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## EVIDENCE-SCIENTIFIC TESTS FOR INTOXICATION- ADMISSIBILITY

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## COMMENTS

EVIDENCE—SCIENTIFIC TESTS FOR INTOXICATION—ADMISSIBILITY—Under most state statutes it is at least a misdemeanor to drive a motor vehicle while “under the influence” of intoxicating liquor. As a general proposition, it can be said that a person is “under the influence” if a sufficient amount of alcohol has been absorbed by his system to impair the rational exercise of his mental and physical faculties.<sup>1</sup> Such an impairment may exist even though there are no outward manifestations leading a competent observer to suspect drunkenness.<sup>2</sup> Furthermore, the suddenness and shock of an accident can jolt a drunken driver into an appearance of sobriety. On the other hand, shock and injury can also produce stupor, drowsiness, and other symptoms of intoxication in a person who is perfectly sober. If the guilty are to be convicted and the innocent protected in cases where the sobriety of the defendant is a critical issue, the testimony of eyewitnesses must be supplemented by evidence of a more scientific nature.

It is the purpose of this comment to examine the admissibility and probative value of the tests available for determining the amount of alcohol in the human system.

*I. Tests Used to Determine Intoxication*

A. *In General.* When alcohol is introduced into the stomach through the use of intoxicants, a certain amount of the alcohol is absorbed into the blood stream and circulated to the brain, where its toxic attributes impair the normal functioning of the physical and mental faculties. All scientific alcohol tests are based on the assumption that there is a direct correlation between the amount of alcohol in the blood and brain, and the influence of that alcohol on the person. This assumption has been substantiated by the experiments of modern science.<sup>3</sup>

It is generally agreed by medical authorities that a concentration of fifteen-hundredths of one per cent or more alcohol by weight in the blood indicates definite intoxication, and that a concentration of five-

<sup>1</sup> Selesnick, “Alcoholic Intoxication. Its Diagnosis and Medico-Legal Implications,” 110 J.A.M.A. 775 (1938); *State v. Glanzman*, 69 Idaho 46, 202 P. (2d) 407 (1949); *State v. Mann*, 143 Me. 305, 61 A. (2d) 786 (1948); *State v. Blankenship*, 229 N.C. 589, 50 S.E. (2d) 724 (1948).

<sup>2</sup> Selesnick, “Alcoholic Intoxication. Its Diagnosis and Medico-Legal Implications,” 110 J.A.M.A. 775 (1938).

<sup>3</sup> *Ibid.*; Ladd and Gibson, “The Medico-Legal Aspects of the Blood Test to Determine Intoxication,” 24 IOWA L. REV. 191 (1939).

hundredths of one per cent or less is not sufficient to impair driving.<sup>4</sup> Between these two levels there may be individual variations. Some persons become intoxicated at levels not much over five-hundredths of one per cent, while a habitual drinker can develop such a tolerance for alcohol as to be barely under its influence when his alcohol-blood ratio is as high as fifteen-hundredths of one per cent.<sup>5</sup>

Other body fluids besides blood can be used in alcohol tests, as alcohol rapidly attains a uniform concentration in all the tissues of the body which contain water.<sup>6</sup> Thus, for example, within an hour and a half after consumption of an intoxicant, an equilibrium is attained between the concentration of the alcohol in the blood and that in the urine.

B. *Blood Test.* A blood analysis gives the most direct reflection of the concentration of alcohol in the brain and is the most accurate of the various tests.<sup>7</sup> Blood contains a negligible amount of non-alcoholic oxidizable material which might cause error, and specimens are always readily available. The taking of a sample and its analysis are not difficult, even though the services of a trained technician are required.<sup>8</sup> The great shortcoming of the blood test lies in the serious constitutional questions raised when a specimen is taken without the consent of the accused. These questions are considered below.

C. *Urine Test.* An advantage of the urine test is that a specimen can be obtained without the aid of a technician or doctor. There are, however, at least three disadvantages of this test.<sup>9</sup> It is sometimes

<sup>4</sup> 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 45 at 46 (1945); Ladd and Gibson, "Legal-Medical Aspects of Blood Tests to Determine Intoxication," 29 *VA. L. REV.* 749 (1943).

<sup>5</sup> Newman and Card, "The Nature of Tolerance to Ethyl Alcohol," 86 *J. NERV. AND MENT. DISEASES* 428 (1937); Rabinowitch, "Medicolegal Aspects of Chemical Tests of Alcoholic Intoxication," 39 *J. CRIM. L. & CRIMINOLOGY* 225 (1948).

<sup>6</sup> Barclay, Miller, and Nickolls, "Blood and Urine Alcohol Tests in Cases of 'Driving under the Influence,'" 19 *MEDICO-LEGAL J.* 98 (1951).

<sup>7</sup> 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 lectures 45 (1945).

<sup>8</sup> For methods used in blood analysis see Harger, "A Simple Micromethod for the Determination of Alcohol in Biologic Material," 20 *J. LAB. AND CLIN. MED.* 746 (1935); Heise, "The Specificity of the Test for Alcohol in Body Fluids," 4 *AM. J. CLIN. PATH.* 182 (1934).

<sup>9</sup> Southgate and Carter, "Excretion of Alcohol in the Urine as a Guide to Alcoholic Intoxication," 1 *BRR. MED. J.* 463 (1926); Jetter, "The Diagnosis of Acute Alcoholic Intoxication by a Correlation of Clinical and Chemical Findings," 196 *AM. J. MED. SCI.* 475 (1938).

impossible to get a urine sample during periods of emotional stress. Even when a sample can be obtained, the amount of alcohol in the urine does not reflect the concentration of alcohol in the brain at the time the sample was taken, but rather the average concentration since the last time the bladder was voided. An immediate analysis of the urine specimen after it is obtained is usually out of the question. This failing of the urine test, which is also true of the blood test, may result in grave inconveniences to persons wrongfully accused of driving while under the influence of intoxicating liquor, since frequently they must be detained by the police until the specimen is taken to a laboratory and analyzed for alcoholic content by trained technicians.

D. *Breath Test.* There are a number of different breath tests for alcoholic concentration, but the ultimate principle in each is the same. When a person inhales, part of the air which is taken into the lungs comes in contact with a large number of blood vessels, and alcohol passes from the blood to the air. This air coming in contact with the blood vessels is termed alveolar, or lung, air. An almost immediate equilibrium is established between the concentration of alcohol in the blood and that in the lung air, and, therefore, if a device of sufficient accuracy is used to measure the concentration of alcohol in the lung air, the amount of alcohol in the blood can be calculated.<sup>10</sup>

The device most commonly used to measure the concentration of alcohol in the lung air is the Harger Drunkometer. This apparatus utilizes a reagent which absorbs all alcohol passed through it. The carbon dioxide in the breath sample is absorbed by another chemical. Breath is passed through these two chemicals until the reagent has absorbed enough alcohol to change color. The amount of alcohol needed to cause a change of color in the reagent being known, and the amount of carbon dioxide absorbed being ascertainable, the alcohol-carbon dioxide ratio of the subject's breath can be computed. The percentage concentration of alcohol in the lung air can then be determined by multiplying this ratio by the percentage of carbon dioxide in lung air.<sup>11</sup>

Two other breathometers have been developed since 1938. The Intoximeter<sup>12</sup> is similar to the Drunkometer in many respects but em-

<sup>10</sup> Greenberg, "The Concentration of Alcohol in the Blood and Its Significance," in *ALCOHOL, SCIENCE AND SOCIETY*, a compilation of lectures 45 (1945).

<sup>11</sup> Harger, Lamb and Hulpieu, "A Rapid Chemical Test for Intoxication Employing Breath," 110 *J. A.M.A.* 779 (1938).

<sup>12</sup> FORRESTER, *CHEMICAL TESTS FOR ALCOHOL IN TRAFFIC LAW ENFORCEMENT* 71 (1950).

employs a different method for determining the alcohol-carbon dioxide ratio. The Alcoholometer<sup>13</sup> differs radically from the Drunkometer. Its unique advantage is its ability to make a quick determination of alcohol concentration in the breath by means of an electric eye measurement of the color intensity of a solution which varies in relation to the amount of alcohol passed through the apparatus.

The advantages of the breath test over either the blood or urine test are immediately apparent. The services of a technician are not needed to procure a breath sample, and such a sample can be obtained even against the will of the subject. The alcoholic content can be easily determined—the Alcoholometer, for instance, registers the concentration of alcohol automatically, and the Drunkometer requires only that the carbon dioxide absorbing chemical be weighed before and after the test.

A breath test is not as accurate as a blood test, but the argument is made that it is accurate enough for practical purposes.<sup>14</sup>

E. *Other Tests.* There are a few other ways of determining the percentage concentration of alcohol in the blood stream. The spinal fluid test,<sup>15</sup> although accurate, is highly impractical since it is almost impossible to procure a specimen of spinal fluid except in a doctor's office or a hospital. The saliva test<sup>16</sup> also does not meet practical needs since the flow of saliva often stops in time of emotional stress and shock. Neither of these tests is used for law enforcement purposes.

## II. *Admissibility*

A. *In General.* The admissibility of data obtained from scientific tests is conditioned upon three factors: (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.<sup>17</sup>

There have been some scientists who have rejected the reliability of a blood test for determining the concentration of alcohol in the brain,

<sup>13</sup> Greenberg, "The Concentration of Alcohol in the Blood and Its Significance," in *ALCOHOL, SCIENCE AND SOCIETY*, a compilation of lectures 45 at 51 (1945).

<sup>14</sup> Selesnick, "Alcoholic Intoxication. Its Diagnosis and Medico-Legal Implications," 110 *J. A.M.A.* 775 (1938).

<sup>15</sup> Gettler and Freireich, "Determination of Alcoholic Intoxication during Life by Spinal Fluid Analysis," 92 *J. BIOL. CHEM.* 199 (1931).

<sup>16</sup> Abels, "Determination of Ethyl Alcohol in Saliva," 34 *PROC. SOC. FOR EXPERIMENTAL BIOLOGY AND MED.* 504 (1936).

<sup>17</sup> WIGMORE, *EVIDENCE* 138 (1935).

contending that only a spinal fluid test will yield accurate results.<sup>18</sup> The weight of medical authority, however, is that the alcohol-blood ratio is a good and reliable indication of the amount of alcohol in the brain.<sup>19</sup> Because the body destroys alcohol through a process of oxidization, a blood test accurately reflects the alcohol-blood ratio at the time the accused was allegedly driving under the influence of intoxicating liquor only if the blood specimen is extracted at that time. If there is a period of delay between the time of the alleged offense and the time the blood specimen is procured (which is the usual case), the test results are still usable since oxidization occurs at a slow, fixed and known rate, which can be taken into consideration in computing final results.<sup>20</sup> Another possible source of unreliability is the presence of impurities in the blood which react as intoxicants. The medical consensus is that these impurities exist in such minute quantities that they can be disregarded.<sup>21</sup>

The urine test offers a greater possibility of unreliability than does the blood test, since the alcohol-urine ratio may represent the concentration of alcohol in the blood at some preceding time. Thus if the urine was collected in the bladder while the alcohol-blood ratio was rising, the alcohol concentration of the urine will be lower than that of the blood, but if the urine was collected while this ratio was declining, the alcohol concentration of the urine will be greater than that of the blood.<sup>22</sup>

Of the several tests, the reliability of the breath test, and more particularly of the Harger Drunkometer test,<sup>23</sup> is most in dispute.<sup>24</sup> The

<sup>18</sup> Gettler, Freireich and Schwartz, "Blood Alcohol and Intoxication: Its Value in Border Line Cases," 14 *AM. J. CLIN. PATH.* 365 (1944); Gettler and Freireich, "Determination of Alcoholic Intoxication During Life by Spinal Fluid Analysis," 92 *J. BIOL. CHEM.* 199 (1931).

<sup>19</sup> Greenberg, "The Concentration of Alcohol in the Blood and Its Significance," in *ALCOHOL, SCIENCE AND SOCIETY*, a compilation of lectures 45 (1945); Ladd and Gibson, "Legal-Medical Aspects of Blood Tests to Determine Intoxication," 29 *VA. L. REV.* 749 (1943); Harger, Hulpieu and Lamb, "The Speed with which Various Parts of the Body Reach Equilibrium in the Storage of Ethyl Alcohol," 120 *J. BIOL. CHEM.* 689 (1937).

<sup>20</sup> Barclay, Miller and Nickolls, "Blood and Urine Alcohol Tests in Cases of 'Driving under the Influence,'" 19 *MEDICO-LEGAL J.* 98 (1951); Newman and Cutting, "Alcohol Injected Intravenously: Rate of Disappearance from the Blood Stream in Man," 54 *J. PHARMACOLOGY & EXPERIMENTAL THERAPEUTICS* 371 (1935).

<sup>21</sup> I GRAY, *ATTORNEYS' TEXTBOOK OF MEDICINE* 615 (1949).

<sup>22</sup> Selesnick, "Alcoholic Intoxication. Its Diagnosis and Medico-Legal Implications," 110 *J. A.M.A.* 775 (1938).

<sup>23</sup> Harger, "Debunking' the Drunkometer," 40 *J. CRIM. L. & CRIMINOLOGY* 497 (1949).

<sup>24</sup> Thus Gray, in I *ATTORNEYS' TEXTBOOK OF MEDICINE* (1949) at 625, states, "It is no longer considered that alcoholic determination of air from the lungs is satisfactory."

most serious criticism of the Harger Drunkometer is directed to the fact that it uses respiratory air (that which does not come in contact with the blood vessels of the lungs) as well as alveolar, or lung, air and thus registers an erroneous picture of the amount of alcohol in the lung air.<sup>25</sup> Dr. Harger's defense of his test is that numerous experiments show there is no significant difference in the alcohol-carbon dioxide ratio obtained whether ordinary expired air or lung air is used.<sup>26</sup> One authority, however, has gone so far as to say, "the sooner this test is discarded for medico-legal purposes, or at least withheld until it is improved, the better."<sup>27</sup>

Even in the absence of statute, most modern courts accept blood and urine tests as reliable.<sup>28</sup> The results of breath tests are probably admissible also, though some courts may exclude such evidence because of the conflict in the medical profession as to the accuracy of the tests.<sup>29</sup> Those courts which admit breath tests as sufficiently reliable argue that the lack of unanimity in medical opinion goes to the weight of the evidence and not its admissibility.

Thirteen states by legislative enactment have recognized the reliability of scientific alcohol tests.<sup>30</sup> Three of these do not specify any particular test, but leave such determination to the courts.<sup>31</sup> The statutes of the other states, however, expressly enumerate admissible tests. The New York law is typical.<sup>32</sup>

Harger, on the other hand in "Medicolegal Aspects of Chemical Tests of Alcoholic Intoxication," 39 J. CRIM. L. & CRIMINOLOGY 402 (1948), restated his original position that breath tests are amply accurate for practical use.

<sup>25</sup> Haggard, Greenberg, Miller and Carroll, "The Alcohol of the Lung Air as an Index of Alcohol in the Blood," 26 J. LAB. AND CLIN. MED. 1527 (1941).

<sup>26</sup> Harger, "'Debunking' the Drunkometer," 40 J. CRIM. L. & CRIMINOLOGY 497 (1949).

<sup>27</sup> Rabinowitch, "Medicolegal Aspects of Chemical Tests of Alcoholic Intoxication," 39 J. CRIM. L. & CRIMINOLOGY 225 at 244 (1948).

<sup>28</sup> See cases cited in 127 A.L.R. 1513 (1940); 159 A.L.R. 209 (1945); and in DONIGAN, CHEMICAL TEST CASE LAW 9 (1950).

<sup>29</sup> In the following cases results of Drunkometer tests were held admissible: *Toms v. State*, 239 P. (2d) 812 (Okla. Crim. 1952); *People v. Bobczek*, 343 Ill. App. 504, 99 N.E. (2d) 567 (1951); *McKay v. State*, 235 S.W. (2d) 173 (Tex. Crim. 1950); *Contra: People v. Morse*, 325 Mich. 270, 38 N.W. (2d) 322 (1949).

<sup>30</sup> *Ariz. Laws* (1950) 1st Spec. Sess. ch. 3, §54; *Ind. Stat. Ann.* (1952) §47-2003; *Me. Rev. Stat.* (1944) c. 19, §121; *Neb. Rev. Stat.* (1951 Supp.) §39-727.01; *N.H. Laws* (1949) c. 204; *N.Y. Vehicle & Traffic Law* (McKinney, 1952) §70-5; *N.D. Rev. Code* (1949 Supp.) §39-0801; *Ore. Comp. Laws Ann.* (1941) §115-318a; *S.C. Acts* (1949) No. 281, §57; *S.D. Session Laws* (1949) c. 42; *Utah Code Ann.* (1951 Supp.) §57-7-111; *Wash. Rev. Code* (1951) §46.56.010; *Wis. Stat.* (1951) §85.13.

<sup>31</sup> Arizona, Maine, and North Dakota.

<sup>32</sup> *N.Y. Vehicle & Traffic Law* (McKinney, 1952) §70-5.

“. . . Upon the trial of any action or proceeding arising out of acts alleged to have been committed by any person arrested for operating a motor vehicle while in an intoxicated condition, the court may admit evidence of the amount of alcohol in the defendant's blood taken within two hours of the time of the arrest, as shown by a medical or chemical analysis of his breath, blood, urine, or saliva. For the purpose of this section (a) evidence that there was, at the time, five-hundredths of one per centum, or less, by weight of alcohol in his blood, is prima facie evidence that the defendant was not in an intoxicated condition; (b) evidence that there was, at the time, more than five-hundredths of one per centum and less than fifteen-hundredths of one per centum by weight of alcohol in his blood is relevant evidence, but it is not to be given prima facie effect in indicating whether or not the defendant was in an intoxicated condition; (c) evidence that there was, at the time, fifteen-hundredths of one per centum, or more by weight of alcohol in his blood, may be admitted as prima facie evidence that the defendant was in an intoxicated condition.”

It is to be emphasized that the presumptions created by these statutes are rebuttable.

As stated above, a scientific test to be admissible as evidence must not only be considered as reliable by the community or the particular profession using it, but the particular piece of apparatus used must have been reliable, and the test must have been competently conducted by an expert. The possibility of error because of faulty or careless administration of an intoxication test is great,<sup>33</sup> and therefore the witness who administered the test should be qualified carefully by the prosecution and, in appropriate circumstances, vigorously cross-examined by the defense.

It is probable that the results of any of the tests will be excluded from evidence if the prosecution cannot prove the instruments and containers used were clean and sterile. Objection to admission of blood test data might be sustained if the defense can show that the defendant's skin, or the instruments or containers used were sterilized with alcohol,<sup>34</sup> or if the analysis was made of plasma rather than whole blood.<sup>35</sup>

<sup>33</sup> On the possible sources of error in alcohol tests see DONIGAN, *CHEMICAL TEST CASE LAW* 20 (1950); Rabinowitch, "Medicolegal Aspects of Chemical Tests of Alcoholic Intoxication," 39 *J. CRIM. L. & CRIMINOLOGY* 225 (1948).

<sup>34</sup> In 39 *J. CRIM. L. & CRIMINOLOGY* 225, 402, 411 (1948), Rabinowitch at p. 229 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. Muehlberger at p. 413 says that error from this source is usually less than 0.01% and never above 0.02%.

<sup>35</sup> *Id.* at 229; Harger *contra*, *id.* at 402.

Objection might be taken to the admissibility of the results of a urine test if the specimen was not rendered alkaline before analysis,<sup>36</sup> or if an alcohol sterilizing agent was used. There is authority that each of the following is a possible source of error in a breath test: (a) traces of alcohol from a former test remaining in the rubber balloon used to collect the breath specimen;<sup>37</sup> (b) regurgitation;<sup>38</sup> (c) inaccurate weighing of the chemical absorbent either before or after the test;<sup>39</sup> (d) traces of liquor in the mouth from a drink taken within fifteen minutes before the test;<sup>40</sup> (e) garlic, onions, etc. recently eaten by the defendant.<sup>41</sup> One of the most important prerequisites for the admission of the results of any of the tests is that the specimen be traced to the accused by an uninterrupted chain of identification.<sup>42</sup>

B. *The Physician-Patient Privilege.* Many of the situations in which alcohol tests are used arise out of accidents in which the defendant has been injured. The doctor who attends the defendant is often asked to take a sample of his body fluid in order that it might be analyzed for alcoholic content. Later, when an attempt is made to introduce the result of this analysis into evidence, the prosecution will probably have to place the doctor on the stand to trace the specimen to the accused. It is not uncommon for the defense to object to the testimony of the doctor on the ground that it violates the physician-patient privilege.

Such a privilege was unknown at common law, but twenty-nine states have statutes providing that information obtained by a physician in the treatment of a patient cannot be admitted into evidence over the objection of the person treated.<sup>43</sup> Most of these statutes provide that only information which was necessary to enable the doctor to prescribe or act for the patient is privileged. Although a doctor might have to know of the presence of alcohol in the patient's system in order to

<sup>36</sup> *Id.* at 231; Muehlberger *contra*, *id.* at 414.

<sup>37</sup> 1 GRAY, ATTORNEYS' TEXTBOOK OF MEDICINE 615 (1949).

<sup>38</sup> Rabinowitch, "Medicolegal Aspects of Chemical Tests of Alcoholic Intoxication," 39 J. CRIM. L. & CRIMINOLOGY 225 at 244 (1948); Harger in answer at 408 of the same volume says that he has never heard of a case of regurgitation during the giving of a test, and even if it should occur the operator can have the subject rinse his mouth.

<sup>39</sup> *State v. Hunter*, 4 N.J. Super. 531, 68 A. (2d) 274 (1949).

<sup>40</sup> Selesnick, "Alcoholic Intoxication. Its Diagnosis and Medico-Legal Implications," 110 J. A.M.A. 775 (1938).

<sup>41</sup> Harger in "Debunking' the Drunkometer," 40 J. CRIM. L. & CRIMINOLOGY 497 (1949) denies that onions, etc. can have any appreciable effect on Drunkometer results.

<sup>42</sup> *Novak v. District of Columbia*, (D.C. Cir. 1947) 160 F. (2d) 588; *Natwick v. Moyer*, 177 Ore. 486, 163 P. (2d) 936 (1945).

<sup>43</sup> 8 WIGMORE, EVIDENCE, 3d ed., 802 (1940).

treat him for shock or stupor or similar disorders, such information will not be necessary to enable him to treat the patient for physical wounds or breaks, and in such cases the privilege will ordinarily be of no avail to the defense.<sup>44</sup> The statute of at least one state is not so limited,<sup>45</sup> and in that jurisdiction it is more likely that an appeal to the privilege will be successful.<sup>46</sup>

### III. *Constitutionality*

A. *In General.* Besides possible exclusion because of failure to meet the evidentiary requirements of competence, materiality and relevance, there is also the possibility that the results of scientific tests will be held inadmissible on constitutional grounds.<sup>47</sup> Arguments have been made, at times successfully, that the use of scientific tests for alcohol violates constitutional guarantees against self-incrimination or unlawful search and seizure, or comes in conflict with the protection of the due process clause.

B. *Self-incrimination.* The Fifth Amendment of the Federal Constitution provides: "No person . . . shall be compelled in any criminal case to be a witness against himself." Most of the states have similar constitutional provisions.<sup>48</sup> The historical purpose of the privilege against self-incrimination was to protect a person from inquisitorial practices employing legal process to extract from him admissions of guilt.<sup>49</sup> A critical issue which modern courts have had to face is whether the scope of this privilege should be extended to include other than testimonial utterances.

The concurring opinions in a recent United States Supreme Court case would include within the scope of this privilege evidence which was forcibly taken from the accused by a contrivance of modern

<sup>44</sup> *Hanlon v. Woodhouse*, 113 Colo. 504, 160 P. (2d) 998 (1945); *Richter v. Hogleund*, (7th Cir. 1943) 132 F. (2d) 748.

<sup>45</sup> Okla. Stat. Ann. (1937) tit. 12-385.

<sup>46</sup> *Clapp v. State*, 73 Okla. Cr. 261, 120 P. (2d) 381 (1941).

<sup>47</sup> In general see DONIGAN, *CHEMICAL TEST CASE LAW* 27 (1950); Mamet, "Constitutionality of Compulsory Chemical Tests to Determine Alcoholic Intoxication," 36 J. CRIM. L. & CRIMINOLOGY 132 (1945); Ladd and Gibson, "The Medico-Legal Aspects of the Blood Test to Determine Intoxication," 24 IOWA L. REV. 191 (1939).

<sup>48</sup> Conn. Const., art. I, §9 (" . . . shall not be compelled to give evidence against himself"); Me. Const., art. I, §6 (" . . . shall not be compelled to furnish or give evidence against himself"). Nothing turns on the variations of wording, 8 WIGMORE, EVIDENCE, 3d ed., 321 (1940).

<sup>49</sup> Inbau, "Self-Incrimination—What can an Accused Person be Compelled to Do?" 28 J. CRIM. L. & CRIMINOLOGY 261 (1937); 8 WIGMORE, EVIDENCE, 3d ed., 363 (1940).

science.<sup>50</sup> The classical approach, however, and that approved by the text writers<sup>51</sup> was set forth by Justice Holmes in *Holt v. United States*.<sup>52</sup>

“But the prohibition of compelling a man in a criminal court to be a witness against himself is a prohibition of the use of physical or moral compulsion to extort communications from him, not an exclusion of his body as evidence when it may be material. . . .”

Thus a distinction has been drawn between real and testimonial evidence. Most of the state courts have adopted this distinction, holding real evidence to be outside the scope of the self-incrimination privilege. As a general rule, therefore, the results of scientific alcohol tests are admissible as evidence even though the test was performed against the will of the accused.<sup>53</sup>

If the defendant consents to the test, there will be a waiver of the privilege against self-incrimination,<sup>54</sup> and in many cases the courts have been able to sidestep the constitutional issue by finding a waiver through consent. Thus failure to resist or object has been held to constitute a waiver<sup>55</sup> even where such failure was due to the fact that the accused thought the law compelled him to submit.<sup>56</sup> Also where no evidence of duress or compulsion was introduced by the defense, some cases have found a waiver.<sup>57</sup> In one case, however, it was held that there was no waiver where the accused had not been warned that the test might be used against him.<sup>58</sup>

<sup>50</sup> *Rochin v. California*, 342 U.S. 165, 72 S.Ct. 205 (1952). See comment, 50 *MICH. L. REV.* 1367 (1952).

<sup>51</sup> 8 *WIGMORE, EVIDENCE*, 3d ed., 374-387 (1940).

<sup>52</sup> 218 U.S. 245 at 252-253, 31 S.Ct. 2 (1910).

<sup>53</sup> *State v. Alexander*, 7 N.J. 585, 83 A. (2d) 441 (1951); *Commonwealth v. Statti*, 166 Pa. Super. 577, 73 A. (2d) 688 (1950); *State v. Cram*, 176 Ore. 577, 160 P. (2d) 283 (1945); *State v. Gatton*, 60 Ohio App. 192, 20 N.E. (2d) 265 (1938); *Contra: Apodaca v. State*, 140 Tex. Cr. App. 593, 146 S.W. (2d) 381 (1940); *Booker v. Cincinnati*, 22 Ohio L. Abs. 286, 1 Ohio Supp. 152 (1936); *People v. Dennis*, 131 Misc. 62, 226 N.Y.S. 689 (1928).

<sup>54</sup> *Novak v. District of Columbia*, (D.C. Cir. 1947) 160 F. (2d) 588; *Spitler v. State*, 221 Ind. 107, 46 N.E. (2d) 591 (1943); *State v. Small*, 233 Iowa 1280, 11 N.W. (2d) 377 (1943).

<sup>55</sup> *Kallnbach v. People*, (Colo. 1952) 242 P. (2d) 222; *State v. Koenig*, 240 Iowa 592, 36 N.W. (2d) 765 (1949); *City of Columbus v. Van Meter*, (Ohio App. 1949) 89 N.E. (2d) 703; *Spitler v. State*, 221 Ind. 107, 46 N.E. (2d) 591 (1943); *State v. Duguid*, 50 Ariz. 276, 72 P. (2d) 435 (1937).

<sup>56</sup> *State v. Werling*, 234 Iowa 1109, 13 N.W. (2d) 318 (1944).

<sup>57</sup> *State v. Small*, 233 Iowa 1280, 11 N.W. (2d) 377 (1943); *State v. Cash*, 219 N.C. 818, 15 S.E. (2d) 277 (1941).

<sup>58</sup> *People v. Corder*, 244 Mich. 274, 221 N.W. 309 (1928). See also dissenting opinion in *Touchton v. State*, 154 Fla. 547, 18 S. (2d) 752 (1944).

Although the issue has been raised in only a few cases, it would seem that the prosecution can comment on the refusal of the defendant to submit to a test.<sup>59</sup> Some states have changed this rule by statute.<sup>60</sup>

C. *Unreasonable Search and Seizure.* Individuals are protected from unreasonable search and seizure by the Fourth Amendment of the United States Constitution, and by similar provisions in many state constitutions.<sup>61</sup> In all jurisdictions, search and seizure of a person while he is under lawful arrest is considered reasonable, and therefore in most cases the question whether the taking of a specimen of body fluid from a person is an unreasonable search and seizure does not arise. If, on the other hand, a test is given while the accused is not under lawful arrest, or if it is given by an unauthorized person, the results therefrom will be excluded if the rule of the jurisdiction is that the manner of acquiring evidence affects its admissibility. The federal courts and a few of the state courts adhere to the doctrine of *Weeks v. United States*<sup>62</sup> that evidence unlawfully obtained is not admissible.<sup>63</sup> An argument has been made that even in these few jurisdictions, the Fourth Amendment and similar state constitutional provisions relate only to unlawful search and seizure of an individual's home or his person for chattels or papers which he might possess, and have no application to physical examinations of the individual or to the compulsory taking of body fluids for testing purposes.<sup>64</sup> Most courts, on the other hand, consider the manner of acquiring evidence immaterial to the question of its admissibility, and thus hold that search and seizure provisions do not act as a bar to the admissibility of the results of alcohol tests conducted with the illegally obtained specimens of breath, blood, urine or other body fluids.<sup>65</sup>

D. *Due Process.* The hint of a new constitutional objection to the admissibility of scientific alcohol tests has recently appeared. In *Rochin v. California*,<sup>66</sup> an emetic solution had been forced through a

<sup>59</sup> *State v. Benson*, 230 Iowa 1168, 300 N.W. 275 (1941), noted in 40 MICH. L. REV. 907 (1942); *State v. Gatton*, 60 Ohio App. 192, 20 N.E. (2d) 265 (1938).

<sup>60</sup> Me. Rev. Stat. (1944) c. 19, §121; Wash. Rev. Code (1951) §46.56.010.

<sup>61</sup> See INBAU, SELF INCRIMINATION 79-80 (1950).

<sup>62</sup> 232 U.S. 383, 34 S.Ct. 341 (1914).

<sup>63</sup> *United States v. Willis*, (D.C. Cal. 1949) 85 F. Supp. 745; *State v. Alexander*, 7 N.J. 585, 83 A. (2d) 441 (1951); *State v. Weltha*, 228 Iowa 519, 292 N.W. 148 (1940).

<sup>64</sup> Ladd and Gibson, "Legal-Medical Aspects of Blood Tests to Determine Intoxication," 29 VA. L. REV. 749 (1943).

<sup>65</sup> *State v. Sturtevant*, 96 N.H. 99, 70 A.(2d) 909 (1950); *Bovey v. State*, 197 Misc. 302, 93 N.Y.S. (2d) 560 (1949); *Op. Atty. Gen. Ind.* 210 (1940).

<sup>66</sup> 342 U.S. 165, 72 S.Ct. 205 (1952).

tube into defendant's stomach in order to induce him to vomit capsules of dope which he had swallowed on being arrested. These capsules were introduced into evidence at the trial and the defendant was found guilty. Reversing the conviction on the ground that it was based upon evidence obtained by means violating due process, the United States Supreme Court per Frankfurter, J., stated:

"This is conduct that shocks the conscience. Illegally breaking into the privacy of the petitioner, the struggle to open his mouth and remove what was there, the forcible extraction of the stomach's contents—this course of proceeding by agents of government to obtain evidence is bound to offend even hardened sensibilities. They are methods too close to the rack and screw to permit constitutional differentiation. . . . It would be a stultification of the responsibility which the course of constitutional history has cast upon this court to hold that in order to convict a man the police cannot extract by force what is in his mind but can extract what is in his stomach."

Although it seems unlikely that the taking of a compulsory breath or urine sample would shock the conscience of the court, it is yet a matter of conjecture whether any court will hold a blood test to be a violation of due process.<sup>67</sup> Some states provide for a compulsory blood test as a prerequisite to marriage, but there is no indication that such a requirement has been offensive to the sensibilities of brides and grooms to be. If those about to enter into nuptial bliss have been thus able to bear up under the compulsory blood test statutes, it hardly seems that a blood test could be condemned as a method of obtaining evidence which "is bound to offend even hardened sensibilities."<sup>68</sup> Even if the forcible taking of a specimen of body fluid were to be considered a violation of due process, it seems it could be argued that admissibility would not be affected except in those jurisdictions adhering to the rule of *Weeks v. United States*.

#### IV. Conclusions

First, the admissibility of results of blood, urine and breath tests should be governed by different rules. The weight of medical authority agrees that the blood test is extremely reliable. Evidence thereby

<sup>67</sup> Cf. *Bednarik v. Bednarik*, 18 N.J. Misc. 633, 16 A. (2d) 80 (1940).

<sup>68</sup> See dissenting opinion in *State v. Cram*, 176 Ore. 577, 160 P. (2d) 283 (1945), however, in which Belt, C.J. stated at 601, "To extract blood by hypodermic needle from a person accused of crime, without his consent and while he is unconscious, for the purpose of obtaining evidence to be used against him, shocks my sense of justice and decency. It is law enforcement with a vengeance!"

obtained should be sufficient in itself to support a verdict. The urine test is less to be trusted as it yields evidence of the average alcoholic concentration only since the last time the bladder was voided. Therefore its evidentiary role should be predominantly corroborative. Since there is a sharp division in medical authority regarding the reliability of the breath test, in the absence of statute the results of this test should be admissible only to show the presence or absence of alcohol in the body system, and not the degree of intoxication. Statutes which make breath test results admissible to show degree of intoxication should be amended to take into account the lower reliability of that test, as, for example, to provide that there would be a rebuttable presumption of sobriety if the alcoholic content of the blood measures five-hundredths of one per cent by blood test or seven-hundredths of one per cent by breath test; and a rebuttable presumption that defendant was "under the influence" if the alcoholic content of the blood was fifteen-hundredths of one per cent by blood test or seventeen-hundredths of one per cent by breath test.<sup>69</sup>

Second, neither the privileges against unlawful search or seizure, and self-incrimination, nor the protection of due process provisions should be a bar to the results of the compulsory alcohol tests. Admissibility of evidence should depend primarily upon its reliability, its materiality and its relevance, and not upon the means by which it was procured. Since no amount of duress or compulsion can change the alcoholic content of blood, there is no danger of unreliability from the fact that a test is given without the consent of the accused. If unreasonable force is used to obtain specimens the rights of the accused should be adequately protected by criminal and civil actions for assault and battery.

Finally, as a practical matter, the prosecution should qualify his expert witnesses thoroughly. The witnesses should explain the theory and the mechanics of the test used, in terms which are understandable to the jury.<sup>70</sup> As a safety measure, the prosecution should never rely solely on scientific evidence, but should be prepared to present corroborative non-scientific testimonial evidence. The defense should also be prepared to produce expert witnesses to attack the theory of the test

<sup>69</sup> The precise percentages would have to be computed and prescribed by medical or scientific authorities.

<sup>70</sup> For a sample list of questions and answers for presenting chemical test evidence, see DONIGAN, *CHEMICAL TEST CASE LAW* 71 (1950).

or the manner in which it was conducted. The cardinal rule, however, for both prosecution and defense is that each attorney should be thoroughly familiar with the theoretical and practical aspects of the test used.

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