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COMMENTS

THE DRINKING DRIVER:
AN APPROACH TO SOLVING A PROBLEM
OF UNDERESTIMATED SEVERITY

The high incidence of automobile accidents in the United States has made driving an automobile a very dangerous activity. Even when drivers are functioning at maximum efficiency, accidents are inevitable. It seems ridiculous, then, that so many drivers continue to operate an automobile when their driving efficiency is significantly lowered by the consumption of alcohol. It would seem obvious that American laws should operate swiftly and effectively to eliminate the presence of such drivers from American highways. However, American laws have not succeeded in preventing such activity to a satisfactory extent. These unfortunate facts provide the reasons for this Comment: first, to show on the basis of statistical studies the severity of the drinking-driver problem in the United States; second, to examine American laws and point out their basic weaknesses; third, to discuss the factors behind these laws which have deterred their effectiveness; and finally, to suggest means by which the problem may be alleviated.

I. THE SEVERITY OF THE PROBLEM

The problem of the drinking driver and the difficulties encountered by the law in treating it were pointed out as early as 1927.1 However, until recently, the severity of the problem has been largely underestimated. In 1937 the National Safety Council estimated that the percentage of drinking drivers involved in accidents was only 7 percent.2 Many articles written during the 1940's set the percentage of accidents involving drinking drivers at approximately 15 percent.3 While this figure may appear fairly high relative to that of the National Safety Council, it is hardly shocking. Even as late as 1957, New York's official state publications attributed only one to two percent of that State's fatal accidents to the drinking driver.4 The conservative nature of these figures, however, was greatly offset by much

1. 71 Sol. J. 954 (1927).
higher estimates derived from medical studies and police records. In addition, many writers pointed out the widely varying and generally unreliable means utilized to measure the effect of the drinking driver's presence on the road.

Although there is still no accurate statistical method with which to measure precisely the danger that the drinking driver presents, two general types of studies now yield rather accurate data: (1) studies of drivers involved in accidents in a particular random sample, from which the percentage of drivers who have been drinking is ascertained; and (2) studies which test the impairment in perception and other driving skills caused by various alcohol levels in their subjects. The results of the latter studies are supplemented in this Comment by a discussion of the amount of alcoholic consumption needed to attain certain alcohol levels.

The earliest study of the first type was that of Heise, which was conducted by analyzing 119 consecutive accidents in Uniontown, Pennsylvania, in the early 1930's. Dr. Heise's results, especially when compared to the conservative estimates noted above, were rather startling: 74 of the 119 accidents were caused by a driver having a greater than .02 percent alcohol level. Perhaps the most publicized study of this type was conducted by Haddon and Bradess in Westchester County, New York, the sample for which was the 626 motor vehicle fatalities occurring in that county between 1950 and 1958. The results here were equally conclusive: 160 of the 208 drivers who were fatally injured were found to have "measurable" alcohol levels. A study of the 500 fatal accidents occurring in Baltimore between 1951 and 1956 showed that 95 of the 156 drivers who were fatally injured had an alcohol level in excess of .01 percent. Drinking drivers were involved in 50 percent of the fatal motor vehicle accidents in Texas in 1952, and a Cleveland survey of the early 1950's showed that more than 50 percent of the highway accidents in that city involved a driver who had been consuming alcohol. The 50 percent figure was con-

5. Figures on New York City accidents for 1957 showed, for example, that 38 of the 69 drivers killed had an alcohol level of greater than .10 percent. Am. Civy. May, 1958, at 141. See also Roalman, supra note 4, at 34, 35.
6. See, e.g., Rabinowitch, supra note 2, at 226. A 1945 article discussing chemical tests for intoxication, though recognizing that a high percentage of accidents involved drinking drivers, candidly admitted that no accurate statistics were available. Comment, Constitutionality of Compulsory Chemical Tests to Determine Alcoholic Intoxication, 40 Ill. L. Rev. 245, 246 (1945).
8. Id. at 739. A .02 percent alcohol level is attained by many persons after consuming only the proverbial "two beers." For an explanation of the amounts of alcohol which must be consumed in order to attain certain levels of alcohol in the system see p. 101 infra.
9. Haddon & Bradess, Alcohol in the Single Vehicle Fatal Accident, 169 J.A.M.A. 1587 (1959). Haddon was the director of the New York State Driver Research Center from 1957 to 1961 and allegedly began his research after policemen scoffed at the New York figures such as those cited at p. 97 supra. Roalman, supra note 4, at 34.
10. Haddon & Bradess, supra note 9, at 1588.
firmed by similar highway fatality studies in 1960 in Montana and in Buffalo, New York.\textsuperscript{14} Perhaps the most painstaking study in the area was made by Holcomb in Evanston, Illinois, in the late 1930's.\textsuperscript{15} After finding that 46 percent of drivers involved in the 270 injury-producing accidents in the Evanston area over a 3-year period had been drinking, he enlisted college students to spot check all drivers at certain strategic points in Evanston to determine what percentage of the total number of drivers on the road were drinking.\textsuperscript{16} The findings, after 1,750 spot checks, were that only 12 percent of the general driving population had been drinking. Thus, he concluded that drinking drivers involved in injury-producing accidents were overrepresented by almost four times their presence in the general driving population.\textsuperscript{17} The study also discussed — and rejected — the argument that the presence of a relatively greater number of drinking drivers on the roads at night, when fatigue is most apparent and when darkness is liable to impair driving ability, is a significant factor in the high percentage of drinking drivers among people involved in traffic accidents.\textsuperscript{18}

The Holcomb study is particularly significant because it made an unusual and diligent attempt to eliminate the confounding variables which can affect any statistical analysis. However, several variables may still exist which make the results of many studies of the first type deceptively low in establishing the number of accidents caused by drinking drivers. For example, it is impossible to measure the number of accidents caused by the drinking driver who forces a nondrinking driver off the road or into another vehicle due to his erratic driving. In light of the fact that a drinking driver probably encounters about 5,000 other drivers on even a short trip,\textsuperscript{19} it is likely that the number is significantly high. Another example is illustrated by a Cleveland study which differentiated traffic deaths caused by injuries in accidents themselves from deaths occurring on the highway from causes unrelated to the accident itself, such as heart attacks.\textsuperscript{20} It was found that 92 percent of those dying from nonaccidental causes had a negative alcohol level, while only 36 percent of those dying from accidental causes had a negative level.\textsuperscript{21} This finding seems to indicate that many studies of the first type include victims of nonaccidental causes in their samples, thereby mistakenly reducing the percentage of traffic deaths attributable to the drinking driver.

Heise was also the pioneer of the second type of study, which measures the impairment of perception and other driving skills caused by various levels of alcohol consumed by subjects.\textsuperscript{22} Subjects given 30 cc. of whiskey, 

\begin{thebibliography}{9}
\bibitem{14} Heise, \textit{The Driver Had Been Drinking}, Sci. Dig., April, 1962, at 57.
\bibitem{15} Holcomb, \textit{Alcohol in Relation to Traffic Accidents}, 111 J.A.M.A. 1076 (1938).
\bibitem{16} Id. at 1077-78.
\bibitem{17} Id. at 1078.
\bibitem{18} Id. at 1082-83.
\bibitem{19} Seliger, \textit{supra} note 13, at 404.
\bibitem{21} Id. at 147-48.
\bibitem{22} Heise, \textit{supra} note 7.
\end{thebibliography}
which was found to induce an average alcohol level of .02 percent, were shown to have a measurable loss in efficiency in typewriting tests. Next, subjects were given 150 cc. of whiskey, which produced levels somewhat short of .10 percent, and were asked to perform actual driving tests. It was found that all subjects had trouble avoiding obstacles and backing.

The classical study in this area was made by Bjerver and Goldberg in 1950. In this study, several expert drivers performed steering, parking, and turning tests. After completing the tests, some of the drivers consumed 40 to 53 cc. of alcohol, yielding an average alcohol level of about .05 percent. Then, all of the drivers were asked to complete the test a second time. The results of time tests, relative to the driver's initial performance, showed an improvement of 20 percent in a control group of drivers who had not consumed alcohol but a deterioration of almost 30 percent in the group which had consumed alcohol. A "flicker" test, which measures the eye's ability to distinguish flickering light, and a "blink" test, which measures the stimulus required to produce a blink, were subsequently administered on the same subjects, employing the same procedures as in the driving tests. While the control group showed no change in performance, the group which had consumed alcohol experienced an average deterioration of 32.4 percent in the flicker test and 35 percent in the blink test.

A similar, more recent study utilized a model car apparatus to test its 10 subjects. The subjects showed some impairment of performance relative to the control group at the .05 percent alcohol level, 85 percent efficiency at the .10 percent level, and only 70 percent efficiency at the .15 percent level. Studies testing performances in "roadeo" or driving-hazard courses in Missouri and Kansas found that subjects were noticeably impaired at an alcohol level of .08 percent, and similar tests in Ontario indicated an impairment to most subjects at the .03 percent level. An interesting British experiment found that three experienced Manchester bus drivers, after consuming two ounces of alcohol, tried to drive their buses through an opening 14 inches narrower than their buses.

In light of these studies, figures indicating that the drinking driver's relative probability of causing an accident is 45 times greater than that of a driver who has not been drinking if his blood alcohol level is .18 percent, 35 times greater if his level is .16 percent, 20 times greater if his level is .14 percent, and 10 times greater if his level is .10 percent, seem well-founded.
To give some idea of how many drinks one must consume to reach a certain measure of alcoholic consumption, and the corresponding alcohol levels such consumption produces, the following guidelines are suggested. Keeping in mind that the alcoholic content of a beverage is one-half of the proof level, a person consumes one ounce of alcohol by drinking two ounces of a 100-proof liquor or one 12-ounce bottle of beer.\(^4\) The consumption of two ounces of alcohol raises one's alcohol level to .04 percent, four ounces raises it to .09 percent, and eight ounces raises it to .14 percent.\(^5\) Although these figures vary somewhat according to the individual's weight and the amount of food he has consumed,\(^6\) by consuming four ounces of 100-proof liquor, one has probably reached an alcohol level of .04 percent, at which level all of the studies noted indicate that his driving ability will be impaired.

The foregoing studies do not directly indicate how great the menace of the drinking driver is, especially with respect to the individual who consumes a relatively small amount of an alcoholic beverage. However, the results of tests under both types of studies make it apparent that the drinking driver is involved in a very high percentage of accidents, that driving abilities are impaired at a rather low alcohol level, and that such abilities deteriorate at an accelerating pace as the level increases. Such conclusions are rather convincing evidence that drinking drivers are a highly dangerous group.

II. THE CURRENT AMERICAN LAW

The potential effectiveness of the law as a deterrent to the drinking driver seems obvious, since, except in the case of the alcoholic,\(^7\) drinking and driving are both willful acts. All States have some legislative enactment prohibiting the operation of motor vehicles when one's ability to do so is impaired by alcohol. The statutes vary in their specificity in establishing what constitutes impairment and what penalties shall be imposed if it is established that one is impaired. The present Pennsylvania statute is set out below as representative of the law as it exists in many states:\(^8\)

> It shall be unlawful for any person to operate a motor vehicle ... while under the influence of intoxicating liquor . . . .

Penalty. — Any person violating the provisions of this section, shall be guilty of a misdemeanor, and shall, upon conviction there-
of . . . be sentenced to pay a fine of not less than one hundred dollars ($100.00) and not more than five hundred dollars ($500.00) and costs of prosecution, or undergo imprisonment for not more than three (3) years, or suffer both such fine and imprisonment.39

The statute, with the exception of the penalty provisions, could hardly be more general. It makes no mention of how law enforcement agencies are to determine whether a suspect is "under the influence" to the extent that he violates the statute. It is apparent that some objective standard must be established to settle this uncertainty, if not by statute, then by the practice of the police and the courts. Hence, Pennsylvania and all other states have utilized chemical tests to determine the alcohol level in the breath, blood, urine, or saliva of a party accused of driving while intoxicated, from which it may be inferred that he is impaired in his driving ability. Although what is measured — level of alcohol — and what is sought to be prevented — impaired driving ability — are not identical, the chemical tests are, nevertheless, an attempt to add objectivity and certainty, necessary elements of any successful law, to an otherwise hopelessly subjective problem.

Chemical tests for intoxication have been known since Civil War times,40 but were not used systematically until the work of Widmark in Sweden in 1914.41 The most commonly used tests are the blood test, preferred for its accuracy, and the breath test, preferred for its simplicity.42 Although chemical tests were once largely limited to use as corroborative evidence of intoxication,43 the tests are now everywhere admissible into evidence as direct proof.44 The tests are presently recognized as quite accurate by the medical profession.45 Even an article suggesting defenses to attorneys of drinking-driver defendants concedes that the accuracy of the tests is not open to serious question.46 Experiments measuring the accuracy of the various testing devices have shown that "breathalyzers," usually considered the least accurate of the devices, are off less

40. Monroe, supra note 3, at 394.
42. See Watts, Some Observations on Police-Administered Tests for Intoxication, 45 N.C.L. REV. 34, 49-76 (1966). This article describes all the tests in some detail.
43. See Vold, Laboratory Tests for Alcoholism in Motor Vehicle Prosecutions, 17 NEB. L. BULL. 251, 259-62 (1938). Chemical tests were thought to be insufficiently reliable to use in the trial stages in Pennsylvania as late as 1956. 29 TEMP. L.Q. 210, 214 (1956).
45. Fisher, Yes, Should There Be a Statute Authorizing Chemical Tests for Determining Intoxication of Drivers?, MICH. ST. B.J., April, 1960, at 20, 24. In the late 1940's the accuracy of the tests was strongly questioned by one medical man, Rabinowitch, supra note 2. This attack was immediately rebutted by other members of the medical profession. Harger, Medicolegal Aspects of Chemical Tests for Alcoholic Intoxication, 39 J. CRIM. L.C. & P.S. 402 (1948); Muehblberger, Medicolegal Aspects of Chemical Tests for Alcoholic Intoxication, 39 J. CRIM. L.C. & P.S. 411 (1948). See also Comment, Admissibility and Constitutionality of Chemical Intoxication Tests, 35 TEXAS L. REV. 813, 815-16 (1957).
than .01 percent in their reading almost 70 percent of the time. Moreover, an experiment comparing readings from different devices used on the same subjects has shown the readings to be virtually identical.

Of primary importance is how the results of the chemical tests are to be interpreted. The data received from the tests is translated into a determination of the alcohol level of the subject, and a presumption of the subject's impairment at a certain level determines whether he is to be considered too intoxicated to legally drive. In 1939 a resolution of a joint conference of the National Safety Council and the American Medical Association recommended that a level of less than .05 percent be presumed safe, that no presumption be drawn at levels from .05 to .15 percent, and that a level of greater than .15 percent be presumed to indicate that the party tested is intoxicated. Consequently, most states have adopted the .15 percent level, either by statute or by judicial precedent, as a definite criterion for determining whether a suspect is presumed to be intoxicated.

A few have set the decisive level at .10 percent, and one state, Utah, has reduced it to .08 percent.

The most important result of the use of the chemical tests is that it effectuates a high increase in the percentage of drivers charged with drunken driving who are ultimately convicted. For example, without the tests, only 27 of the 83 persons charged with drunken driving in Boston in 1964 were convicted. Similarly, only 144 of the 237 so charged in Baltimore in 1950 were convicted. Conversely, cities using the tests were able to obtain very high conviction rates. Oakland, for example, convicted 149 of the 153 parties charged with driving while intoxicated in a single year. The increase in convictions by 222 percent in Detroit in 1947 is another graphic illustration of what the adoption of chemical tests in a city can accomplish. An examination of conviction rates in several counties in Pennsylvania in 1948 showed that counties using chemical tests obtained very high conviction rates, while Allegheny County, without tests, convicted only about 50 percent of parties charged with drunken driving.

50. See e.g., Bongartz, It's Time to Stop Drunk Drivers from Killing, True, Sept., 1968, at 25, 89; Roalman, supra note 4, at 35.
51. Bongartz, supra note 50, at 89, cites Florida, Georgia, Illinois, Kentucky, Minnesota, North Carolina, North Dakota, Rhode Island, Vermont, and West Virginia as establishing the .10 percent level. Pennsylvania is now also included in this group. See note 38 supra.
52. Utah Code Ann. § 41-6-44(3) (Supp. 1967). The propriety of the levels established by the various states is discussed at pp. 106-07 infra.
57. Comment, supra note 3, at 169.
Moreover, studies of conviction rates in jurisdictions where the party charged is permitted the right to refuse to take such tests show significant differences in the conviction rate of those taking the tests and those refusing to take them. A study in Ottawa of parties arrested for drunken driving from 1960 to 1962 found that 73 percent of those refusing were convicted, as compared to a 94 percent conviction rate for those who took the test.\(^\text{58}\) A study of parties arrested for drunken driving in Allentown, Pennsylvania, in 1967 showed that only 60 percent of the “refusers” were convicted, whereas 85.7 percent of those taking the test were convicted.\(^\text{59}\)

In addition to the chemical tests, other objective tests have been used to some extent. Performance tests in which the party charged is requested to perform certain motor or verbal skills,\(^\text{60}\) and movies taken by the police of the accused’s activities\(^\text{61}\) are examples, although neither appears to be in widespread use. Of course, the testimony of policemen and medical or other observers regarding the accused’s condition is always admissible and can supplement any of the more objective forms of evidence.

III. THE CHANGES REQUIRED TO IMPROVE THE CURRENT AMERICAN LAW

Since many jurisdictions do not require a party charged with drunken driving to undergo chemical tests if he refuses to do so, whether one is convicted often depends to a great extent upon whether he is wise enough to refuse. This points out a rather glaring loophole in the drinking driver laws. It is not surprising to find that, as the police begin to use chemical tests more widely and a greater number of drivers are apprehended, the percentage of drivers refusing to take the test steadily increases.\(^\text{62}\) And, often, the accused parties who have drunk the most are least likely to submit to the test.\(^\text{63}\)

The rapidly-spreading answer to this problem is the “implied consent” statute. Such a statute is based upon the premise that obtaining a license to drive an automobile is a “privilege,” for which a driver must “impliedly consent” to have his breath or blood tested for its alcoholic content when a policeman has reasonable grounds to believe that he was driving while


\(^\text{60.}\) See Monroe, supra note 3, at 403. Such tests are used in California. Knight, *We Jail Drunken Drivers*, SAT. EVEN. POST, April 26, 1958, at 31, 102.

\(^\text{61.}\) See Seymour, *Admissibility of Police Movies of Drunk Drivers*, 1966 INS. L.J. 754; Watts, supra note 42, at 47-48. It is reported that the use of such movies has resulted in a 95 percent conviction rate in Denver. *Time*, Nov. 22, 1963, at 61.

\(^\text{62.}\) See Coldwell & Grant, supra note 58, at 276, where the increase of refusals from the first year in which police administered breathalyzer tests in Ottawa to the second year was from 7 percent to 17 percent. The Allentown study of C. Scholl, supra note 59, at 20, showed that only 30 percent of drivers apprehended in that Pennsylvania city consented to undergo chemical tests.

\(^\text{63.}\) See Freeman, *The Drinking Driver*, BRIT. MED. J., Oct.-Dec., 1964, at 1634, which reports this phenomenon in Great Britain.
intoxicated. The driver can refuse to submit to the tests under such statutes; but then his "privilege" of driving is taken away, usually for as long a period as if the driver were actually convicted of drunken driving.\textsuperscript{64} Hence, the problem of physically forcing a driver to undergo the tests is avoided.

Although such statutes were proposed as early as 1945,\textsuperscript{65} it was not until 1953 that New York adopted the first.\textsuperscript{66} Such a provision is included in the Uniform Vehicle Code\textsuperscript{67} and the adoption of such laws has been almost uniformly endorsed by law review articles.\textsuperscript{68} By 1963, 12 states had passed such laws,\textsuperscript{69} and, by mid-1968, the count had increased to 28.\textsuperscript{70}

The constitutionality of such statutes seems to have been put at rest, at least for the time being, by the United States Supreme Court's decision in \textit{Schmerber v. California}.\textsuperscript{71} There, the entry into evidence of the results of a blood test performed on the defendant against his will was held proper.\textsuperscript{72} \textit{Schmerber} does, however, raise two interesting questions. First, it has been contended that \textit{Schmerber} makes implied consent laws unnecessary, since the accused party can be forced to submit to the test.\textsuperscript{73} In fact, California, the State in which Schmerber was forced to take the test, had no such law then and as yet has not enacted one. However, as mentioned previously, many States do not require the accused to submit to tests against his will. Even within a single State, the possibility exists that some municipalities will enforce the use of the tests, while others are more lenient.\textsuperscript{74} Again, much depends upon whether the accused is wise enough

\textsuperscript{64} See, e.g., N.J. STAT. ANN. § 39: 4-50(b) (Supp. 1967) (fine of $50 to $100 and loss of driving privileges for 6 months if convicted of drinking-driving) and N.J. STAT. ANN. § 39: 4-50.4 (Supp. 1967) (loss of driving privileges for 6 months if refused to take test).

\textsuperscript{65} Comment, supra note 6, at 252.

\textsuperscript{66} N.Y. VEH. & TRAF. LAWS § 71-a (McKinney 1954).

\textsuperscript{67} UNIFORM VEHICLE CODE § 6-205.


\textsuperscript{69} La Plante, Alcohol Testing: Connecticut's Implied Consent Statute, 38 CONN. B.J. 16, 17 (1964).

\textsuperscript{70} Bongartz, supra note 50, at 91. Pennsylvania is now added to this list. See note 38 supra.

\textsuperscript{71} 384 U.S. 757 (1966).

\textsuperscript{72} The scope of this Comment is not intended to embrace the constitutional issues concerning the admissibility of compulsory blood tests. The feeling here is that the gravity of the problem which the drinking driver creates is such that any governmental system recognizing the weight of the balance between the harm to society created by the drinking driver and the harm to personal liberties by a very small infringement upon one's person would, without question, uphold compulsory tests.

\textsuperscript{73} 13 WAYNE L. REV. 425, 434 (1967).

\textsuperscript{74} It is clear that the practice of the Allentown, Pennsylvania, police force of not requiring parties accused of drunken-driving to take a blood test was not influenced by the \textit{Schmerber} decision. Only 50 percent (35 of 70) of those apprehended for drinking-driving in Allentown in 1967 took the chemical tests for intoxication. C. Scholl, supra note 59, at 20.
to refuse to take the test. Implied consent laws are necessary to lend uniformity of treatment to those charged with drunken driving.

Second, many commentators have been repelled by the "privilege" language and the fiction of "implied consent." Unquestionably, there is something dubious in couching a statute of keystone significance in indirect terminology, because it leaves the impression that a direct statement to the effect that refusing to submit to a blood test is a misdemeanor, and therefore punishable, would be wrong. However, such terminology is easily borrowed from hit-and-run and nonresident motorist statutes. Moreover, the language probably represents, in part, an attempt by state legislatures to support such legislation by an already proven rationale due to a fear that the United States Supreme Court may, in the future, find such laws unconstitutional. This is especially true since Schmerber was a 5-4 decision and Justice Clark, a member of the Schmerber majority, has retired.

Although requiring drivers suspected of being under the influence of alcohol to undergo chemical tests is the most important area where the drinking-driver statutes of many American States could be improved, it is not enough in itself. Even where such statutes are in effect, the high alcohol level which is required to obtain a conviction allows many obviously impaired drivers to go unpunished. A review of the impairment studies described above indicates that the .15 percent figure adopted by most States is unrealistically high for determining when a driver is impaired by alcoholic consumption.

Only one commentator has suggested that the .15 percent level is too low. Several sources have declared that the .02 percent level is the point where most people experience intoxication and driving skills begin to deteriorate. Bjerver and Goldberg declared that .02 percent to .03 percent was the impairment threshold for their average subject. However, the .05 percent level is the lowest at which the average person's driving skills are most often said to significantly deteriorate. This is the level which the British Medical Association, in a report released in 1959, established as the highest level consistent with the safety of other drivers. Holcomb's careful study, discussed above, found that the ratio of accident injuries

75. One source referred to such terminology as "linguistic slight of hand." Comment, supra note 45, at 829. See also Weinstein, Statute Compelling Submission to a Chemical Test for Intoxication, 45 J. CRIM. L.C. & P.S. 541, 544 (1955).
76. See Comment, Constitutional Law — Validity of New York Statute Setting Out Motorists' Implied Consent to Chemical Tests for Intoxication, supra note 68, at 1200; Comment, supra note 6, at 261.
77. See pp. 99-101 supra.
78. See p. 103 supra.
79. Hollopetter, supra note 46, at 415-17.
82. Bjerver & Goldberg, supra note 25, at 25.
84. These findings are reported in The Drinking Driver and the Law, 1960 CRIM. L. REV. (Eng.), 152, 153; BRIT. MED. J., Jan.-Mar., 1960, at 256.
of drivers at the various alcohol levels to the general driving public did not approach one-to-one until the .05 percent level, indicating that the .05 level was the minimum acceptable level. Recently, the Canadian Bar Association suggested the adoption of a .08 percent level for that country. Finally, the Uniform Vehicle Code, which had previously adopted the guidelines of the 1939 American Safety Council-American Medical Association conference, altered its scale to make .10 percent the level at which it is presumed that a driver is under the influence of alcohol.

In light of the above figures, it is obvious that the .15 percent level adopted by most States as creating a presumption of intoxication is antiquated. The .10 percent level is at best a realistic compromise, and the .08 percent level established only by Utah appears most likely to gain the support of the majority of advanced medical men.

Another area where the statutes of most States appear inadequate is in meting out penalties for drunken driving. Assuming that the law, in this area, is capable of acting as a deterrent on a large part of the driving population, the most effective statutes for combating drinking drivers would appear to be those which provide a strong and consistent penalty. The Pennsylvania statute is a typical example of the failure of drinking driver statutes in these respects. It provides for a penalty which can range from 3 years in prison and a $500 fine at the maximum to only a $100 fine at the minimum. Perhaps the difference was effectuated to give judges discretion in resolving different sentences for penitent first-offenders and recidivists, but a surer and more realistic approach would have been to enact a definite set of penalties depending on the character of the offender.

The general shortcoming of most American statutes is that penalties which they prescribe are, in practice, not strict enough. For example, from the wide range of possible punishment typified by the Pennsylvania statute, it can be anticipated that offenders usually receive a fine near the minimum. Although some States have recently enacted statutes providing stricter penalties, it is doubtful whether even these measures are strict enough. For example, since the late 1950's California has embarked on a relatively hard line against the drinking driver. The first conviction for this offense is made punishable by 30 days to 6 months imprisonment or a fine of $250 to $500; the second offense results in a jail term of 5 days to 1 year and a fine of $250 to $1000. If an injury occurs, imprisonment is increased to 90 days to 5 years, even on the first offense, and, in addition, there is

86. Holcomb, supra note 15, at 1081-82.
88. See p. 103 supra.
89. UNIFORM VEHICLE CODE § 11-902.
90. Of course, making the penalty too strict can result in making juries and judges alike reluctant to convict. See Chapman, Practical Aspects of Drunken Driving Cases, 2 PORTLAND L. REV. 24, 25-27 (1951). For example, classifying drunken driving as a felony, which was done under Missouri law in 1960, is certain to result in fewer convictions. See Note, Removal of Intoxicated Drivers from Missouri Roads: A Suggested Approach, 1960 WASH. U.L.Q. 84.
91. This law, CAL. VEHICLE CODE § 23102(a) (West Supp. 1967), is described in an article by California's then-Governor in Knight, supra note 60, at 102.
an accompanying fine of $250 to $1000. 92 Perhaps the strictest State on first offenders is Oklahoma, which provides a mandatory 10-day jail sentence and a fine. 93 Although various other States have mandatory jail terms for first offenders, none of these has a term over 3 days. 94

It has been suggested that a jail term of 10 to 30 days for conviction for one's first drinking-driver offense and 90 days to 6 months for a second such conviction be adopted in Pennsylvania. 95 That, or a similar statutory provision, appears very reasonable. The party suggesting these penalties felt, and it appears rightfully so, that such sanctions were not too strict and would result in relatively consistent enforcement.

IV. THE APPROACH OF EUROPEAN LAW

To lend perspective to the treatment of drunken driving by American law, it is worthwhile to examine briefly the laws enacted by various European countries in three respects: (1) the penalties imposed; (2) the compulsory nature of chemical tests; and (3) the alcohol levels accepted as establishing that a driver is under the influence of alcohol.

The tenor in almost all European countries is to punish strictly and without exception. Although Russia's alleged death penalty for drinking drivers 96 and .005 alcohol level for determining whether a driver is intoxicated 97 may be exaggerations, the Communist countries of Eastern Europe are probably the strictest on drinking drivers. One drink is sufficient grounds to send a driver to jail in most of them, 98 and a .03 alcohol level is in effect in East Germany and Czechoslovakia. 99

The Scandinavian countries, particularly Norway and Sweden, have been the vanguards of strict sanctions in the western world. In 1926, Norway established that any driver found, through compulsory tests, to have an alcohol level in excess of .05 percent would be sentenced to a jail term 100 and lose his license for a year; a second offense resulted in loss of driving privileges for life. 101 A proposal to lower the prohibited alcohol level to .035 percent was considered in Norway, but was rejected. 102 Tests have been compulsory in Sweden since 1934, 103 and the compulsory 1- to 12-month prison term has rendered so many respectable Swedes inmates of one prison that it is called "the country club." 104 Another Swedish innovation

94. The Drinking Driver and the Law, supra note 84, at 159.
95. Comment, supra note 3, at 193.
97. Bongartz, supra note 50, at 89.
99. Bongartz, supra note 50, at 89.
101. The Drinking Driver and the Law, supra note 84, at 159.
is to impose stricter punishment for offenders found to be over the .15 percent alcohol level than for those within the level of .08 to .15 percent.  

The critical alcohol levels in effect in other European countries include: .05 percent in Yugoslavia; .08 percent in Austria; .10 percent in Denmark, Switzerland, and the Netherlands; and .15 percent in France, Germany, and Belgium. Moreover, mandatory tests are employed in Belgium, Finland, France, Germany, and Switzerland. Clearly, the European tendency is to utilize low alcohol levels at which a driver is presumed to be intoxicated, to employ compulsory tests, and to prescribe strict penalties.

The European country whose laws are probably of most interest to Americans are those of Great Britain. Despite a previous British aversion to compulsory tests, a quasi—"implied consent" law was passed in that country on October 9, 1967, whereby refusal to take the test resulted in an automatic $140 fine, and the accused was still subject to trial as a drunken driver. An alcohol level of greater than .08 percent results in "almost certain" conviction. However, the most striking aspect of the new law has been its successful deterrent effect. Over the Christmas holidays, subsequent to the passage of the new law, British traffic deaths decreased by over 40 percent from the 1966 figures. By comparison, American traffic deaths increased from 600 in 1966 to 684 in 1967 over the same holiday period. Such an increase in America is not surprising in light of its relatively high alcohol levels required to obtain a presumption of intoxication, its sporadic and inconsistent penalties for drinking drivers, and the lack of unanimity among its States in requiring compulsory tests for intoxication.

V. THE ALCOHOLIC: A SPECIAL KIND OF DRINKING DRIVER

The presence of the alcoholic among drinking drivers, in contrast to the more common social drinker, has become a subject of increasing concern for medical and legal scholars. The first study concerned with establishing that alcoholics were greatly overrepresented among drinking drivers and comprised a significant portion of them was rather unsuccessful in proving its hypotheses. The party conducting the research found that in his sample of 430 drivers involved in accidents in York County (Toronto area), Canada, only 2.6 percent of

105. Ryan, supra note 31, at 56.
106. These figures are obtained from two sources: (1) An excellent chart in Breitnecer, Alcohol Testing Programs in Europe, Breath Alcohol Tests — Symposium, TRIAL LAWYERS' GUIDE 84, 92 (1961); and (2) Little, Control of the Drinking Driver: Science Challenges Legal Creativity, 54 A.B.A.J. 555, 556 (1968).
the sample were alcoholics. Recent studies, however, have been much more successful in establishing these hypotheses. Findings that 45 percent of the drinking drivers apprehended in Sweden were known alcoholics, and that 40 percent of the fatally injured drivers in the Ann Arbor, Michigan area from 1961 to 1964 were alcoholics, certainly do seem to indicate that the alcoholic is greatly overrepresented in the group of drinking drivers.

The most impressive study was that of Waller, working in Oakland, California. He studied four separate groups: (1) drivers arrested for drunken driving who were not in accidents; (2) drivers in accidents (a) who were charged with drunken driving, and (b) who were not so charged; (3) drivers convicted of moving violations other than drunken driving; and (4) drivers who were not convicted of any violations at all. Of the parties falling into groups (1) and (2)(a), 87 percent and 76 percent, respectively, were found to have been known by police or social agencies to have a "drinking problem." The other groups, (2)(b), (3), and (4), showed that 39 percent, 34 percent, and 19 percent of their constituents, respectively, had a "drinking problem." Hence, parties with a so-called "drinking problem" made up a very high percentage of those arrested for drunken driving and they were clearly overrepresented in the groups including those arrested for that offense.

Another study, taking a different point of departure, found that the 98 patients at a Canadian hospital for the rehabilitation of alcoholics, after adjustments were made for mileage driven with that of the average driver, had significantly more arrests and license suspensions than the general driving population. The alcoholic is said to account for two-and-one-half times the accidents, six times the license suspensions, and nine times the drunken driving convictions as would normally be expected from his number in the general population.

Although the above studies certainly indicate that the alcoholic driver is a serious problem, their results do not justify the implication frequently made by their authors that the severity of the problem of the social-drinking driver has been overemphasized because alcoholics are really the causative factor of most of the injuries and accidents resulting from drinking

112. Popham, Alcoholism and Traffic Accidents, 17 Q.J. STUD. ON ALCOHOL 225, 227 (1956). Although Popham concluded that these findings showed that a "significantly high proportion" of drinking drivers were alcoholics, his disappointment in his results was shown by his attempts to invoke confounding variables, which may have rendered his results too low. Id. at 229-30.


116. Id. at 117. In defining "drinking problem," Waller used the World Health Organization definition, i.e., the party's drinking was of such an extent that it affected his health, socioeconomic functioning, or both. Id. at 116.

117. Id. at 117.


There are several confounding variables clearly operating upon the results of these studies. First the definition of "alcoholic" is uncertain. It is not a scientific term, and no objective measures for determining whether a specific party is an alcoholic have been offered. Second, the more successful studies, such as that of Waller, are dealing with subjects differentiated only by whether they have been arrested for drunken driving. With relatively high alcohol levels required to convict in the United States and many prosecutors willing to compromise prosecutions for drunken driving unless the defendant is a recidivist or has caused damages or injuries, these studies may be differentiating only drivers who have drunk very heavily prior to the time at which they are apprehended or who are constant recidivists from the general driving population. Finally, although the high percentage of alcoholics involved in accidents and drinking-driver convictions may partially explain away the studies finding a high percentage of drinking drivers among parties involved in or killed in accidents, it does not affect the validity of the impairment studies, which show that any driver will be affected by having consumed a certain amount of alcohol.

Although the studies on alcoholics may be correct in concluding that the law is unable to deal with alcoholics and probably requires such preventive measures as compulsory treatment for them,121 it is a mistake to assume that the effective control of the alcoholic will solve the problem of the drinking driver. The primary emphasis of any program to combat the problem of the drinking driver must be directed at the social drinker.

VI. IMPROVING THE ENFORCEMENT OF AMERICAN LAW

It has been pointed out that American laws to combat the drinking driver, on the whole, need substantial improvement; however, such improvement will be meaningless if the laws cannot be enforced. To a great extent, improving the law and improving its enforcement go hand-in-hand, since the weaknesses in the laws surely do not facilitate the conviction rates. However, a law is ultimately only as effective as the consensus of its support. There are several special problems of enforcement inherent in drinking-driver cases.

Presenting the results of a chemical test into evidence in a drinking-driver case, even though these results are uniformly admissible, is a complicated matter. Any weak link in the chain of custody of a test sample may be fatal to the prosecutor's case.122 The availability of expert testimony — or at least well-educated policemen — is necessary to explain

120. See Little, supra note 106, at 557; Selzer, supra note 113, at 15.
121. See Little, supra note 106, at 559; Selzer, supra note 113, at 61-62; Waller, supra note 55, at 119-20.
122. See Gorov & Chapman, Use of Blood Tests to Establish Intoxication, 8 Trial Lawyers' Guide 141, 142 (1964), which cites 10 different hands through which a chain of custody of a blood sample must generally be established.
in detail the chemical reactions involved in the test.\textsuperscript{123} An intelligent defense attorney can flood the prosecution's witnesses with questions and thereby frequently cast doubt on the accuracy of the tests and on the observation testimony of witnesses.\textsuperscript{124}

However, this is only a small part of the difficulty in securing convictions in drinking-driver cases. The more subjective difficulties arise from the sympathy with which juries, judges, and even prosecutors seem to view the drinking driver. Although this sympathy might be understandable if the consequences of conviction were as severe as in Europe, such an attitude in America is indeed frustrating in light of its relatively lenient penalties. Drinking-driver cases are those least popular with prosecutors.\textsuperscript{125} To avoid proceeding with such cases, prosecutors frequently nolpros them or allow them to go stale,\textsuperscript{126} particularly if they know the defendant.\textsuperscript{127} If the case is prosecuted, the charge is often lowered to reckless driving or some lesser offense.\textsuperscript{128} One source attributes much of the difficulty in attaining convictions to the bench's softness and corruption.\textsuperscript{129}

Most sources feel, however, that juries are the weakest link in obtaining a record of steady convictions of drinking drivers. Jury members, recalling occasions when they were fortunate to avoid apprehension for drunk driving, feel threatened by the police\textsuperscript{130} and thus tend to identify\textsuperscript{131} and sympathize with such defendants. For example, an English study indicated that, while magistrates convicted 91 percent of all drunken drivers brought before them, juries convicted only 48 percent.\textsuperscript{132} If judges do become stricter, defendants will frequently seek more time-consuming and, from their point of view, more successful jury trials.\textsuperscript{133}

Since prosecutors, judges, and juries are not only the primary constituents of the American legal system, but are also members of the public, their sympathy with drunken drivers and their reluctance to convict are indicative of a general public unawareness — or apathy — regarding the danger of the drinking driver. Public apathy was cited as the primary

\textsuperscript{123}. See id. at 143-73, for a detailed account of the lengthy testimony of a toxicologist and his chemist at a recent trial.


\textsuperscript{125}. Chapman, \textit{supra} note 90, at 24-27.

\textsuperscript{126}. Watts, \textit{supra} note 42, at 39.

\textsuperscript{127}. Chapman, \textit{supra} note 90, at 26. See also \textit{Crash Echoes Across the Nation}, \textit{Life}, July 19, 1963, at 22.

\textsuperscript{128}. Chapman, \textit{supra} note 90, at 25.

\textsuperscript{129}. Knight, \textit{supra} note 60, at 100, 102.

\textsuperscript{130}. Brooks, \textit{supra} note 48, at 10.

\textsuperscript{131}. Chapman, \textit{supra} note 90, at 26.

\textsuperscript{132}. \textit{The Drinking Driver and the Law}, \textit{supra} note 84, at 156.

\textsuperscript{133}. Chapman, \textit{supra} note 90, at 27. The attempt to secure a sympathetic jury is described as being an important part of the defense attorney's case in Hollopeter, \textit{supra} note 46, at 408-09. Defense attorneys are thus urged to shun "prohibitionistic" juries: "If the jury, as finally selected, includes a goodly number who would say of the defendant, 'There go I but for the grace of God,' you are well under way to the trial of the case before an open-minded jury." Id. at 409 (emphasis added).
problem in convicting drinking drivers in articles written several years ago,\textsuperscript{134} and it seems to be just as viable a causative factor today. That such apathy still exists is exemplified by the reactions of two members of the bar to the increased severity in the penalties under the California drinking-driver statute. A California attorney, after reciting the “extreme hardship” of receiving a conviction in his State, produced a virtual manual for discovering loopholes in the prosecution’s case,\textsuperscript{135} apparently oblivious to the danger usually created by such defendants. However, perhaps most disappointing was the following quotation from an article by the Deputy District Attorney of Marin County, California: “The violation [drunk driving] is properly characterized as a \textit{petty offense}; nonetheless, the consequences of a conviction can be severe.”\textsuperscript{136} If this is indicative of the attitude of those who are the public representatives in prosecuting drinking drivers, it is hardly surprising that enforcement of the law in this area has been so lax.

The basis of the problem, then, both from a social and a legal viewpoint, appears to be public apathy. Public propaganda has been the principal method utilized heretofore to combat such apathy. This method has been effectuated by advertising slogans of the “drinking-and-driving-don’t-mix” variety. Although impatience with the effectiveness of these slogans is prevalent,\textsuperscript{137} there is practically no way to measure just how many more drinking drivers might be on the roads were it not for such exhortations. Surely, such slogans can do little but help.

A related approach that has been suggested is the institution of a general education program.\textsuperscript{138} A systematic educational program directed at high school students, which would include furthering an attitude which upgrades the status of a driver’s license and making testing standards and qualifications higher, has also been suggested.\textsuperscript{139} Perhaps the most effective education would be the appearance of more articles in national magazines like that of Roalman in the March 1968 issue of \textit{Today’s Health}.\textsuperscript{140} Such an article, which realistically describes the dangers of combining drinking with driving, explains the current laws, and most importantly, the number of drinks which one must consume in order to approach a dangerous

\begin{footnotesize}
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\item[134.] See Seliger, supra note 13, at 404; Comment, supra note 3, at 165, which cites “lack of public consciousness” first among the five problems which make the apprehension of the drinking driver difficult.
\item[135.] Erwin, supra note 124. See also Hollopeter, supra note 46. The latter article does, however, appear to recognize the menace of the drinking driver, but maintains, rightly, that he must be defended at least as well as a felon. \textit{Id.} at 418.
\item[137.] See Knight, supra note 60, at 101. Several of the medical men concerned with the alcoholic, in their inability to discern how such slogans can affect the alcoholic, are especially critical of the efficacy of this approach. See Schmidt & Smart, supra note 118, at 641; Selzer, supra note 113, at 15. One source did, however, urge more extensive use of propaganda. Freeman, supra note 63, at 1636.
\item[138.] Monroe, supra note 3, at 405.
\item[140.] Roalman, supra note 4. See also Bongartz, supra note 50. However, the former, unlike the latter, never alters its tone of addressing and educating the average person without appealing to the reader on other, more sensational grounds.
\end{enumerate}
\end{footnotesize}
alcohol level, is easily read and has the advantage of widespread circulation. Perhaps a systematic dissemination of such articles would be the most effective means of effectuating the educational approach.

The efficacy of such approaches on alcoholics may, of course, be limited. However, slogans and education probably dissuade alcoholics from driving to some extent and might encourage their friends and relatives to take steps to keep them off the road.

VII. Conclusion

Perhaps the most effective means of dealing with the problem of the drinking driver would be to reshape the structure of our society to remove, in part, the great American dependence on the automobile. Henry Ford, in 1927, foresaw the dire effects of removing prohibition in the wake of the mushrooming increase in auto ownership which had taken place since prohibition's inception.\footnote{141} There is no question that the taverns and bars which dot American highways can frequently be reached — and returned from — only by automobile.\footnote{142} The presence of the alcoholic on our highways is not surprising, since the auto is essential to him as well. Moreover, the fact that a driver's license has become so essential in our society has furthered the reluctance of juries to convict drunken drivers, when suspension of one's license often accompanies such convictions.\footnote{143} Of course, removing our society's dependence on the auto is chiefly a problem of land-use planning, but the effect of that problem on the seemingly ubiquitous presence of the drinking driver on American highways should not be forgotten.

The very minimum which the legal fabric can accomplish is the improvement of the statutes prohibiting driving while intoxicated. The adoption of implied consent laws or their equivalent is an absolute necessity to the institution of effective law enforcement. Reducing the alcohol level above which a driver is presumed to be intoxicated and providing stricter, more consistent penalties are also necessary for more appropriate statutes. Although it has been suggested that only by preventing people from driving for a certain number of hours after drinking any liquor at all can drinking-driver laws be made uniformly effective and fair,\footnote{144} this is simply not practical or possibly enforceable in an America which has lost its "prohibitionistic flavor."\footnote{145} A somewhat more practical suggestion for facilitating enforcement of drinking-driver statutes is that police institute periodic road blocks to more readily ferret out drinking drivers,\footnote{146} or at least to frighten the

\footnote{142. Selzer, supra note 113, at 16.}
\footnote{143. Watts, supra note 42, at 38.}
\footnote{144. It can be inferred that this is the only solution which would be approved by a Baptist minister who originated the "Voice of Temperance." Morris, Liquor and Highway Slaughter, Am. Mercury, Nov., 1959, at 143, 145. Such a suggestion was also directly offered by a medical man. Rabinowitch, supra note 2, at 248.}
\footnote{145. Roalman, supra note 4, at 34.}
\footnote{146. Chapman, supra note 90, at 28-29.}
public into sobriety by the possibility of confronting such a road block. Stake-outs at bars might also prove an effective means of enforcement.

The laws in this area can, however, be ultimately successful only by instituting a program to remove the public apathy to the severity of the problem. Despite the various propaganda and educational programs which have already been instituted, very few Americans are aware of the severity of the danger created by the drinking driver's presence on the road. A random survey showed that 42 percent of the driving population who drink admitted that they regularly drive after drinking, and an additional 20 percent admitted to occasionally doing so.147

The only effective means of significantly eliminating the presence of the drinking driver is to impress upon the public that driving after one has consumed more than a token amount of alcohol is unthinkable. The problem that it is frequently very inconvenient not to drive after drinking must be solved, either by reducing the dependence on the auto, providing ready and inexpensive taxi service to people under the influence, or, and it bears repeating, simply making the two activities so unthinkable that convenience will be a secondary consideration of the drinker who is about to drive.

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