of introducing expert testimony on this issue. The principles underlying radar, intoxication tests, fingerprint comparison and firearms identification have all been judicially recognized in this fashion. *See* C. McCormick, Evidence 763 (2d ed. 1972). *See also* City of East Cleveland v. Ferell, 168 Ohio St. 298, 154 N.E.2d 630 (1958) (radar); State v. Shelt, 46 Ohio App.2d 115, 120, 346 N.E.2d 345, 348-49 (1976) (MR-7 radar device) (concurring opinions); City of Akron v. Gray, 60 Ohio Misc. 68 (1979) (K-55 radar device). Third, the validity of a scientific technique could be recognized legislatively. *See* R.C. 4511.19 (intoxication tests). Like judicial notice, such a statute relieves the proponent of scientific evidence of the burden of introducing expert testimony on the validity issue.

Typically, the validity of a novel technique must be established through expert testimony. *See* Tiffin v. Whitmer, 32 Ohio Misc. 169, 170, 290 N.E.2d 198, 199 (1970) ("Because the instrument [VASCAR] is new, expert testimony as to the scientific principle, construction, operation, accuracy and reliability of the device must be established beyond a reasonable doubt."); State v. Shelt, 46 Ohio App.2d 115, 346 N.E.2d 345 (1976); State v. Wilcox, 40 Ohio App.2d 380, 319 N.E.2d 615 (1974).

The General Acceptance Standard

Frye v. U.S., 293 F. 1013 (D.C. Cir. 1923), is the leading case on the admissibility of novel scientific evidence by means of expert testimony. In rejecting polygraph evidence, the D.C. Circuit set forth what has come to be known as the "general acceptance" test. The court, in an oft-quoted passage, commented:

> Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while the courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs. *Id.* at 1014.

The court went on to hold that the polygraph had "not yet gained such standing and scientific recognition among the physiological and psychological authorities." *Id.*

A number of commentators have criticized the general acceptance standard, *e.g.*, C. McCormick, Evidence 489-90 (2d ed. 1972), and several courts have rejected the standard. *E.g.*, U.S. v. Baller, 519 F.2d 463 (4th Cir.), *cert. denied*, 423 U.S. 1019 (1975); State v. Williams, 388 A.2d 500 (Me. 1978). Other courts, however, have adhered steadfastly to the *Frye* test. *See* U.S. v. Addison, 498 F.2d 741 (D.C. Cir. 1974); People v. Kelly, 17 Cal.3d 24, 130 Cal. Rptr. 144, 549 P.2d 1240 (1976); Reed v. State, 283 Md. 374, 391 A.2d 364 (1978); People v. Tobey, 401 Mich. 141, 257 N.W.2d 537 (1977); Commonwealth v. Topa, 471 Pa. 223, 369 A.2d 1277 (1977).

The general acceptance test has been accepted by the Ohio courts of appeal. A number of polygraph cases have used the *Frye* test. *See* State v. Towns, 35 Ohio App.2d 237, 301 N.E.2d 700 (1973) ("lie detector test has not yet attained scientific acceptance."); State v. Hill, 40 Ohio App.2d 16, 317 N.E.2d 233 (1963) (polygraph has not received "scientific recognition"); State v. Smith, 113 Ohio App. 461, 463, 178 N.E.2d 605 (1960) ("lie detector has not yet attained scientific acceptance"); Parker v. Friendt, 99 Ohio App. 329, 338, 118 N.E.2d 216 (1954) (polygraph inadmissible because of lack of "general scientific recognition and public acceptance."). The test has also been employed in voiceprint and gunshot residue cases. *See* State v. Olderman, 44 Ohio App.2d 130, 336 N.E.2d 442 (1975) (voiceprints); State v. Smith, 50 Ohio App.2d 183, 362 N.E.2d 1239 (1976) (gunshot residue test). Nevertheless, the Supreme Court of Ohio has never explicitly adopted the *Frye* test. In upholding the admissibility of polygraph evidence upon stipulation, the Court mentioned *Frye* but gave no indication that *Frye* was the controlling standard in Ohio. State v. Souel, 53 Ohio St.2d 123, 130, 372 N.E.2d 1318, 1322 (1978). Indeed, the Court, in a footnote, quoted extensively from McCormick's critical comments. *Id.* at 130 n.4, 372 N.E.2d at 1322 n.4. In a prior case, however, the Court seemed to come close to adopting the *Frye* standard. *See* State v. Holt, 17 Ohio St.2d 81, 85, 246 N.E.2d 365, 367 (1969) ("Neutron Activation Analysis has not yet reached the point of generally proven reliability . . . .").

Several arguments have been offered to support the general acceptance standard. First, that standard guarantees that "a minimal reserve of experts exists who can critically examine the validity of a scientific determination in a particular case." U.S. v. Addison, 498 F.2d 741, 744 (D.C. Cir. 1974). Second, the *Frye* test "may well promote a degree of uniformity of decision. Individual judges whose particular conclusions may differ regarding the reliability of particular scientific evidence, may discover substantial agreement and consensus in the scientific community." People v. Kelly, 17 Cal.3d 24, 31, 130 Cal. Rptr. 144, 148-49, 549 P.2d 1240, 1244-45 (1976). Finally, "[w]ithout the *Frye* test or something similar, the reliability of an experimental scientific technique is likely to become a central issue in each trial in which it is introduced, as long as there remains serious disagreement in the scientific community over its reliability. Again and again, the examination and cross-examination of expert witnesses will be . . . protracted and time-consuming . . . and the proceedings may well degenerate into trials of the technique itself." Reed v. State, 283 Md. 374, 388, 391 A.2d 364, 371-72 (1978).

The principal justification for the *Frye* test, however, is that it creates a procedure for ensuring the reliability of scientific evidence: "The requirement of general acceptance in the scientific community assures that those most qualified to assess the general validity of a scientific method will have the determinative voice." U.S. v. Addison, 498 F.2d 741, 743-44 (D.C. Cir. 1974). Without some standard, such as *Frye*, which requires a special burden to be satisfied before innovative techniques gain admissibility, evidence derived from many techniques whose validity has not been established will be admitted. As a consequence, the burden of rebutting such evidence will fall on the opposing party — most often the defendant. *See* State v. Williams, 388 A.2d 500, 506 (Me. 1978) (dissenting opinion) (the "burden of rebuttal is generally borne in the criminal cases by defendants without the economic means to marshal scientific witnesses for a battle of the experts."). As the Sixth Circuit has commented: "A courtroom is not a research laboratory. The fate of a defendant in a criminal prosecution should not hang on his ability to successfully rebut scientific evidence which bears an 'aura of special reliability and trustworthiness,' although, in reality the witness is testifying on the basis of an unproved hypothesis in an isolated experiment which has yet to gain general acceptance in its field." U.S. v. Brown, 557 F.2d 541, 556 (6th Cir. 1977).

The Qualifications of Expert Witnesses

No matter what standard of admissibility is adopted, only a person thoroughly acquainted with the underlying theory and its application would be qualified to testify about the validity of a new scientific technique. This usually means a *scientist* must be called as the expert. Too often, a *technician*, rather than a scientist, has been permitted to testify. For example, in State v. Daniels, 37 Ohio App.2d 4, 305 N.E.2d 497 (1973), the court upheld the admissibility of evidence based upon the trace metal detection technique. The only person who testified about the technique was a police officer. Although the officer was qualified to testify about the procedure used and the results obtained in that particular case, he was *not qualified* to testify about the validity of the technique. Nevertheless, the officer's assertions about the validity of the test were accepted without further scrutiny. In contrast, the same technique was excluded in People v. Lauro, 91 Misc.2d 706, 398 N.Y.S.2d 503 (1977), because there was "absolutely no testimony before the Court as to this test having been received in any court or in the literature of forensic science; nor is there any scientific data presented to show the reliability of this test." *Id.* at 712, 398 N.Y.S.2d at 507. A police officer also testified in *Lauro*.

Another example of technician testimony is found in State v. Smith, 50 Ohio App.2d 183, 362 N.E.2d 1239 (1967). In *Smith* a police officer testified that gunshot residues were detected on the hands of the defendant based upon the results of the Harrison-Gilroy test as modified by the officer. On appeal, the court reversed because there was "no evidence in the record from which it [could] be concluded that [the officer] was qualified either to testify as to the theoretical basis of a new test for determining the presence of gunshot residue or to give expert testimony that such a test was generally accepted in the scientific community." *Id.* at 193, 362 N.E.2d at 1246. *See also* People v. Kelly, 17 Cal.3d 24, 39, 130 Cal.Rptr. 144, 154, 549 P.2d 1240, 1250 (1976) (voiceprint expert's qualifications were "those of a technician and law enforcement officer, not a scientist."); Kirk, *The Interrelationship of Law and Science*, 13 Buff. L. Rev. 393, 394 (1964) ("[T]he technician merely follows prescribed routines, and is not expected to understand their underlying fundamentals. He knows how, but not why.").

Proper Application of the Technique

Once the validity of the principle and the technique have been established, either by expert testimony or by judicial notice, the proper application of the technique on the particular occasion involved in the case must be demonstrated. This requires an examination into the condition of any instrumentation employed in the technique, adherence to proper procedures, the qualifications of the person conducting the procedure, and the qualifications of the person interpreting the results. Generally, these conditions have been recognized by the Ohio cases. *See* City of East Cleveland v. Ferell, 168 Ohio St. 298, 303, 154 N.E.2d 630, 633 (1958) ("There remains . . . a determination as to the sufficiency of the evidence concerning the accuracy of the particular speed meter involved in the instant case and the qualifications of the person using it."); City of Columbus v. Marks, 118 Ohio App. 359, 361, 194 N.E.2d 791, 793 (1963) ("The particular apparatus used must be reliable" and the "test must have been conducted and the apparatus used in a competent manner by a qualified person."); Tiffin v. Whitmer, 32 Ohio Misc. 169, 171, 290 N.E.2d 198, 200 (1970) ("The City is required to prove proper testing and use of the device [VASCAR]"); City of Akron v. Gray, 60 Ohio Misc. 68, 69 (1979) (The "court must consider: (1) Whether the unit was in good operating condition at the time of the instant use; (2) whether the operator of the unit was properly qualified; and (3) whether the operator properly read the unit."). *See generally*, E. Imwinkelried, P. Giannelli, F. Gilligan, & F. Lederer, Criminal Evidence, ch. 8 (1979).

For cases discussing the proper procedures for breathalyzer analysis, *see* State v. Walker, 53 Ohio St.2d 192, 374 N.E.2d 132 (1978); State v. Steele, 52 Ohio St.2d 187, 370 N.E.2d 740 (1977).

THE RIGHT TO A DEFENSE EXPERT

In a case involving scientific evidence, the defense counsel's most important, and perhaps most difficult, task will be obtaining the services of a defense expert. *See* U.S. v. Baller, 519 F.2d 463, 466 (4th Cir.) *cert. denied*, 423 U.S. 1019 (1975) ("[I]t is difficult to rebut [expert] opinion except by other experts or by cross-examination based on a thorough acquaintance with the underlying principles"). Several developments have facilitated the task of securing expert assistance. A growing number of courts have recognized that indigent defendants are constitutionally entitled to expert assistance at state expense. A number of

constitutional grounds for such assistance have been recognized. In People v. Watson, 36 Ill.2d 228, 221 N.E.2d 645 (1966), the court held that the compulsory process clause required the state to provide funds for a questioned document examiner to assist the defense:

> The court recognizes that there is a distinction between the right to call witnesses and the right to have these witnesses paid for by the government, but in certain instances involving indigents, the lack of funds with which to pay for the witness will often preclude him from calling that witness and occasionally prevent him from offering a defense. Thus, although the defendant is afforded the shadow of the right to call witnesses, he is deprived of the substance. *Id.* at 233, 221 N.E.2d at 648.

Other courts have found a right to the assistance of experts in the defendant's guarantee of effective assistance of counsel. For example, in Bush v. McCollum, 231 F. Supp. 560 (D.C. Tex. 1964), *aff'd*, 344 F.2d 672 (5th Cir. 1965), the court commented: "But the right to counsel is meaningless if the lawyer is unable to make an effective defense because he has no funds to provide the specialized testimony that the case requires . . . . In order for [the defendant] in the instant case to have the effective aid of counsel, it was necessary for his counsel to have the assistance of a qualified psychiatrist . . . ." *Id.* at 565. *See also* Hintz v. Beto, 379 F.2d 937, 941 (5th Cir. 1967); ABA Standards Relating to Providing Defense Services 23 (1967) ("The quality of representation at trial may be excellent and yet valueless to the defendant if his defense requires . . . [the] services of a handwriting expert and no such services are available.").

Still other courts have looked to the equal protection clause. In Jacobs v. U.S., 350 F.2d 571 (4th Cir. 1965), the court observed: "It is obvious that only [the defendant's] inability to pay for the services of a psychiatrist prevented a proper presentation of his case. The Supreme Court has unmistakably held that in criminal proceedings it will not tolerate discrimination between indigents and those who possess the means to protect their rights." *Id.* at 573. *Cf.* Douglas v. California, 372 U.S. 353 (1963); Griffin v. Illinois, 351 U.S. 12 (1956). Finally, some courts have reached the same result on due process grounds. *See* Robinson v. Pate, 345 F.2d 691, 695 (7th Cir. 1965), *aff'd in part, remanded in part on other grounds*, 383 U.S. 375 (1966) ("[T]he denial of a reasonable request to obtain the services of a necessary psychiatric witness is effectually a suppression of evidence violating the fundamental right of due process.").

See generally, Anno., 34 A.L.R.3d 1256 (1970); Note, *The Indigent's Right to an Adequate Defense: Expert and Investigational Assistance in Criminal Proceedings*, 55 Cornell L.J. 632 (1970); Note, *Right to Aid in Addition to Counsel for Indigent Criminal Defendants*, 48 Minn. L. Rev. 1054 (1963); Note, *Criminal Law: Indigent Defendant's Right to Independent Psychiatrist*, 7 Tulsa L.J. 137 (1971).

In many jurisdictions, the right to defense experts is governed by statute. For example, the Criminal Justice Act of 1964 provides for such assistance in federal cases. 18 U.S.C. §3006(A)(e) (1976). *See generally*, Anno., 6 A.L.R. Fed. 1007 (1971); 3 C. Wright, Federal Practice and Procedure 740 (1969); Note, *The Criminal Justice Act of 1964 – The Defendant's Right to an Independent Psychiatric Examination*, 28 Wash. & Lee L. Rev. 443 (1971). In Ohio, R.C. 120.04(C) provides that the "state public defender may: (1) In providing legal representation, conduct investigations, obtain expert testimony . . . which are appropriate and necessary to an adequate defense . . . ." R.C. 120.15(C) recognizes the same authority for county public defenders.

DISCOVERY

Scientific Reports

Criminal Rule 16(B)(1)(d) provides for discovery by the defense of "any results or reports . . . of scientific tests or experiments . . . ." This type of discovery provision is intended to cover "autopsy reports, reports of medical examinations of victims, of any psychiatric examination of accused, of chemical analyses, of blood tests, of handwriting and fingerprint comparisons, of ballistics tests and the like." ABA Standards Relating to Discovery and Procedure Before Trial 67 (1970). The principal defect in this provision is that it does not explicitly require disclosure of the *testing methods* used by the government's expert. Without knowledge of the testing methods, the defense cannot adequately prepare to challenge the test results.

Several Ohio cases have addressed this problem. In State v. Cross, 48 Ohio App.2d 357, 357 N.E.2d 1103 (1975), the court stated:

> We do not agree with defendant's contention that the court's ruling with regard to the discovery of the chemist's testing methods was erroneous. Defendant, through his letter requesting discovery, under Crim. R. 16, was furnished all the reports from the chemist, . . . which were within the possession or control of the prosecutor. The defendant knew the chemist's name and had ample time to interview him for trial purposes by deposition, or otherwise, to ascertain the testing methods. *Id.* at 360, 357 N.E.2d at 1105-06.

This passage implies that procedures for discovering the testing methods were available but that the defendant failed to use them. The reference to the availability of a deposition procedure, however, is puzzling because Criminal Rule 15 limits the use of criminal depositions to the preservation of testimony; it is not a discovery procedure. Nevertheless, the use of Criminal Rule 15 as a discovery device has also been sanctioned by the Ohio Supreme Court. In State v. Walker, 53 Ohio St.2d 192, 374 N.E.2d 132 (1978), the Court stated: "In Ohio, it is not questioned that through pretrial discovery under Crim. R. 16 the defense may obtain the name of the individual responsible for conducting the calibration [breathalyzer] test, and determine through deposition under Crim. R. 15 whether such individual utilized the proper methods in calibrating the machine." *Id.* at 197, 374 N.E.2d at 135.

One other point deserves comment. Criminal Rule 16(D) imposes on the prosecution a continuing duty to disclose. In U.S. v. Kelly, 420 F.2d 26 (2d Cir. 1969), the defendant moved for the production of all

scientific tests. The government agreed to provide reports of drug analysis. Subsequently, the government had the drugs tested by neutron activation analysis, but failed to inform the defense of the new tests. The Second Circuit reversed, finding a violation of the government's continuing duty to disclose. The court concluded that "fairness requires that adequate notice be given the defense to check the findings and conclusions of the government's experts" and that the "course of the government smacks too much of a trial by ambush . . . ." *Id.* at 29.

Disclosure of Favorable Evidence

Criminal Rule 16(B)(1)(f) requires the prosecution to disclose evidence favorable to the defendant upon request. This provision follows the constitutional requirements of Brady v. Maryland, 373 U.S. 83 (1963). The leading Ohio case on this issue, McMullen v. Maxwell, 3 Ohio St.2d 160, 209 N.E.2d 449 (1965), involved the state's failure to disclose a ballistics report showing that the defendant's gun had not fired the fatal bullet. According to the Court, "[s]ince the excluded evidence . . . was of such a substantial nature, the failure of the prosecutor to disclose it deprived petitioner of his right to a fair trial." *Id.* at 168, 209 N.E.2d at 456. Other cases applying the *Brady* doctrine to scientific evidence include: State v. Sahlie, 245 N.W.2d 476 (S.D. 1976) (failure to disclose existence of unidentified fingerprints); People v. Drake, 64 Mich. App. 671, 236 N.W.2d 537 (1975) (failure to disclose results of blood and urine analysis of murder victim); State v. Gammill, 585 P.2d 1074 (Kan. App. 1978) (failure to disclose results of examinations of rape victim).

Retesting

In order to challenge scientific evidence, a defendant in many cases must have an opportunity to have the evidence reexamined by its own expert. Criminal Rule 16(B)(1)(c) provides for the inspection of tangible objects within the possession or control of the state, and thus would appear to provide for retesting by the defense. Moreover, a number of courts have found that such a right is constitutionally guaranteed. For example, in Barnard v. Henderson, 514 F.2d 744 (5th Cir. 1975), the defendant's request for inspection of a murder weapon and bullet was rejected by the state courts. The Fifth Circuit, however, granted the defendant habeas relief, holding: "[F]undamental fairness is violated when a criminal defendant . . . is denied the opportunity to have an expert of his choosing, bound by appropriate safeguards imposed by the Court, examine a piece of critical evidence whose nature is subject to varying expert opinion." *Id.* at 746. *See also* White v. Maggio, 556 F.2d 1352 (5th Cir. 1977); Warren v. State, 292 Ala. 71, 288 So.2d 826 (1973); Patterson v. State, 238 Ga. 204, 232 S.E.2d 233 (1977); Jackson v. State, 243 So.2d 396 (1970). Other courts have reached the same result on nonconstitutional grounds. *See* James v. Commonwealth, 482 S.W.2d 92 (Ky. 1972); State v. Gaddis, 530 S.W.2d 64 (Tenn. 1975); People v. White, 40 N.Y.2d 797, 358 N.E.2d 1031 (1976).

The opportunity to reexamine evidence is especially critical when novel scientific techniques are introduced. The Sixth Circuit, in a case involving neutron activation analysis, commented: "[I]f the government sees fit to use this time consuming, expensive means of fact-finding, it must both allow time for a defendant to make similar tests, and in the instance of an indigent defendant, a means to provide for payment for same." U.S. v. Stifel, 433 F.2d 431, 441 (6th Cir. 1970), *cert. denied*, 401 U.S. 994 (1971).

The Duty to Preserve Evidence

Once it is established that a defendant has the right to reexamine scientific evidence, it follows that the state would have a corollary duty to preserve such evidence. Otherwise, the right to reexamination would be meaningless. The leading case on this issue is People v. Hitch, 11 Cal.3d 159, 113 Cal. Rptr. 158, 520 P.2d 974, *vacated*, 12 Cal.3d 641, 117 Cal. Rptr. 9, 527 P.2d 361 (1974). *Hitch* involved the preservation of ampoules used in a breathalyzer test. According to the court, failure to adopt procedures for the preservation of the ampoules deprived the defendant of due process. *See* People v. Municipal Court (Ahnemann),12 Cal.3d 658, 663, 117 Cal. Rptr. 20, 22-23, 527 P.2d 372, 374-75 (1974) ("[D]ue process requires such evidence to be disclosed by the prosecution . . . [and] since the prosecution has the duty to disclose such material evidence, the investigative agency involved in the test has the duty to preserve it for disclosure . . . ."). *See also* Garcia v. District Court, 589 P.2d 924 (Colo. 1979); State v. Michener, 25 Or. App. 523, 550 P.2d 449 (1976).

The Ohio courts have yet to adopt the *Hitch* rationale. *See* State v. Watson, 48 Ohio App.2d 110, 355 N.E.2d 883 (1975); State v. Grose, 45 Ohio Misc. 1, 340 N.E.2d 441 (1975). *See generally, State v. Grose: The Right of the Accused to the Breathalyzer Test Ampoule*, 3 Ohio North. U. L. Rev. 1339 (1976). Nevertheless, the issue is far from settled. The holding in *Watson* was limited; the court stated:

> Therefore, we hold that while the test ampoule and its solution used in the breathalyzer test given to the defendant may be "material to the preparation of his defense" (within the meaning of Crim. R. 16(B)(1)(c)) and ordinarily excludable from evidence when made unavailable to him, where there is no evidence that the ampoule and solution, if preserved, could be scientifically examined so as to produce conclusive results, nor that it was maliciously destroyed, the results of the breathalyzer test may be admitted. *Id.* at 112, 355 N.E.2d at 885.

This passage suggests that had evidence demonstrating the value of retesting been offered, the court would have decided the case differently. No such evidence was presented in *Watson*. *Id.*

More importantly, the duty to preserve evidence has been extended beyond the breathalyzer context. In People v. Taylor, 54 Ill. App.3d 454, 369 N.E.2d 573 (1977), heroin allegedly sold by the defendant was consumed in an unnecessary laboratory test. The court reversed the defendant's conviction: "We hold . . . that defendant in the instant case was denied due process of law and the opportunity for meaningful confrontation of the witnesses against him by the State's unnecessary destruction of the allegedly pro-

hibited substance . . . ." *Id.* at 457, 369 N.E.2d at 576. *See also* State v. Hannah, 120 Ariz. 1, 583 P.2d 888 (1978) (destruction of evidence of arson); People v. Gomez, 596 P.2d 1192 (Colo. 1979) (destruction of heroin); Jackson v. State, 249 So.2d 470 (Fla. App. 1971), *aff'd*, 280 So.2d 673 (1973) (destruction of a bullet); State v. Wright, 87 Wash.2d 783, 557 P.2d 1 (1976) (destruction of evidence in homicide case). *See generally*, Note, *The Right to Independent Testing: A New Hitch in the Preservation of Evidence Doctrine*, 75 Colum. L. Rev. 1355 (1975); *Preservation of Due Process When Evidence is Destroyed or Tested*, 53 Wash. L. Rev. 573 (1978); Comment, *Judicial Response to Government Loss or Destruction of Evidence*, 39 U. Chi. L. Rev. 542 (1972); *Government Has Duty to Implement Effective Guidelines to Preserve Discoverable Evidence*, 1971 Duke L.J. 644.

Prosecutorial Discovery

Criminal Rule 16 provides for reciprocal discovery by the prosecution *if* the defense requests production of tangible objects or the results of scientific tests. Crim. R. 16(C)(1)(a) & (b). These provisions, however, are more restrictive than the comparable provisions for defense discovery. For example, the defense is entitled to all scientific reports "made in connection with the particular case," while the prosecution is entitled to scientific reports only if "made in connection with the particular case" *and* the defendant intends to introduce the evidence at trial or intends to call a witness "when such results or reports relate to his testimony."

Thus, if the defendant does not intend to use the scientific evidence at trial, discovery is not required. Nevertheless, the prosecution may learn of the existence of a defense expert and attempt to call that expert as a prosecution witness. Such a tactic runs afoul of the defendant's right to effective assistance of counsel as well as the attorney-client privilege. In State v. Mingo, 77 N.J. 576, 392 A.2d 590 (1978), the defense retained a questioned document examiner to compare handwriting exemplars provided by the defendant with a writing used in the commission of a crime. The examiner concluded that the exemplars were written by the same person. Consequently, the defense decided not to call the expert. The prosecution, however, subpoenaed the expert and he testified as a government witness. The New Jersey Supreme Court reversed, resting its decision on the right to effective representation of counsel and the attorney-client privilege. The Third Circuit reached the same result in U.S. v. Alvarez, 519 F.2d 1036 (3d Cir. 1975). According to that court, the "attorney must be free to make an informed judgment with respect to the best course for the defense without the inhibition of creating a potential government witness." *Id.* at 1047. *See also* Edney v. Smith, 425 F. Supp. 1038 (E.D.N.Y. 1976); Pouncey v. State, 353 So.2d 640 (Fla. App. 1977). *See generally*, R.C. 2317.02(A) (attorney-client privilege); C. McCormick, Evidence 188-89 (2d ed. 1972); 2 J. Weinstein & M. Berger, Weinstein's Evidence 503-26 (1975).

THE RIGHT TO PRESENT DEFENSE EVIDENCE

A criminal defendant's right to present defense evidence has been recognized in several U.S. Supreme Court decisions. Such a right can be inferred from the compulsory process guarantee. In Washington v. Texas, 388 U.S. 14 (1967), after holding that the compulsory process clause was binding upon the states, the Court stated: "The right to offer the testimony of witnesses, and to compel their attendance, if necessary, is in plain terms the right to present a defense . . . ." *Id.* at 19. The right to present defense evidence also finds support in the due process guarantee. *See* Chambers v. Mississippi, 410 U.S. 284 (1973) (due process violated by state evidentiary rules which precluded the defendant from introducing critical and reliable defense evidence); Green v. Georgia, 99 S.Ct. 2150 (1979). *See generally*, Westen, *The Compulsory Process Clause*, 73 Mich. L. Rev. 73, 149-59 (1974); Clinton, *The Right to Present a Defense: An Emergent Constitutional Guarantee in Criminal Trials*, 9 Ind. L. Rev. 711 (1976); Note, *Constitutional Restraints on the Exclusion of Evidence in the Defendant's Favor: The Implications of Davis v. Alaska*, 73 Mich. L. Rev. 1465 (1975).

The right to present defense evidence has played a significant part in several cases involving the use of scientific evidence. In State v. Sims, 52 Ohio Misc. 31, 369 N.E.2d 24 (1977), the court found an implied right to present defense evidence in the compulsory process clause and concluded that that right compelled admission of defense polygraph evidence. In State v. Dorsey, 87 N.M. 323, 532 P.2d 912, *aff'd*, 88 N.M. 184, 539 P.2d 204 (1975), the court upheld the admissibility of defense-offered polygraph evidence on due process grounds. The court based its decision on *Chambers v. Mississippi*. *See generally*, Clinton, *The Right to Present a Defense: An Emergent Constitutional Guarantee in Criminal Trials*, 9 Ind. L. Rev. 711, 810-15 (1976); O'Connor, *"That's the Man"; A Sobering Study of Eyewitness Identification and the Polygraph*, 49 St. John's L. Rev. 1, 27 (1974).

LABORATORY REPORTS

The admissibility of laboratory reports has been litigated in a number of cases. The leading Ohio case is State v. Tims, 9 Ohio St.2d 136, 224 N.E.2d 348 (1967), in which the prosecution introduced a hospital report of the examination of a rape victim. According to the prosecution, the report was admissible under the Business Record statute. R.C. 2317.40. The Ohio Supreme Court reversed on confrontation grounds: "This right of confrontation includes the right of cross-examination of the person who is the actual witness against him. If applicable in a criminal case, the Business Records as Evidence Act denies him such right." *Id.* at 138, 224 N.E.2d at 351. *Accord*, State v. Miller, 42 Ohio St.2d 102, 326 N.E.2d 259 (1975). In a later case, the Court limited *Tims*: "The *Tims* case only involved the admissibility of hospital records; it clearly did not set forth a general rule proscribing the introduction in evidence of all document that may qualify as a business record." State v. Walker, 53 Ohio St.2d 192, 198, 374 N.E.2d 132, 136 (1978). *See also* Stare v. Kehn, 50 Ohio St.2d 11,

361 N.E.2d 1330 (1977); State v. Colvin, 19 Ohio St.2d 86, 249 N.E.2d 784 (1969). The Court, however, has not overruled *Tims*. *See generally*, Imwinkelried, *The Constitutionality of Introducing Evaluative Laboratory Reports Against Criminal Defendants*, 30 Hastings L.J. 621 (1979).

One other statutory provision is pertinent. R.C. 2925.51 provides that a laboratory report is prima facie evidence in drug cases if the prosecutor serves a copy of the report on the defense. Subsection (C) provides that the "report shall not be prima facie evidence . . . if the accused or his attorney demands the testimony of the person signing the report . . . ." In State v. Reese, 56 Ohio App.2d 278, 382 N.E.2d 1193 (1978), the prosecutor failed to serve a copy of the laboratory report on the defense. The court held that the statutory language was "mandatory" and consequently, the "failure on the part of the prosecutor to properly provide a copy to defense counsel renders such a report inadmissible." *Id.* at 281, 382 N.E.2d at 1195.

RELATED ISSUES

The scope of this article does not permit consideration of all the issues presented by the use of scientific evidence. Nevertheless, several issues are important enough to note briefly. First, evidence submitted to a crime laboratory for analysis often is obtained from the defendant. This, of course, may raise constitutional issues – principally the legality of a search or seizure. *See* Davis v. Mississippi, 394 U.S. 721 (1969) (probable cause lacking for seizure of suspect for fingerprinting); 2 W. LaFave, Search and Seizure 321 & 338 (1979). Second, once the state has obtained evidence, from the defendant or from the crime scene, the prosecution will be required to identify the evidence at trial. This will often require establishing a chain-of-custody. *See* State v. Reese, 56 Ohio App.2d 278, 382 N.E.2d 1193 (1978) ("The trial record here utterly fails to establish a continuous chain of custody [for drugs].").

RECENT DEVELOPMENTS

Search & Seizure

Police, acting pursuant to a search warrant authorizing the search of a bar and one bartender for narcotics and associated paraphenalia, performed "cursory weapons searches" of the occupants of the bar. During the frisks the officers found packets of narcotics on one of the patrons. The U.S. Supreme Court held that the search which produced the narcotics violated the Fourth and Fourteenth Amendments. Noting that the warrant mentioned only the bar and one bartender, the Court reasoned that the police had no probable cause to believe that any patron would be violating the law. In addition, the initial pat-down could not be justified under *Terry v. Ohio*, 392 U.S. 1 (1968), since the frisk was not supported by a reasonable belief that the patron was armed. The Court emphasized that a valid *Terry* frisk requires a "reasonable belief or suspicion directed at the person to be frisked," and does not permit a "generalized 'cursory search for weapons'" among the occupants of the premises to be searched. *Ybarra v. Illinois*, 100 S. Ct. 338 (1979).

Confrontation – Videotape Deposition

The Sixth Circuit found error in the admission at trial of a videotape deposition taken while the defendant was in another room watching the proceedings on a monitor. On advice of psychiatrists, the victim of the crime gave her deposition "not within the vision" of the defendant. The defendant had a buzzer with which he could stop the questioning in order to confer with his counsel, but the witness was unaware of his presence. In reversing his conviction, the Court ruled that "the accuracy of [the witness'] perception of the events during the kidnapping and her recollection and expression of those events was crucial to the government's case. The partial confrontation allowed was inadequate to test those features of her testimony." *U.S. v. Benfield*, 25 Crim. L. Rptr. 2026 (6th Cir. 1979).

Defense Witnesses

According to the First Circuit, evidence of a witness' difficulty in identifying the defendant from a photographic array is probative and critical evidence, even when the witness does not testify for the prosecution. The Court held that the exclusion of the witness when called by the defendant was a denial of the Sixth Amendment right to present witnesses in one's own behalf. *Pettijohn v. Hall*, 599 F.2d 476 (1st Cir. 1979).

Stop and Frisk

While stopped for a traffic offense, the defendant made several suspicious attempts to reach something inside his coat pocket. Consequently, the officer reached into the defendant's coat pocket and withdrew an envelope containing stolen checks. The Ninth Circuit held that once the police officer removed the envelope, he "had no concern that it might contain a weapon." Therefore the "examination of its contents was not 'an intrusion reasonably designed to discover instruments of assault' as required by *Terry*." Although reasonable at its inception, the frisk became unreasonable because of its scope. *U.S. v. Thompson*, 597 F.2d 187 (9th Cir. 1979).

Security Guard Search

The California Supreme Court held that the search and seizure provisions of the State Constitution are triggered when a private security guard conducts an investigation which goes beyond the purely private concerns of his employer and furthers a state interest. The Court found such a case to exist where store security guards searched, seized and detained a shoplifting suspect while waiting for police to arrive. According to the Court, "when private security personnel conduct an illegal search or seizure while engaged in a statutorily-authorized citizens arrest and detention of a person in aid of law enforcement authorities, the constitutional proscriptions . . . are applicable."

People v. Zelinski, 25 Crim. L. Rptr. 1042 (Cal. Sup. Ct. 1979).

Accomplice Testimony

At defendant's trial for assault, his alleged accomplice testified for the prosecution. When questioned by the defense regarding a promise of leniency in exchange for his testimony, the accomplice claimed the attorney-client privilege. On appeal, the Court held that a promise of leniency could not be protected by privilege. Noting that such information is "vital to the jury for a proper evaluation of . . . credibility," the Court held that public policy "demands full disclosure to the jury of the terms of such a bargain." *Mays v. State*, 25 Crim. L. Rptr. 2106 (Okla. Ct. Crim. App. 1979).

Inventory Search

When the defendant was found unconscious by police in his stopped automobile, he was taken to the hospital and the car was towed off the road where it had been blocking traffic. During the course of a warrantless inventory search of the auto, police opened a knapsack which was found to contain large amounts of illegal drugs. Since the knapsack could have easily been inventoried and stored as a unit, the Court held that the search and inventory of the contents of the knapsack were unwarranted in the absence of any danger posed to the police. Concluding that no such danger existed under the circumstances of the case, the Court ruled the evidence produced by the search was inadmissible. *U.S. v. Bloomfield*, 24 Crim. L. Rptr. 2530 (8th Cir. 1979).

Public Trial Right

The Court held that the blanket exclusion of spectators at an incest trial violated the defendant's Sixth Amendment right to a public trial. While the Court acknowledged that such an exclusion may be acceptable during the testimony of children who are required to testify to sordid facts, the order in this case applied for the duration of the entire trial. The Court also ruled that the defendant did not waive his right to a public trial by failing to renew his objection at the end of the child's testimony. *Cumbee v. Commonwealth*, 25 Crim. L. Rptr. 2136 (1979).

Judicial Impartiality

The Court found plain error in the conduct of a federal trial judge in an otherwise "routine" one-day trial. The trial judge interrupted the proceedings over 250 times, infringed upon the cross examination by defense counsel, interrupted defense counsel in the first sentence of the opening statement, and made expressions of "contemptuous disbelief" at the testimony of defense witnesses. According to the Court, "given what occurred, the judge's jury instructions could not offset the effects of his conduct." *U.S. v. Hickman*, 24 Crim. L. Rptr. 2505 (6th Cir. 1979).

Brady Doctrine

During the defendants' trial, the prosecution was requested by the defense to produce any correspondence it had with the state parole board concerning its key witnesses. The prosecutor refused to produce any material and would not affirm or deny its existence. After trial, a letter from the prosecutor to the parole board asking that the witness' "cooperation" be taken into account at his parole hearing was released. Under Brady v. Maryland, 373 U.S. 83 (1963), the prosecution must produce, upon request by the defense, information of an exculpatory nature in its possession. The Court held that "[t]he nondisclosure of this evidence denied defendant his right to a fair trial," since the jury could have found that the evidence indicated an ulterior motive on the part of the witness. *People v. Cwikla*, 24 Crim. L. Rptr. 2485 (N.Y. Ct. App. 1979).

Eyewitness Identification Instruction

The Eighth Circuit has ruled that under certain circumstances a jury instruction on the possible unreliability of eyewitness identifications should be given *See also* U.S. v. Telfaire, 469 F.2d 552 (D.C. Cir. 1972). Where "the eyewitness identification is the sole basis for the conviction [and] there is the possibility of misidentification," the trial court should give an instruction alerting the jury to the crucial role the eyewitness identification plays in the case. *U.S. v. Greene*, 24 Crim. L. Rptr. 2436 (8th Cir. 1979).

Traffic Stops — Ordering Passengers Out of Cars

The Louisiana Supreme Court has refused to extend the holding of *Pennsylvania v. Mimms*, 434 U.S. 106 (1977) to automobile passengers. In *Mimms*, the Supreme Court ruled that police may routinely, and without probable cause, order drivers stopped for traffic offenses out of their cars. The *Mimms* decision was based upon concern for the safety of police officers enforcing traffic regulations. However, the Court found that protection of the police from injuries caused by passing traffic is not applicable when a passenger is involved. In addition, an automobile passenger has a greater expectation of privacy than the driver. "To give the police officer the discretion to order the passenger from the automobile without requiring any explanation of the officer's actions (other than a blanket concern for personal safety in all situations) is to abandon the requirement of individualized inquiry into the reasons for an intrusion of the right to privacy secured by Article 1, §5 of the Louisiana Constitution." *State v. Williams*, 24 Crim. L. Rep. 2359 (La. Sup. Ct. 1979).