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ADMISSIBILITY OF BLOOD ANALYSIS DATA ON QUESTION OF INTOXICATION

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Introduction

The use of blood tests to determine intoxication has reached a stage of scientific development and reliability where it should serve a most useful purpose in assisting courts and juries to discover the truth in cases where intoxication is an issue. It has been recognized that a blood analysis directly reflects the concentration of alcohol in the brain and is the most accurate of the various intoxication tests.[1] Since it is virtually impossible to diagnose intoxication accurately from symptoms alone, it is important that the chemical observation of the percentage of alcohol in an individual's blood or other body fluid be used to confirm intoxication.[2] Although science has developed the blood test to a sufficient degree of reliability to warrant its admission as competent evidence of intoxication,[3] it has not been used to any great degree in civil or criminal litigation in South Carolina. Apparently one reason for the non-use of the blood analysis as evidence of intoxication is the stringent requirement that before results of such tests will be admitted as competent evidence the blood specimen must be traced to the accused by an uninterrupted chain of identification. Failure to take certain precautions in the obtaining and subsequent handling of blood specimens may result in a fatal defect of proof at the trial of the case, leading to exclusion of the results of the blood analysis.

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1. Selesnick, *Alcoholic Intoxication. Its Diagnosis and Medico-Legal Implications*, 110 J. A. M. A. 775 (1938); Greenberg, *The Concentration of Alcohol in the Blood and its Significance*, in ALCOHOL, SCIENCE, AND SOCIETY, a compilation of twenty-nine lectures given at the Yale Summer School of Alcohol Studies (1945).

2. *Preliminary Report of the Committee to Study Problems of Motor Vehicle Accidents*, 108 J. A. M. A. 2137 (1937).

3. Melvin Belli has said of the idea that the problem of determining intoxication has become increasingly one of science: "If the law has not run to meet this scientific advancement, at least a judicial canter in that direction has been manifested." I BELLI, MODERN TRIALS 429 (1954).

Scope

The paramount purpose of this note is to acquaint the members of the legal and medical professions, as well as law enforcement agencies, with the various medico-legal problems which must be overcome before an alcohol blood analysis will be admissible as evidence of intoxication in South Carolina. The first problem is to determine whether or not the results of scientific alcohol tests to show intoxication are admissible at all in this state. The next crucial problem which arises is *how* to get the results admitted as evidence. A knowledge of the mechanics of laying a proper and complete foundation is of utmost importance to the practitioner. Therefore, the primary purpose of this note is to illustrate various precautions to be observed in the obtaining and subsequent handling of blood specimens[4] so that alcohol tests based on the latter may be utilized with more frequency in the courts of South Carolina. Their probative value seems beyond question, although brief reference will be devoted to the weight to be given blood test evidence.

An important problem, not within the scope of this note, is whether there are constitutional restrictions which on independent grounds may preclude the admissibility of the test in certain cases, assuming its value as proof.[5] The only South Carolina case in point is the recent case of *State v. Sanders*,[6] in which the Court was able to avoid the constitutional questions.

4. Note, however, that the problems discussed in this article apply equally to scientific tests for intoxication based on specimens of urine, saliva, breath or spinal fluid.

5. For a good discussion of these problems (unlawful search and seizure, due process of law, privilege against self-incrimination) see Ladd and Gibson, *The Medico-Legal Aspects of the Blood Test for Intoxication*, 24 IOWA L. REV. 191, 215-251 (1939). See also Breithaupt v. Abrams, 352 U. S. 432 (1957); 164 A. L. R. 967 (1946); Annot., 25 A. L. R. 2d 1407 (1952).

6. 234 S. C. 233, 107 S. E. 2d 457 (1959). In a prosecution for reckless homicide, the defendant argued that:

> the taking of his blood without his consent to be analyzed for alcohol content, so that the result of such analysis might be used against him, violated his immunity from self-incrimination under the Fifth Amendment, . . . and further, that such sampling of his blood was an invasion of his body repugnant to the concept of due process under the Fourteenth Amendment.

While recognizing that the question had not been presented previously, the Court did not undertake to answer it because the premise of non-acquiescence was without factual support in the record. As consent was found by the court, no mention was made as to foundation testimony.

South Carolina Statute—Alcohol in the Blood

In South Carolina it is unlawful for any person who is under the influence of intoxicating liquors to operate any vehicle within this state.[7] As a corollary to this statute, and possibly to aid in determining the truth or falsity of the many defenses interposed (*e.g.*, the stupor was produced by shock), our legislature has provided for the use of chemical tests on the charge against the accused.[8] Unfortunately these chemical tests have been seldom used and our Court has not had occasion to construe Section 46-344.[9] However, the presumptions that arise thereunder would seem to be rebuttable presumptions.[10]

By expressly providing for use of chemical tests to aid in the proof of Section 46-343[11] violations, it would appear that our legislature has indicated that the presumptions are not to apply in civil litigation. However, by the weight of authority, even in the absence of statute most courts accept blood tests as reliable.[12] The requirements for admissibility

7. CODE OF LAWS OF SOUTH CAROLINA, § 46-343 (1952).

8. CODE OF LAWS OF SOUTH CAROLINA, § 46-344 (1952).

In any criminal prosecution for the violation of § 46-343 relating to driving a vehicle under the influence of intoxicating liquor, the amount of alcohol in the defendant's blood at the time of the alleged violation, as shown by chemical analysis of the defendant's blood, urine, breath or other bodily substance, shall give rise to the following presumptions:

1. If there was at that time five one-hundredths per cent or less by weight of alcohol in the defendant's blood, it shall be presumed that the defendant was not under the influence of intoxicating liquor;
2. If there was at that time in excess of five one-hundredths per cent but less than fifteen one-hundredths per cent by weight of alcohol in the defendant's blood such fact shall not give rise to any presumption that the defendant was or was not under the influence of intoxicating liquor, but such fact may be considered with other competent evidence in determining the guilt or innocence of the defendant; and
3. If there was at that time fifteen one-hundredths per cent or more by weight of alcohol in the defendant's blood it shall be presumed that the defendant was under the influence of intoxicating liquor.

The provisions of this section shall not be construed as limiting the introduction of any other competent evidence bearing upon the question whether or not the defendant was under the influence of intoxicating liquor.

9. CODE OF LAWS OF SOUTH CAROLINA § 46-344 (1952).

10. An interesting constitutional question is whether or not the enforcement of a presumption of intoxication when blood-alcohol reaches fifteen one-hundredths per cent is a denial of due process. See *Chemical Tests for Intoxication*, 17 MD. L. REV. 193, 207 (1957).

11. CODE OF LAWS OF SOUTH CAROLINA § 46-343 (1952).

12. See cases cited in Annot., 127 A. L. R. 1513 (1940); Annot., 159 A. L. R. 209 (1945); and in DONIGAN, CHEMICAL TEST CASE LAW 9 (1950). Some courts, even in the absence of statute, will admit the less reliable breath tests as sufficiently reliable, the argument being that the lack of unanimity in medical opinion goes to the weight of the evidence and not its admissibility. See 51 MICH. L. REV. 72, 77 (1952).

of the results of blood alcohol tests in civil litigation should be no different from the requirements for admissibility of data obtained from other scientific tests.[13] There is authority to the effect that under the common law the results of tests voluntarily submitted to were admissible under hearsay rule exceptions as an admission against interest.[14] Thus, the scientific blood test for intoxication, when properly used, should be admissible in civil litigation.[15]

Assuming the tests have probative value, when attempting to introduce the results of the intoxication test in either a civil or criminal proceeding, it is nevertheless essential that the blood specimen be traced to the defendant by an uninterrupted chain of evidence.

Necessity for Foundation Evidence

1. The Problem: The rules of admission and exclusion of evidence are not self-operative in our adversary system of trial. Paving the way for admissibility of evidence requires the use of foundation testimony. Thayer's observation that all relevant evidence is admissible unless barred by one of the rules of exclusion[16] presupposes the necessity of laying a proper foundation to avoid, or to show the inapplicability of, the rules of exclusion. Therefore, the methods of laying foundation testimony are a part of the law of evidence.[17] Applying this rationale to the admissibility of blood samples, the problem becomes one of proving the taking, preservation, and adequate custody of this type of real evidence. More specifically, the proof of the identity of blood samples requires that the proponent show: (a) the blood was actually taken (b) from the particular human body from which it

13. WIGMORE, THE LAW OF EVIDENCE § 108 (1935) notes these factors as necessary for a scientific test to be admissable as evidence:
1. The test must be generally accepted as reliable by the community or the special occupation using it;
2. The particular piece of apparatus used must have been of a standard make and in reliable condition when used;
3. The tests must have been competently conducted by an expert.

14. State v. Resler, 262 Wis. 285, 55 N. W. 2d 35, 39 (1959), and cases cited therein.

15. In Schwartz v. Schneuriger, 269 Wis. 535, 69 N. W. 2d 756, 760 (1955), a civil action for negligence in the collision of two vehicles, the Wisconsin court recognized that "in civil actions . . . expert testimony based upon the percentage of alcohol in the blood is admissible to determine intoxication."

16. THAYER, PRELIMINARY TREATISE 265 (1898).

17. Ladd, *Objections, Motions and Foundation Testimony*, 43 CORNELL L. Q. 543 (1958).

was supposed to have been taken; that thereafter it was properly (c) kept and if necessary (d) transported and (e) delivered to the expert who made the analysis.[18] Further, it may be necessary for the expert to keep the sample under lock and key and produce the same at the trial.

2. As Applied in South Carolina: A brief statement of the facts and holding in *Benton v. Pellum*[19] will facilitate a clearer understanding of subsequent sections of this note wherein the case is commented upon with more detail.

The *Benton* case involved a civil action for negligence brought against the driver of a car by a guest passenger for injuries received in an automobile collision. Defendant contended that the driver of the other car involved in the collision was the negligent party, and was highly intoxicated at the time of the accident. To prove intoxication, defendant offered in evidence the results of a blood analysis of samples of blood taken from himself and from the other driver; the trial judge excluded the report based on these tests on the ground that a proper foundation had not been laid for admitting the results of the chemical tests.

The Supreme Court affirmed, the late Justice Oxner saying in effect that the proof did not show continuity in the chain of custody of the blood specimens as there was no evidence that the technologist who drew the samples either sealed the vials or otherwise took precautions against tampering; it was not shown specifically that the vials were mailed to the Charleston Medical College laboratory from the Colleton hospital where the samples were drawn; and the record did not disclose who had possession of the package containing the vials from the early morning of December 25th when the samples were taken until the chemist at the Medical College opened it on December 27th. Further, there was no testimony by whom the package was received at the Medical College, Justice Oxner adding that this missing link probably could have been supplied by the chemist's secretary, who was not, however, used as a witness.

18. These requirements are taken from Annot., 21 A. L. R. 2d 1206, 1219 (1952). McCormick, in his handbook on evidence, states:
The party offering the results of any of these chemical tests must first lay a foundation by producing expert witnesses who will explain the way in which the test is conducted, attest to its scientific reliability, and vouch for its correct administration in the particular case. MCCORMICK, EVIDENCE, § 176, at 277 (1954).
19. 232 S. C. 26, 100 S. E. 2d 534 (1957).

Laying The Proper Foundation

From a study of cases it is apparently impossible to state with finality the extent to which the courts will police the admissibility of results of a blood analysis to determine the degree of intoxication of a party to litigation (whether it be civil or criminal). That it is necessary to offer certain foundation testimony as to the identity of the sample seems without controversy. However, the problem is to determine the quantum of foundation evidence necessary to satisfy the trial judge that he is justified in admitting the results of the blood test as evidence. His wide discretion in the area of admissibility of evidence makes it extremely important that the attorney seeking to introduce the results of the blood alcohol test lay a foundation with care. Otherwise, he may be met with the formidable objection that possession of the blood specimen has not been traced to the accused by an uninterrupted chain of evidence. Each step in the procedure for taking the blood specimen, its delivery to the expert for analysis, and the methods employed in making the test and obtaining the results are of great importance for successful use of this expert testimony at the trial.[20] Therefore, the following is intended to illustrate the mechanics of laying a proper foundation for admissibility of a blood analysis as evidence of intoxication.

Proponent should show that there was an actual *taking* of the blood in question from defendant's body.[21] This can be proved by the direct testimony of a witness, usually the technician taking the sample. Until the possible constitutional problems are decided in South Carolina, it should be shown that some affirmative expression of consent was obtained from the patient whose blood specimen was taken. Next, the doctor or technician who extracted the sample should be examined with care upon the method used, bringing out

20. Ladd and Gibson, *The Medico-Legal Aspects of the Blood Test for Intoxication*, 24 IOWA L. REV. 191, 262 (1939).

21. McGowan v. Los Angeles, 100 Cal. App. 2d 386, 223 P. 2d 862 (1950) (personal injury action involving automobile accident; defense that driver of car in which plaintiff was riding was drunk; expert's report on blood sample was rejected, the court held that there was no evidence of the fact that any blood was taken from the driver's body, of who took it, of when it was taken, or that it was his blood). See also Nesje v. Metropolitan Coach Lines, 140 Cal. App. 2d 807, 295 P. 2d 979 (1956) (Specimen not shown to be blood of decedent). Compare State v. Werling, 234 Iowa 1109, 13 N. W. 2d 318 (1944), which is noted in Annot. 21 A. L. R. 2d 1206, at 1228 (1952) as representing a "red-letter" example of how to prove the fact of taking.

proper sterilization of the hypodermic and of the part of the body from which the blood was taken. It is desirable not to use alcohol as a sterilizing agent, and at the trial to show affirmatively that a different agency was used.[22] Objection to admission of blood test data might be sustained if the defendant's skin, or the instruments of containers used in taking the sample were sterilized with alcohol.

It should be shown that care was used in sealing the containers so as to prevent claims that alcohol could have been added to the original blood content[23] and, further, that the container was properly labeled with the name of the donor, the date and time of taking, and the initials of the person taking the specimen. It has been held that a lack of proper labeling may constitute a fatal defect in the chain of evidence.[24]

It is advisable to offer as an exhibit the container and original label as evidence and have it identified by the technologist or party who drew the specimen. In this connection, Justice Oxner in the *Benton*[25] case notes:

> There was no effort at the trial to produce the vials, the labels, or the request for a blood analysis so as to determine whether or not the technologist could identify them as those he wrapped for mailing.

22. Authorities are not in accord with the possible consequences of using alcohol as a sterilizing agent. Rabinowitch, writing in 39 *Journal of Criminal Law and Criminology* 225, 229 (1948), states that the use of alcohol as a sterilizing agent may account for as much as .12% alcohol in the results of a blood test, whereas Muehlberger at 413 says that error from this source is usually less than 0.01% and never above 0.02%. It has been suggested that the proper sterilization procedure is to dry or steam sterilize the syringe and needle, and use only bichloride solution or cake soap and water in disinfecting the skin. Ladd, *Legal-Medical Aspects of Blood Tests to Determine Intoxication* 29 VA. L. REV. 749, 754 (1943).

23. In Benton v. Pellum, 232 S. C. 26, 33, 100 S. E. 2d 534, 537 (1957), the Court in rejecting the report based on the blood test noted that there was no evidence that the technologist who drew the samples sealed the vials or otherwise took any precautions against tampering.

24. American Mutual Liability Ins. Co. v. Industrial Accident Commission, 78 Cal. App. 2d 493, 178 P. 2d 40 (1947) (workmen's compensation proceeding in which defense was that injury was caused by workman's intoxication; expert's testimony that blood sample showed intoxication rejected where no one knew who labeled it and there was nothing on label to show when or from what body the specimen was taken); Nesje v. Metropolitan Coach Lines, 140 Cal. App. 2d 807, 295 P. 2d 979 (1956) (proof of identity manifestly insufficient; notation on label that blood was taken by F. B. McDonald, place not being specified; no testimony as to who wrote the label or how the writer or writers came by the information which was entered on the label; court noted that label did not rise to the dignity of evidence in that it was the blood of the decedent that was analyzed).

25. Benton v. Pellum, 232 S. C. 26, 34, 100 S. E. 2d 534, 538 (1957).

At this stage it is important to question the physician or technologist who obtained the sample as to any outward manifestations of intoxication, or objective symptoms which point to the intoxication of the defendant, such as odor of alcohol on the breath, abnormalities of gait and speech, size of the pupils, and flushing of the face. South Carolina[26] apparently permits the introduction of any competent evidence bearing upon the question of whether defendant was under the influence of intoxicants, at least in prosecutions for driving under the influence. This technician should also be asked to state that it is his opinion that the defendant is not perceptibly, or is slightly, or is highly affected by alcohol.[27] However, it is better not to question the witness who took the specimen on direct examination as to the consequences of the test itself, because he may not be an expert upon the analysis of blood and therefore may be subject to ruinous cross-examination if this point is considered. There should be no valid objection as to any of the above evidence on the ground of privilege because South Carolina does not recognize the physician-patient privilege.[28]

Continuity of possession and delivery of the blood specimen to the analyst are important links in the chain of evidence. Where a specimen has passed through many hands and proper continuity in handling the specimen cannot be established there is ground for objection that the specimen tested has

26. CODE OF LAWS OF SOUTH CAROLINA § 46-344 (1952); Schwartz v. Schneuriger, 269 Wis. 535, 69 N. W. 2d 756 (1955) (civil action for negligence, testimony by several witnesses of smelling intoxicating liquor on the breath of Schwartz; other witnesses testified that they did not smell intoxicating liquor upon his breath; the court said that if the jury wished to believe the witnesses who testified in the affirmative, that would be corroborating evidence of intoxication, as would his method of driving as found by the jury; by dictum the court suggests that in a civil action corroborating physical evidence of intoxication is not even necessary to the admissibility of the results of the blood test).

27. In State v. Ramey, 221 S. C. 10, 13, 68 S. E. 2d 634, 635 (1952), defendant argued that a conviction for driving under the influence of intoxicants could not be based on testimony of the investigating officer as to defendant's condition. The Court stated that ". . . it is well settled that a lay witness may testify whether or not in his opinion a person was drunk or sober on a given occasion on which he observed him and that the weight of such testimony is for determination by the jury." (Citing cases).

28. WHALEY, HANDBOOK ON SOUTH CAROLINA EVIDENCE 9 S. C. L. Q. at 30 (Supp. 1957). Judge Whaley notes that the physician and patient privilege was not existent at common law and therefore is not a common law rule in South Carolina nor is there any statute in the state giving it recognition. 1961 Attorney General Opinion No. 1248.

not been clearly demonstrated to be that taken from the defendant.[29]

Where possible, the specimen should be delivered personally by the physician, sheriff or patrolman to the chemist or qualified expert who is to analyze it and a receipt obtained.[30] However, where the specimen has been mailed to the analyst the problem of tracing possession poses difficult and often insurmountable problems of proof. Custody of the specimen should be accounted for up to the instant of mailing and, further, there should be testimony as to the actual mailing of the package containing the specimen.[31] The safest procedure is to use registered or special delivery mail in order that a verified dated receipt can be obtained in the analyst's own handwriting. This should avoid the practical problem that from lapse of time the analyst or his secretary has forgotten whether or not the package and specimen was actually received through the mails.[32] In *Benton v. Pellum*[33] the Court, after noting that there was no testimony as to who received the package at the Medical College, suggests that such missing link could have probably been supplied by the chemist's secretary who was not offered as a witness. It may be possible to show delivery through circumstantial evidence by producing the containers and original labels and ask-

29. State v. Weltha, 228 Iowa 519, 292 N. W. 148 (1940) (Specimen passed through several hands, including an unidentified person, and the U. S. mails; results of the test held inadmissible as hearsay); Benton v. Pellum, *supra* note 25. *But cf.* Kuroske v. Aetna Life Insurance Co., 234 Wis. 394, 291 N. W. 384 (1940) (where specimen had passed through a great number of hands, it was for jury to determine whether the integrity of the sample had been preserved).

30. State v. Werling, 234 Iowa 1109, 13 N. W. 2d 318 (1944) (showing of proper delivery).

31. In Benton v. Pellum, *supra* note 25, the hospital superintendent testified that it was likely that he mailed the package but he had no specific knowledge that he did. The Court stated:

> Neither is it definitely shown that the package was mailed at Walterboro. It is true that several of the witnesses referred to its being mailed, but this was necessarily either a mere conclusion based on hearsay or an inference from the customary method of handling these specimens. Benton v. Pellum, *supra* at 34.

32. It would seem that proponent would benefit from the proposition noted in Rodgers v. Commonwealth, 197 Va. 527, 90 S. E. 2d 257, 259 (1955) in which the court stated:

> In proving identity legal presumptions may of course be relied on unless rebutted, e.g., that articles regularly mailed are delivered in substantially the same condition in which they were sent, Schacht v. State, 154 Neb. 858, 50 N. W. 2d 78, 80; and that an analysis made by an official in the regular course of his duties was properly made, 20 Am. Jur., Evidence, §§ 170-171, pp. 174-178.

33. 232 S. C. 26, 100 S. E. 2d 534 (1957).

ing the technician whether he could identify them as those he wrapped for mailing.[34]

At this stage of the case proponent is ready to examine the chemist or analyst who actually determined the alcohol content of the specimen. The analyst, who very commonly is the expert as well, should be examined regarding his qualifications and training, especially with reference to his experience in testing the alcohol content of blood. He should explain meticulously the mechanics of the test used, in terms which are understandable to the jury.[35] The chemist should also be asked to identify the container and the residue of the specimen, the time he received the specimen and when he made the blood analysis. It cannot be overemphasized that the custody of the blood sample must be definitely accounted for at least until the test has been made, and preferably until the trial.[36] It is better, though not essential, that tests be made in duplicate and the results compared. Analytical notes should be kept and filed by the chemist. The analyst[37] should testify as to the results of the test in milligrams of alcohol per hundred cubic centimeters of blood.

The effect of the alcohol content of the blood should be the last testimony. This witness (usually but not necessarily the analyst) should qualify truly as an expert if his testimony is to carry weight with the trier of fact.[38] If the litigation is a

34. In any event it would appear advisable to produce the vials, the labels, and the request for the blood analysis in South Carolina. *Benton v. Pellum, supra* note 25. Cited in the *Benton* case was Novak v. District of Columbia, 82 App. D. C. 95, 160 F. 2d 588 (1947) in which the results of a blood analysis were held inadmissible where the prosecution failed to have the police officer who took the specimen testify as to the identity of the bottle and label thereon which were in the hands of the chemist who made the analysis.

35. See DONIGAN, CHEMICAL TEST CASE LAW 9, at 71 (1950) for a sample list of questions and answers for presenting chemical test evidence. Briefly stated, the analyst should name the method of analysis, outline briefly the procedure and precautions to assure accuracy, the quantity of alcohol found and the subsequent disposal of the container and remaining specimen. Ladd, *Legal-Medical Aspects of Blood Tests to Determine Intoxication*, 29 VA. L. REV. 749, 755 (1943).

36. Custody of the blood up to time of trial would not seem indispensable where other adequate records were made, because the balance of the blood specimen remaining after the test could serve little purpose other than to present the testimony visually to the jury as an exhibit. Ladd & Gibson, *The Medico-Legal Aspects of the Blood Test to Determine Intoxication*, 24 IOWA L. REV. 191, 265 (1939).

37. And it was held in Bryan v. State, 157 Tex. Crim. 592, 252 S. W. 2d 184 (1952) that results of an analysis may be testified to by an expert chemist or toxicologist who was present and supervised the analysis even though it was made by another person and not by the witness.

38. Another reason advanced why this expert should be fully qualified and well read in the literature of the subject of blood tests is because "ex-

criminal prosecution under section 46-343[39] for driving under the influence of intoxicants, the expert need only testify as to the percentage of alcohol of the blood sample tested. The presumptions provided by section 46-344[40] make it unnecessary for the expert to testify as to the consequences of the alcohol content in the blood of the defendant. In both criminal and civil litigation where intoxication is an issue the hypothetical question is a valuable tool for bringing home the consequences of the blood alcohol test to the trier of fact. This opinion evidence should be valuable on the issue of intoxication.[41]

In passing, it should be noted that the discussion of the steps necessary to a proper tracing of the blood specimen points up the possible methods of attack in seeking to exclude the results of the test. Cross examination may include such factors as tolerance to alcohol,[42] physical condition of the defendant at the time of drinking, the significance of the element of time, and the possibilities of other types of physical ailments as affecting the results of the blood test.[43] However, although these facts may lessen the weight of the expert testimony with the jury, they cannot be employed to exclude it.[44] The competency of the blood test remains unimpaired.

Conclusion

It is desirable that scientific blood-intoxication tests not be over-regulated by the courts. Judge Learned Hand observed that generally more harm is done by excluding evidence than

perience has shown that it is upon this problem that the greatest amount of cross examination is developed." Ladd, *Legal-Medical Aspects of Blood Tests to Determine Intoxication*, 29 VA. L. REV. 749, 757 (1943).

39. CODE OF LAWS OF SOUTH CAROLINA § 46-343 (1952).

40. CODE OF LAWS OF SOUTH CAROLINA § 36-344 (1952).

41. However, the expert witness cannot express his opinion directly that the defendant was intoxicated as he would thus be forced to assume the existence of too many facts subject to independent proof. In Natwick v. Moyer, 177 Ore. 486, 163 P. 2d 936 (1945), the court while recognizing that an expert witness testifying as to the result of a blood test may say that a given quantity of alcohol found in the blood of a particular individual indicates intoxication in a greater or less degree, says, however ". . . since his testimony is based solely on the result of the blood test, he may not . . . give his opinion that the *individual* in question was in fact intoxicated." (Emphasis supplied).

42. Kuroske v. Aetna Life Insurance Co., 234 Wis. 394, 291 N. W. 384 (1940).

43. Kirschwing v. Farrar, 114 Colo. 421, 166 P. 2d 154 (1946) (defense of epileptic seizure of the grand mal type; other evidence held sufficient to uphold finding of intoxication).

44. Natwick v. Moyer, 177 Ore. 486, 163 P. 2d 936 (1945) (blood test results admissible; fact that some persons yield more readily than others to the deleterious effect of intoxicants is but other evidence to be considered in determining the question of intoxication vel non.).

by admitting it. Where there is a minor break in the chain tracing the blood specimen to defendant, it would seem more reasonable, in order to further the ends of justice, to permit a reasonable stress on the chain and admit the results on the issue of intoxication. Since the blood alcohol test is not conclusive on the issue of intoxication, the trial judge should permit the jury to weigh the relative weaknesses in proponent's foundation evidence. The results of the test do not stand in the place of the usual evidence introduced as proof of intoxication but stand as merely supplemental evidence thereof.

As a practical matter, because of the crowded lower court dockets in South Carolina and the lapse of time which usually occurs between the taking of a blood sample and the trial, witnesses are often unavailable or don't remember certain key facts. Assuming that the attorney has not been lax in preparing his case, it would appear reasonable for the court to disregard the missing link and accept the results of the blood test in evidence. Cross examination and the summation to the jury are sufficient safeguards to point out weak links in the foundation testimony. Inasmuch as intoxication can be proved circumstantially[45] (*e.g.*, witnesses testifying as to having seen defendant drinking intoxicating liquor on the day of the accident), why not admit the results of blood tests on the same plane?

Certainly foundation testimony is required in the field of real and demonstrative evidence in order to make the ultimate testimony relevant and give it strength. Yet to require a too rigid chain of evidence disregards the practical limitations of proof. The standard of proof should not be too rigid but at the same time it should not be as liberal as the rule in some workmen's compensation cases,[46] which requires merely that there should not be a total lack of identification. A possible middle ground standard is suggested. This approach is illustrated in *People v. Riser*,[47] where the court stated:

> The burden on the party offering the evidence is to show to the satisfaction of the trial court that, taking all the circumstances into account including the ease or diffi-

45. 2 WIGMORE, EVIDENCE, § 235 at 31 (3d ed. 1940).
46. Hobday v. Compensation Comm'n, 126 W. Va. 99, 27 S. E. 2d 608 (1943).
47. 47 Cal. 2d 566, 305 P. 2d 1 (1956).

> culty with which the particular evidence could have been altered, it is reasonably certain that there was no alteration.

Nevertheless, the California court notes that the requirement of reasonable certainty is not met if some *vital* link in the chain of possession is not accounted for. The question remains, what constitutes a vital link?

South Carolina requires strict foundation evidence before results of blood tests will be admissible on the issue of intoxication. It is hoped that the suggestions contained herein will be beneficial to the practitioner in this respect.