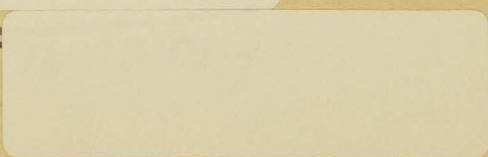
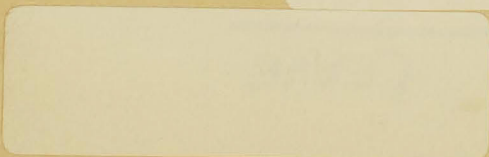
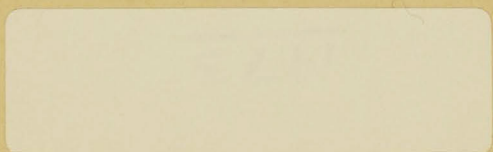
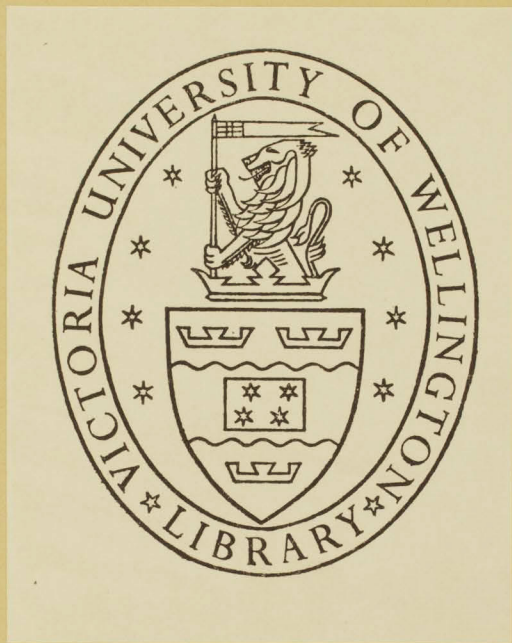


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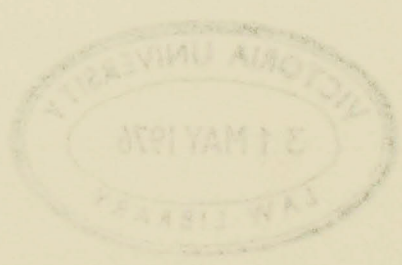
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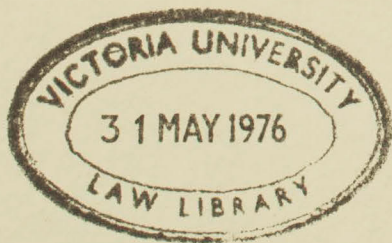
Research Paper - Medico Legal -
LLM Special Topic

A comparative study of Blood
Alcohol Legislation



M.P. REED,
September, 1974.

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BLOOD ALCOHOL LEGISLATIONThe affect of alcohol on the human body

Ethyl alcohol is the principal active ingredient of alcoholic beverages. It is a simple chemical compound with various other popular and scientific names, the most common being alcohol and ethanal. Alcohol is, of course, easy and inexpensive to produce by either fermentation or chemical synthesis. Most alcoholic beverages also contain small amounts of other chemical components, called congenerers, and at present there does not seem to be any scientific evidence to show that these congeners have any significant affect on the drinking driver.

Alcohol, when consumed, is quickly absorbed from the gastrointestinal tract and carried by the blood to all parts of the body, including the brain. "When absorbed, it alters the relationship of man both with his environment and with himself, and has properties intermediate between the addiction producing and habit forming drug".

(1) At this stage it is interesting to note, that despite a widespread belief that alcohol is a stimulant, scientific evidence has shown clearly that it is not. "The apparent stimulation that commonly results from its use is actually the result of a depression of the mechanisms within the brain that normally moderate behaviour" (2).

It appears that when alcohol reaches the stomach and intestines several factors determine the rate at which it enters the blood. These include the rate of consumption of alcohol, the amount involved, its concentration, plus

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such other factors as the consumption of food or other drink. A clear example of the affect of food on the consumption of alcohol can be seen from the following summary from the Commissioner of the Royal Canadian Mounted Police (3) - "if an individual weighing 150lbs, drinking between one and two hours after an average meal were to consume in that one hour at least four and a half ounces of 80 proof liquor, his blood alcohol concentration would probably reach 50mg per 100ml. Similarly, under the same conditions for 100lb and 200lb individuals the corresponding amounts of 80 proof liquor to reach 50mg per 100ml would be slightly more than 3 ounces and 6 ounces respectively". However, it is not possible to predict with any accuracy the blood alcohol concentration which will result from the consumption of any given quantity of alcohol. It can be seen that once alcohol reaches the blood its rate of entrance is very dependant upon the body weight of an individual and the rate at which the body eliminates it, both metabolically and by excretion, which is mainly breath and urine. Ethyl alcohol is absorbed into the bloodstream more rapidly than most other drugs and a peak concentration following a single dose is reached in between fifteen and nineteen minutes, depending on the rate of absorbtion. (4)

In an attempt to translate the concentration of alcohol in the body into the amount of alcohol actually consumed, the British Medical Association at one stage produced some tables, but they emphasised that these tables were not reliable and could only be used as a guide. For the purposes of this paper, however, it is interesting to note the approximate amount of alcohol

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that can be consumed to give a particular reading. According to the tables, a blood alcohol concentration of 50mg per 100ml indicated that a person of average weight had consumed at least 1½ pints of beer. Translating this to social surroundings where drinks may be taken over a period of time, and often with food, it was found that a person would probably have to consume about three pints of ordinary beer to give the same reading. Of greater significance is the fact that to produce a level of 80mg per 100ml it is necessary to consume more than half as much again as for a reading of 50mg per 100ml.

In concluding this brief summary of the affect of alcohol on the body, the "Grand Rapids" survey (5), which impressed the British Medical Association as the best of its time, showed that a concentration of 50mg per 100ml was the highest that can be accepted as entirely consistent for the safety of other road users. The New Zealand statutory limit is 100mg per 100ml and the same Grand Rapids survey shows that the overall accident involvement and responsibility for causing accidents increases by as much as six to seven times for a reading of 100mg per 100ml. The British Medical Association considered that there was adequate scientific evidence to support legislation making it an offence for a person with a blood alcohol concentration in excess of 80mg per 100ml to drive a motor vehicle on a highway (6).

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Legislation in the United States of America and Canada

In the United States of America the offence of driving under the influence of alcohol had an early start. The New Jersey Supreme Court in the case of State v. Locker 50 N.J.L. 512 referred to "Act suppressing vice and immorality" dated the 12th of December, 1704. This Act provided that any person convicted of drunkenness before any Justice of the Peace, on his own confession or by the testimony of one witness, was to be fined six shillings for each offence. Drunkenness as such, does not appear to have been an offence at common law unless it was accompanied by sufficient public inconvenience amounting to a nuisance. As far as driving was concerned, it was not an offence unless it amounted to a nuisance.

In most states of the United States there are laws prohibiting people from operating a motor vehicle after they have consumed alcohol to such an extent that their driving ability has been affected. The Uniform Code, Section 11-902 (a) provides:-

"it is unlawful and punishable as provided in Section 11-902.2 for any person who is under the influence of intoxicating liquor to drive or be in actual physical control of any vehicle within this State".

Most states seem to follow the provisions of the Uniform Code, but some have not included the "physical control" aspect while others have combined references to drugs with those relating to alcohol or intoxicating liquor.

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Other states, such as Iowa, Missouri and New York refer to driving "while in an intoxicated condition". Minnesota, Nebraska and Virginia have laws which relate to persons operating a vehicle under the influence of alcohol or alcoholic liquor while the laws of Tennessee and Wisconsin refer simply to intoxicants.

The early statutes on this subject mainly used the words "intoxicated" or words of a very similar nature, but nowadays most statutes appear to use the phrase "under the influence" (7).

It is interesting to compare the equivalent words in the Canadian Criminal Code which prohibits "driving while ability impaired by alcohol". New Jersey, New York and Virginia have adopted the Canadian concept and made "driving while impaired" a lesser degree of the offence of driving while under the influence of alcohol. Section 1192 of the New York Vehicle and Traffic Law provides that "driving while in an intoxicated condition" is a misdemeanour, whereas "driving while impaired" is a traffic 'infraction' and not a criminal offence. The differing standards allows some discretion to law enforcement agencies when making arrests for drunken driving.

In most states the consequence of a conviction for driving under the influence of alcohol, or while ability is impaired, is usually a penalty of what we call disqualification. However, this varies considerably between the states and a distinction is drawn between

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revocation and suspension. Where a licence is suspended a driver can generally resume his driving immediately the period of suspension has lapsed. Whereas in the case of revocation a person is required to start afresh and apply for a new licence. It should be noted that a conviction on either one of the above offences, in some states, does not result in any action against the drivers licens. The New York Vehicle & Traffic Law Section 510 (6) provides that in the case of a minor, a period of suspension may be for the period of his minority. New Jersey also provides for such a penalty (8). In cases where there is a mandatory fine or jail sentence, the sentence may be suspended or the person placed upon probation. The affectiveness of a mandatory jail sentence appears to be considerably impaired by such things as routine sentence suspension which in our terms is a form of probation or suspended sentence.

The Quebec Motor Vehicles Act provides under RSQ Ch. 142 S.48(1) "No person under the influence of intoxicating liquors or of narcotics shall drive a motor vehicle on a public highway, or have the care or control of same, even if such motor vehicle is not in motion". The penalty for such an offence is tough by United States standards in that "If a person convicted under this section be not the holder of an operator's or a chauffeur's license, he shall be condemned to imprisonment for such period of time, not exceeding six months, as the court may determine, without the option of a fine". The Act then goes on

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to provide for the seizure of a motor vehicle.

"In the case of all offences after the second, the vehicle shall be seized and its confiscation pronounced by the Court ...".

Enforcement

The Uniform Vehicle Code, Section 17 - 101 provides that driving while under the influence of alcohol is a misdemeanour, and therefore the procedural safeguards applicable to ordinary criminal prosecutions apply. In many cases this includes the right to trial by jury. This latter fact has greatly impaired the affectiveness of the legislation as many prosecutors appear to be reluctant to prosecute before juries even where chemical tests and other scientific evidence has been available to conclusively prove the offence. Their experience is that juries are often swayed by sympathy based on the knowledge that a conviction followed by licence revocation will lead to hardship. In addition, many jurors apparently believe that they sometimes drink as much as the defendant apparently did and can therefore visualise themselves in a similar position. The above facts regarding the attitude of jurors has recently been confirmed in a study of the behaviour of juries in criminal cases (9).

The knowledge that juries are reluctant to convict for such offences has greatly increased "plea

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bargaining" which has resulted in most people agreeing to plead guilty to a lesser charge which does not involve the suspension of their licence. In some states, such as New York, where the lesser offence of driving while ability impaired is a mere traffic infraction, no jury trial is permissible. Another affect of the two types of offence is that with the lesser violation "if it is characterised as not being a crime, there is a greater likelihood that pleas of guilty will be made. The defendant is naturally reluctant to enter a plea of guilty to a crime and thereby expose himself to the inconvenience, stigma and other secondary effects commonly associated with a criminal conviction" (10).

Convicting the Drunken Driver

It appears that there is no constitutional basis in the United States of America allowing the introduction of compulsory breath tests and blood tests as is regularly carried out in New Zealand any many European countries. There is no statutory authority in the United States for carrying out a preliminary breath test unless a driver has first been arrested for some specific charge in relation to driving whilst under the influence of alcohol. Because there is often a difficulty in

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proving certain facts concerning the particular prosecution, statutory presumptions have been introduced to surmount these difficulties. The constitution, however, requires that there be a rational connection between the fact proved and the fact presumed and that the conclusion be one ordinarily drawn in common experience (11).

Accordingly, many states have introduced statutory presumptions which makes some specified blood alcohol concentrations a presumption that the drivers ability has been impaired. This allows a prosecutor to establish a case without submitting additional evidence actually proving that the driving skills were impaired. The United States Appellate Courts have been prepared to uphold these presumptions "on the grounds that the scientific evidence adequately establishes that the presumptive concentrations affect the driving ability of all individuals". (12)

However, unlike the absolute presumptions under New Zealand law, the presumptions in the United States are not conclusive. Many states provide that certain blood alcohol concentrations are merely prima facie evidence that the drivers ability has been impaired. Consequently, the defendant can rebut this presumption if he has sufficient evidence. The presumptions do, of course, have the benefit of shifting the burden of proof onto the defendant. Some statutes appear

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to be a two edged sword as far as the prosecution is concerned because they also have minimum blood alcohol concentrations, at which level there is a presumption that the driver was not impaired. These laws do not seem, however, to preclude a conventional prosecution using such evidence as walking a white line and other such tests. The Uniform Traffic Code now provides that a statutory presumption of the impairment of driving skills comes into play at the level of 100mgs and it is interesting to note that the National Committee on uniform traffic laws considers that the level should probably be lower than that.

The 1968 Alcohol & Highway Safety Report, at page 108, shows that many states such as Florida, Illinois, Kentucky, Minnesota and West Virginia have adopted the recommended 100 level. Utah has adopted the lower level of 80 whilst although New York has adopted the 100 level it is only a presumption for the lesser offence of driving while ability impaired by alcohol. However, the New York statute deals with persons under the age of 21 by lowering the presumption to a level of 50.

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Legal problems in the use of breath and blood testing techniques

Laws have not been generally introduced authorising compulsory tests for all motorists arrested for driving offences involving alcohol. The main reason for this is that many people argue that "an unconsented invasion of the body to procure chemical evidence would constitute a violation of the defendants constitutional rights". (13)

To overcome this problem the so called "implied consent laws" have been introduced. These laws require a motorist to choose between submitting to an authorised test or automatic suspension or revocation of his licence. An example of these implied consent laws can be found in the New York Vehicle & Traffic Laws Section 1194 (1) which provides:-

"Any person who operates a motor vehicle or motorcycle in this state shall be deemed to have given his consent to a chemical test of his breath, blood, urine or saliva to the purpose of determining the alcoholic content of his blood provided that such test is administered at the direction of a police officer having reasonable grounds to believe such person to have been driving in an intoxicated condition or while his ability to operate such motor vehicle or motorcycle was impaired by the consumption of alcohol and in accordance with the rules and regulations established by the Police Force of which he is a member. If such person having been placed under arrest and having thereafter being requested to submit

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to such chemical tests, refuses to submit to such chemical tests a test shall not be given but the Commissioner shall revoke his licence or permit to drive and any non residence operation privilege; provided, however, the Commissioner shall grant such person an opportunity to be heard ..."

There was an early attack on this law and the section was declared unconstitutional on the grounds that the absence of a hearing on the issue of revocation amounted to a denial of due process of law (14). However, this defect was soon patched up and the section has now been upheld in the case of Anderson v. MacDuff (15).

In New York, before the test can be applied, the person must be arrested on the basis of reasonable grounds for belief that the person was driving while intoxicated or while his ability was impaired by alcohol. Although the Uniform Vehicle Code does not specify on what grounds the arrest must be made, before a test can be applied, there is a requirement that it be for a violation arising out of acts committed while the person was driving or in actual vehicle control while under the influence of intoxicating liquor. Despite the terms of the implied consent laws, the suspect must nevertheless be asked whether he in fact consents. Even if a person refuses the test, hence invoking the presumption, most states allow a hearing on the question of the legality of the arrest or upon the question of

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the justification for any refusal. Any revocation or suspension of a licence as a result of a refusal does not restrict the prosecution from proceeding with the additional charge out of which the arrest arose, "Otherwise implied consent laws would be useless, since the driver would have nothing additional to lose by refusing to take the test" (16). This appears to be a strange observation since any refusal automatically means suspension or revocation, whereas if a driver took the test there is a chance that the blood alcohol level might be within the area where there is a prima facie presumption that the person does have the required ability to drive. This of course, is virtually the situation in New Zealand and the European countries.

Most states require the arresting constable to advise the person concerned of the consequences of a refusal. However, in Michigan and Virginia the statute does not require any such information to be given. The lack of such advice has not been upheld as a ground for dismissing an action per *State v. Blair* (17). In a New York decision the Court said that it would be desirable for such information to be given, although not essential. The Uniform Vehicle Code says that any question arising out of whether the driver was correctly advised of the consequences of a refusal should not be taken into account when suspending or revoking a licence, under the implied consent laws. This is in marked contrast to the British Road Safety Act which requires that a person must be warned of the consequences of a refusal otherwise

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the Court will automatically dismiss the action.

A further most important defect in the use of testing apparatus in the United States is that the constitution appears to demand that a Constable, before making an arrest, must have first hand evidence of an offence sufficient to amount to "probably cause", to arrest. This requirement must be substantiated so as to establish that the Constable even had the right to stop the driver and even before any question of observing his behaviour or applying any tests become operative. The Alcohol & Highway Safety Report says that "the affect of such a requirement has been to prevent officers from making arrests for driving while intoxicated in situations where they do not feel that there are articulable suspicions which would stand up in Court".

Legal Developments in the United States

One possibility for reducing the frequency and magnitude of blood alcohol concentrations among drivers and pedestrians steems from the widespread enactment in utilisation of dram shop laws. These laws attempt to shift the cost of injuries inflicted by intoxicated persons to vendors of liquor by giving a right of action against the one who caused

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the intoxication. Most states with dram shop laws hold vendors liable only when the liquor sold was illegal. (e.g. selling to a person under age or someone already intoxicated). However, in Illinois there is a statute which imposes strict liability upon a vendor of liquor. It is interesting to note, however, that the above statute has been judicially limited to those persons who are in the business of selling liquor.

Of even more interest is the development of the common law tort of negligence. In some states, such as Illinois and Minnesota, an injured person can bring an action against the seller of liquor based upon the seller's failure to foresee that serving liquor illegally will expose the community to unreasonable danger. The Alcohol & Highway Safety Report comments "an incidental affect may be that tavern keepers and others dispensing alcoholic beverages at locations only reachable by motor vehicles will be more reluctant to serve excessive amounts of such beverages to their patrons" (18).

This last comment is of particular relevance to the New Zealand situation where most large taverns appear to be only accessible by road.

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Legislation in Europe

The Swedish legislators as far back as 1916 provided that driving licences should only be granted to persons "with a reputation for sobriety and general propriety". Then from 1920 onwards it appears that the Swedish authorities started to take a close interest in the question of alcohol and driving safety. In 1920 a clause was added to the earlier 1916 ordinance to the effect that all licences were covered by the condition imposed in the 1916 ordinance. In addition, it was further provided for special grounds for withdrawing a licence if the driver had been driving while drunk or incapable of having control.

In 1923 the Motor Vehicle Ordinance introduced the first penalty clause in respect of drunken driving. At first this took the form of merely providing incriminating circumstances and was not strictly speaking an independent penalty for drunken driving. The actual effect of the 1923 Motor Vehicle Ordinance was to provide that insobriety was to be treated as further incriminating evidence against the driver who, for example, exceeded the speed limit. In 1925 the Motor Vehicle Ordinance provided penalties in respect of persons "obviously affected by strong drink". However, the legislature became increasingly more aware of the problem of drunken driving and several private members bills were introduced, although none passed into law. The effect of these private members bills was that it continued to keep the question of drunken driving firmly in the public eye.

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In a review in 1930 "obviously affected by strong drink" was replaced by the words "so affected by strong drink that it can be assumed he can no longer exercise necessary control over his actions..."

In 1934 a general review of the penalties provided under the Motor Vehicle Ordinance of that time was carried out. As a consequence of this review the penalties relating to offences concerning driving while under the influence of alcohol were substantially increased. As an example of these stiffer penalties the introduction of a term of imprisonment was provided as the normal penalty for being drunk in charge of a motor vehicle or a tractor. Then later in the same year an Act was introduced concerning blood tests in connection with criminal cases.

Therefore, as far back as 1934, the Swedish legislators provided for the taking of blood tests and in addition methods of blood analysis received specific recognition. The lower limit was fixed under Swedish law at 0.8 promille which corresponds with the present English level of 80. Although there has been a prison sentence for those convicted of drunken driving as far back as 1934, there was introduced in 1941 an additional ground for imprisonment. The 1941 Act provided for the normal penalty of imprisonment for those persons found driving a motor vehicle whilst the level of alcohol in their blood was 1.5 promille or over. It is interesting to note that only minor alterations have been made since 1941, although in 1951 drivers of all motorised equipment were included in this legislation. In addition those drivers, who because of illness, tiredness or the

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effect of strong drinks or other stimulants and sedatives were covered by the legislation. Another refinement was the addition of the words "or for some other reason were incapable of driving a motor vehicle with due care". In 1957 the lower limit under the blood tests legislation was lowered from 0.4 promille to 0.5 promille.

Blood tests were introduced in 1941 permitting a driver suspected of drinking to be tested and in 1941 a prison term of one year was provided for any driver with a blood alcohol concentration of 150 or above. The lower limit of 80 was provided and between 80 and 150 a clinical diagnosis was needed to supplement the evidence of the blood alcohol reading. As already mentioned, the lower limit was reduced to 50 in 1957 and the Swedish legislature is at present considering whether this lower limit should be further reduced to 35.

Czechoslovakia has very strict controls on those persons driving under the influence of alcohol and in that country there is a general prohibition on the consumption of alcohol by any driver of either a private or commercial vehicle of any type. Although there is this general prohibition, there is nevertheless a procedure for breath testing. Any driver can be stopped and requested to take a "drunkometer" and if the reading exceeds 30 the driver is automatically presumed to be drunk. As an example of the effectiveness of the Czechoslovakian legislation, it can be shown that in

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1961 there was a reduction in accidents due to drinking by 23.7%. This result was achieved in a year when the overall traffic accident rate increased by 2.9%.

In Switzerland, Norway and Yugoslavia all commercial drivers are generally prohibited from drinking prior to driving a motor vehicle.

Other countries which have adopted a low limit for blood alcohol concentrations are Norway, Yugoslavia and Iceland which have a general limit of 50. Up until 1961 Austria was one of the countries which had no effective blood alcohol legislation. However, in 1961, with the introduction of legislation giving a limit of 80, the number of accidents due to drinking and driving was reduced to 2,961. In the previous year, before the introduction of the legislation, the number of accidents due to drinking and driving was 4,601. During the period when there was this reduction in drinking and driving accidents there was a general increase in ordinary accidents. In Denmark the blood alcohol level is prescribed at 100 and this limit extends not only to drivers of motor vehicles, but also to horse riders and pedestrians. A further variation can be found in Norway where any person who provides drink to a driver, whether he receives payment or not, is automatically punished.

In contrast to the generally strict blood alcohol legislation in Europe, France and Italy do not have any

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compulsory blood alcohol legislation. It can be seen that there is a general tendency on the stricter countries to limit the level at 50. In this connection it is interesting to note that in 1954 a report of the expert committee on alcohol of the World Health Organisation found that according to experimental results, a serious decrease in competency was noted in more than 50% of all drivers who had a blood alcohol concentration of 50 or more. Supporting this general finding the Automobile Accident Death Investigation Committee of the American Medical Society reported in 1958 that it should be unlawful for any person with a blood alcohol concentration of more than 50 to drive any vehicle on a public road. They further recommended that a blood test should be compulsory on any driver suspected of drinking and driving.

A general summary of the various types of legislation in force in European countries has already been given, but it is considered worthwhile discussing, in more depth, the general working of such legislation in Sweden and in England.

The Swedish legislature has generally provided for drunken driving in two ways. The first is where the blood alcohol concentration is 150 and above, which is considered to be drunken driving proper. There is then the lesser type when the blood alcohol concentration is between 50 and 150. This latter offence is usually described as "drivers insobriety". The

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distinction as far as penalties are concerned, is that the former has a mandatory prison sentence whereas the latter is usually dealt with by way of a fine. The first and most important consideration in the Swedish legislation is the fact that a Policeman has the right to stop any vehicle so as to check whether the driver is sober. This of course contrasts markedly with the general provision in other countries where a driver can only be stopped where he is suspected as being under the influence of alcohol. Once a driver is stopped a Policeman may administer a breath test device, if he is not satisfied that the driver is sober.

Since 1957 the **type** of breath test apparatus used has been the "Alcotest" system. A Policeman may request that a breath test be taken and if the test is positive a blood test can then be requested. The strange thing is that drivers suffer no penalty if they refuse to take a breath test and it is then up to the Policeman to decide by some other means whether a blood test should be carried out. Where a Policeman is satisfied by any means that a driver has committed an offence serious enough to be punished by a term of imprisonment, he can request the driver to accompany him to a Police Station. At the Police Station the driver can then be requested to take a blood test, which is technically termed as "physical inspection". Blood tests can only be carried out by a registered medical practitioner.

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It has been found in Sweden that the majority of drunken driving infringements come to light as a result of standard traffic controls. These traffic controls consist of regular checks as to whether drivers have the proper licence and tax receipt, etc. Such controls are carried out also as to the condition of the vehicle (19).

Doctor C. Luke reporting in the N.Z. Medical Journal in December 1967 said:-

"There is ample evidence that such measures can be expected to have effect. Analysis of road accident statistics in Sweden over a 25 year period provides interesting study (Andreasson, 1962). The frequency with which road accidents occurred involving alcohol has halved during this period and the ratio between the number of alcohol induced accidents to the number of road vehicles has fallen by 64%. Two years after the introduction of legislation designed to reduce the incidence of alcohol-induced accidents in Austria in 1959, the number of road accidents reduced by 27%, the number of injuries by 28%, the number of deaths by 16% and the incidence of driving whilst under the influence of alcohol fell by 27% (Breitenecker, 1962)".

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Turning now to the blood alcohol legislation in England, it is first necessary to consider the law in that country prior to the introduction of the Road Safety Act in 1967.

Prior to 1967 the law generally prohibited any person from driving a motor vehicle while under the influence of alcohol. Whether or not a person was under the influence of alcohol was determined by way of a clinical diagnosis carried out by a doctor and not exclusively by chemical tests. This type of law enforcement proved over a number of years to be very ineffective. This can be particularly well illustrated by some research carried out by the British Medical Association on the question of diagnosing whether a driver was under the influence of alcohol without the aid of chemical tests.

In the 1965 report of the British Medical Association on "the drinking driver" (Supra) they reported that "if it were not for the rules of criminal procedure, it would be possible to provide the Court with an agreed medical opinion in almost every case" (20).

However, the Committee was of the view that because a Medical Practitioner is open to cross-examination, minor differences of opinion often came to light which, although of little significant scientific value, were often used by experienced counsel to show that there was substantial disagreement in the medical evidence. A further problem pointed to by the committee was that a public image soon emerged of a doctor regularly called by the Police. This public image seemed to be to the affect that the doctor

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was trying to get the person convicted. For this reason the British Medical Association was of the view that only a very experienced medical practitioner should give evidence in Court so that it was presented in an unbiased manner as possible.

Turning to the actual effectiveness of a clinical examination, the Committee pointed to "inherent sensitivity of clinical examination as a method of detecting impairment of driving ability, particularly at low concentrations of alcohol in the Blood" (21) The shock of a person finding himself in a Police Station and about to be charged with an offence of drunken driving, is apparently sufficient to enable that person to pull himself together for long enough to pass a clinical examination. However, the Committee showed that a person could only pull himself together for a relatively short period before relaxing "into a state of manifest intoxication". A clinical examination may not detect that the persons condition is due to some illness or injury or even perhaps to extreme nervousness.

In conclusion, it was considered by the Committee that a doctor could not give a truly reliable indication without the prior knowledge of the actual blood alcohol concentration. It has already been pointed out earlier in this paper that a clinical diagnosis is very likely to favour the motorist. This is so because a medical practitioner may not necessarily observe that a person is unfit to drive although his blood alcohol concentration is such that he is patently unfit to drive. As already mentioned, the peak reading for a blood alcohol con-

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centration may not be achieved for up to 90 minutes.

Prior to the introduction of the British Road Safety Act of 1967, the relevant English legislation was contained in Sections 1 and 2 of the Road Traffic Act 1962. Section 1 of that Act provided that "a person shall be taken to be unfit to drive if his ability to drive properly is for the time being impaired". Section 2 provided that if a motorist consented to a blood test this evidence could be given in Court. In addition, the section provided that where a person refused to give a sample to a Constable "his refusal may, unless reasonable cause therefore is shown, be treated as supporting any evidence given on behalf of the prosecution, or as rebutting any evidence given on behalf of the defence, with respect to his condition at that time".

The provisions of Section 2 seem to have a similar basis to the implied consent laws contained in many American states. The difference being, of course, that in England the refusal merely adds to the evidence against the defendant, whereas in the United States the refusal is conclusive for the purpose of supporting a drivers licence. However, in the United States, the implied consent laws do not restrict any proceedings against the driver for drunken driving, notwithstanding his conviction for refusing to give a blood sample.

Under the English Act of 1962 and where a blood test was taken, an analysts certificate was required to be served on the defendant seven days before the trial. The defendant could then within three days of the trial require the prosecution to have in attendance at the

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hearing the analyst who signed the certificate. However, Sub-Section 3 of Section 2 provided that in Scotland the evidence of the analyst was sufficient evidence of the facts stated in the certificate.

It appears therefore that in other parts of the British Isles the analyst's evidence was not conclusive, inasmuch as it could be rebutted. The 1962 Act also provided that a motorist could request, at the time when the specimen was taken, for a part of that specimen to be examined by his own physician. Any failure by the Police to comply with this request made any evidence of a blood test inadmissible.

The special committee of the British Medical Association on the drinking driver concluded its report by recommending that evidence of blood alcohol concentration should be the only test accepted by the Court said "we believe that analysis of the concentration of alcohol in the body affords the best available scientific evidence of impairment of the ability to drive properly due to alcohol, and we recommend it should be made an offence for any person with a blood alcohol concentration in excess of 80mg/100ml to drive a motor vehicle on the public highway" (22). In addition they recommended "that a procedure for taking specimens of blood (preferably capillary blood) or breath should be introduced as soon as practicable". (23)

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Before turning to the introduction of the revolutionary Road Safety Act of 1967, it is considered of value to briefly review the legislative history in England relating to drunken driving.

The Licensing Act 1872 (24) made it an offence to be "drunk while in charge on any highway or other public place of any carriage, horse, cattle, or steam engine". However, it was not until the Criminal Justice Act of 1925 (25) that a provision was made for "any mechanically propelled vehicle". In these early stages medical evidence was called in support of prosecutions of persons charged under the Criminal Justice Act and other Acts generally for drunkenness. As a result of public concern as to the rights of individuals prosecuted for such offences, the British Medical Association published a report called "Tests for Drunkenness" (26). This report quoted a press report that "motorists had a feeling of apprehension that they might at any time find themselves charged with a serious offence and that there was no certainty that the tests applied were of such a nature as to give them a fair chance of vindicating their personal reputation". Accordingly, the abovementioned report of the British Medical Association was called "to consider and report on the present tests for drunkenness with recommendations as to their modification or improvement". This report then produced a guide for doctors called upon to examine persons suspected of offences relating to drunken driving. This guidance was particularly directed to the giving of evidence in courts.

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In the case of R v. Presdee (27) the Court of Criminal Appeal quashed a conviction for drunken driving. In the Court of first instance a jury had found a motorist "guilty of being incapable of driving a motor car brought about by alcohol, but he was not drunk ... to the extent we should call a drunken man". The Appeal Court in quashing the conviction considered that the word "drunk" is "what an ordinary reasonable person would consider as such". The Road Safety Act of 1930 was passed to remedy this situation. The Act created the offence of being "under the influence of drink or a drug to such an extent as to be incapable of having proper control of a vehicle" (28).

The British Medical Association considered that the above wording of the 1930 Act was unfortunate and their reasons were that "not least amongst the reasons was the unhappy choice of words in the drafting of the relevant section, the words "incapable of having proper control" having become confused in the minds of the Police, bench and jury with "drunk and incapable" also the words "drink or a drug" are tautologous and confusing, as they suggested alcohol is not a drug.

In 1935, the then Minister of Transport (Mr Leslie Hore Belisha) called upon the British Medical Association to consider the role of alcohol as a cause of road accidents. As a result of this request a report was published in 1935 (29). This report concluded that it was "highly desirable in the public interest to draw attention to the affects of amounts of alcohol commonly regarded as

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without deleterious affect on the driving capacity of the person in charge of a motor vehicle". Then in 1954, because of the ever increasing scientific evidence relating to alcohol and road accidents, the British Medical Association reconvened the 1935 special committee to collate and bring up to date the relevant information. This report appeared as the recognition of intoxication (British Medical Association London 1954 revised edition 1958). The Committee concluded, amongst other things, that a blood alcohol concentration of 50 was the highest that could be accepted as entirely consistent with the safety of other road users. This report led to the introduction of the 1962 Road Traffic Act which has already been explained in some detail.

This now brings us to the introduction of the British Road Safety Act of 1967. As the philosophy behind the introduction of this Act and the New Zealand Act appears to be the same, it is intended to quote from some comments of the then British Minister of Transport when launching the legislation. In a speech given by Mrs Barbara Castle on the 19th of September, 1967, a preview of the impending legislation was given. "The Act comes into force ... on October the 9th. From then on, it will be an offence for anyone to drive, attempt to drive, or be in charge of a motor vehicle with more than 80mg of alcohol per 100ml of blood. By creating this new offence we have made a far reaching change in the law. It is a tough law - but then it is a tough problem".

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In a later speech at the same meeting, Sir Edward Wayne acknowledged that "it is unrealistic to expect that all drivers will stop drinking before driving". But he went on to say that "if a driver must drink he should not exceed three single measures of spirits or the equivalent in beer of one and a half pints. These quantities should never be taken on an empty stomach and the driver should never drive, even within these limits, if he feels he is any way affected by alcohol nor does this advice apply to those who are not used to taking alcohol, because they should never drink before driving".

Section 1 (1) of the Road Safety Act 1967 provides:-

"if a person drives or attempts to drive a motor vehicle on a road or other public place, having consumed alcohol in such a quantity that the proportion thereof in his blood, as ascertained from a laboratory test for which he subsequently provides a specimen under Section 3 of this Act, exceeds the prescribed limit at the time he provides the specimen, he shall be liable

- (a) On summary conviction to a fine not exceeding £100.0.0 or imprisonment for a term not exceeding four months or both, or, in the case of a second

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or subsequent conviction, to a fine not exceeding £100.0.0 or to imprisonment for a term not exceeding six months or both.

- (b) On conviction on indictment to a fine or imprisonment for a term not exceeding two years or both".

A Constable (in uniform) may require any person driving or attempting to drive a vehicle on a road or other public place to provide a specimen of breath for a breath test there or nearby. However, the Constable must have reasonable cause:-

- (a) To suspect him of having alcohol in his body, or
- (b) To suspect him of having committed a traffic offence while the vehicle was in motion.

Any such request for a specimen of breath must be made as soon as reasonably practical after the commission of the traffic offence in question. If the breath test shows a level of alcohol in excess of the prescribed limit, a Constable may arrest the driver without a warrant. If a person fails to take a breath test as required he is liable to a fine of up to £50.0.0. In addition, if the Constable has reasonable cause to suspect him of having alcohol in his body, he may arrest the driver without a warrant. It is interesting to note that the Constable must only suspect some alcohol however slight. A person arrested as above must be given a full opportunity

to take a breath test at the Police Station. Once at the Police Station the driver may be required to give a specimen of blood or urine if either the breath test shows a positive reading or the driver refused to give a specimen of breath. A person who then refuses to give a specimen of blood or urine is liable upon conviction to the same penalty as set out in Section 1 above. A person cannot be convicted for failing to give a specimen of blood or urine unless:-

- (a) He is first requested to provide a specimen of blood, but refuses to do so.
- (b) He is then requested to provide two specimens of urine within one hour of the request, but fails to provide them within the hour or refuses any time within the hour to provide them, and
- (c) Is again requested to provide specimen of blood but refuses to do so.

In addition, a Constable must warn the motorist of the consequences of any such failure to provide a specimen.

It is interesting to note that the Road Safety Act applies, to persons subject to service discipline, outside as well as within Great Britain. The Act also provides that 107mg of alcohol in 100ml of urine shall be treated as equivalent of 80mg of alcohol in 100ml of blood.

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Where a person has refused to give a blood or urine specimen he may be detained in the Police Station until he provides a breath specimen and that specimen indicates that his blood alcohol level is below the prescribed limit. No provision is made for a person who refuses even that breath test.

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General Characteristics of the Drunken Driver

In the United States there are certain characteristics which have become noticeable in those drivers who drink and then get into trouble. They possess substantial histories of arrests and social and medical problems relating to alcohol. The widely held view that drinking drivers are generally just the average man, is not supported by the American evidence. A study shows that the vast majority of most people involved in ordinary crashes or those involved in arrests for drunken driving, were already known to community services agencies because of repeated problems, especially involving misuse of alcohol (30). Most of the above persons had already developed these problems at least five years earlier and before they had reached the age of 25 or 30.

One of the general conclusions that can be taken from the Alcohol & Highway Safety Report 1968 is the fact that alcoholism or some form of a drinking problem is of far more significance to fatal road injuries than had previously been thought. It is considered worthwhile to quote fully a summary of some Australian findings regarding the drunken driver (31)

"It is readily apparent that the records of drinking drivers compared to those of the general driving population, include:-

- (1) more convictions
- (2) more convictions for serious offences
- (3) more repeated convictions for serious offences.

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These comparisons apply to drink-driving convictions as well as to those for other serious offences and show that a drink-driving conviction is sufficiently unusual in the general population to warrant particular attention. When the blood alcohol levels of drivers convicted after a breath test are considered the need for attention becomes even clearer.

Of all drivers breathalysed by police 70% have BAC's of .150% or higher and 35% are .200% or higher. At the other end of the scale only 2½% are .05% or less and only 6% are less than .08%, the legal limit in other states. These drivers, in spite of their comparatively low BAC's, have been apprehended as the result of an accident or because of conspicuously unsafe driving performance which attracted police attention.

No driver was charged with a drink-driving offence unless his BAC exceeded .06%. This practice seems to give ample protection to a driver who might be a borderline case, and for whom the accuracy of the breathalyser reading becomes critical.

While only the sub-group of licensed male drivers resident in the metropolitan area has been discussed so far, other sub-groups showed the same pattern of convictions, that is more convictions than their counterparts in the general driving population, more convictions for serious offences, and

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more repetitions of serious offences, including in particular those for drink-driving. Other sub-groups which have been examined and have shown the same pattern are those of males resident outside the metropolitan area, unlicensed drivers, those who refused a breath test, and women drivers."

It appears that most people consider that the person caught on a blood alcohol charge is merely the "unlucky person next door" who has had very little to drink but unfortunately is just over the prescribed limit. It would seem that it is time the general public was made aware of the actual position. In a recent article in the N.Z. Law Journal (32) this point was clearly illustrated:-

"Following "breathalyser legislation", it has become possible accurately to monitor blood alcohol levels, and it is apparent that these are very often extraordinarily high - well above "social drinking" levels. We are dealing in many cases with abnormally heavy drinkers, those with drinking problems, i.e. incipient and actual alcoholics.

Alcoholism is now regarded as a disease. It is treated as one, and regarded with much less opprobrium than in earlier years. It is also a common disease, and many alcoholics hold driving licences. Alcoholic drivers may cover 10 percent of the total annual mileage driven over Australian roads. And such drivers may be involved in over half of the alcohol-related accidents which are so sickeningly familiar.

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These are alarming findings, but are supported by a growing body of scientific evidence. If, indeed, frank and incipient alcoholics are actually so heavily involved in the road accident scene, certain conclusions are inescapable:

First, if these alcoholics were not on the road, there would be a marked reduction in the accident rate. One could, perhaps, disqualify them from driving altogether. But this would be a punishment and now that we no longer punish alcoholism, having recognised it as a disease, is this punitive approach consistent? Moreover, there is evidence that alcoholics are very likely to continue to drive if their licences are taken away.

Secondly, inasmuch as alcoholism is a disease and therefore by definition the person concerned is under its influence involuntarily, how can propoganda and/or legal administrative sanctions significantly affect his driving habits? An appeal to the social conscience of such a man is precisely to miss the point. And the prospect of his own death in a road accident is unlikely to be a deterrent.

"Accidental" death in this way might even be an attractive proposition."

Speaking on "Alcohol & Road Safety" at a recent meeting of the N.Z. Temperance Alliance, Doctor A. Missen of the Toxicology Section of the D.S.I.R. said that approximately 58% of drivers in alcohol fatalities in New Zealand were under 26 years old. Commenting on proposals to lower the prescribed limit to 80mg per 100ml Doctor Missen said that a greater number of drivers under 26 would be

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apprehended but the number of older drivers would be hardly affected.

Alcohol and Driving

Alcohol degrades individual driving performance in many ways, including deterioration in judgment, ability to concentrate, comprehension, vision and co-ordination. "It cannot, for example, be inferred that a driver is not a menace on the road because his reaction times are unaffected or because a test of skill revealed no impairment. The decisive feature is not the drivers skill in itself but in relation to what he believes he could do and what he would in fact undertake". (33)

At levels of 100, only about half of those adversely affected could be identified on the basis of observation alone. It was not until a level of 300 was reached that observing physicians were unanimous that an individual was adversely affected. It is clear that observation alone greatly under estimates the affect of drink on the ability of a person to drive. Doctors in the United States do not like taking blood tests from patients as their insurance policies only cover a doctor patient relationship. In the case of blood tests the doctor is carrying out the test for the police and therefore the doctor patient relationship has not been maintained. To cover this, some states have allowed persons making claims to claim against the state.

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The reliability of tests in general

It is obvious that the main purpose of all testing procedures is to estimate the concentration of alcohol in the blood supplying the brain and central nervous system. Once alcohol is absorbed from the gut, it passes very rapidly to the brain. However, there is some delay before the concentration builds up in the cubitals frame which is the usual site for taking blood samples (34). This same report considers that the analysis of breath is more preferable, particularly when the concentration of alcohol is rising. It appears that the concentration of alcohol in arterial blood is reached between 15 and 90 minutes after the alcohol has been drank. At the end of this period all testing procedures seem to have approximately equal accuracy.

Alcohol is not found in the urine till about 20 minutes after it has first appeared in the blood. The peak urine alcohol concentration is reached about 20 minutes after the peak has been reached in blood. During the whole of the phase of absorption of alcohol, the concentration of alcohol is higher in blood than in urine. The general disadvantages of using urine is that the alcohol in the urine in the bladder does not remain in equilibrium with the alcohol in the blood. Urine obtained early after heavy drinking of a person who has not emptied his bladder will give a low figure for the corresponding blood alcohol concentration. Conversely, too high a figure will be obtained if a man drinks heavily after emptying his bladder and then holds his water for considerable time. A further problem is the presence of

residual urine in the bladder, a fact to which is found increasingly in men as they approach and pass middle age. However, all these errors can be generally reduced if two specimens of urine are taken, the second about 30 minutes after the first.

The British Medical Association considers that the testing of breath gives a more accurate reading, particularly in the early stages, as this more accurately reflects the alcohol concentration in the blood reaching the brain. "The principal which underlines breath analysis is that there is a constant portion ratio between alcohol in the pulmonary circulation and alcohol in the breath, so that at 34°C, 2,100ml of breath contains the same amount of alcohol as 1ml of blood (35). The only real problem with breath analysis is that alcohol tends to remain in a persons upper respiratory tract for periods up to 20 minutes after drinking. This period of 20 minutes, has of course been reflected in the New Zealand legislation.

The British Medical Association has summed up its recommendation by saying that testing should be done on either capillary blood (that is blood taken from the lobe of the ear or fingertip) and not as is usually the case in New Zealand where blood is taken from the cubital vein. They also suggest that breath tests or blood tests should be used in preference to urine tests unless two urine tests are taken with an interval of 40 minutes between them. When using urine tests the figure reached must be reduced in the ratio of 1.33:1.

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Recommendations

For the purposes of this paper, no detailed discussion of the existing N.Z. legislation has been attempted. It is common knowledge that the New Zealand blood alcohol legislation is badly in need of revision. The sheer volume of case law indicates the technical nature of its provisions. It is considered to be of more value to consider what changes should be made to the N.Z. legislation including other recommendations with regard to the drunken driver.

(a) Who is the Drunken Driver

It has already been shown that the drunken driver is most likely to be under 20 years of age or an alcoholic or at least have a "drink problem". However, is this really the case in New Zealand? If it is, then any new or revised legislation should be tailored to deter and then assist in the rehabilitation of such persons. Is there any point punishing an alcoholic? For the protection of society he should be removed from the road while he receives treatment. Research shows that a high blood alcohol reading shows a strong likelihood that the driver has a drink problem. Consideration should therefore be given to the possibility of ordering a medical examination. At present New Zealand merely suspends the problem for six months.

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Inexperience seems to be the key word with young drivers, but is it inexperience in driving or inexperience with drink. In either case, we must educate the young driver.

It is suggested that research should be undertaken in New Zealand in an endeavour to establish who really is the drunken driver. The mere existence of blood alcohol legislation would not appear to be of much value unless it is helping to solve the problem.

The Prescribed Level - 80 or 100?

During research on this paper it seemed that an inevitable conclusion must be the reduction of the prescribed limit from 100 to 80. After careful consideration, however, a serious doubt exists as to whether there is any value in such a move. It has already been said that such a reduction will merely catch more young drivers. Is this of any value? To reach the 100 limit one need only drink about four or five whiskies or its equivalent in beer. In our New Zealand society this is a relatively small intake of alcohol. It would therefore appear pointless to reduce the limit if it cannot be adequately enforced and if the general public is not prepared to co-operate.

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It is submitted that the best deterrent is the likelihood of being caught. The level of the prescribed limit would not seem to affect the likelihood of apprehension.

One only needs to spend a morning in the Traffic Court to hear magistrates repeatedly saying that this problem will continue while society continues to condone drinking and driving.

There is, however, sufficient scientific evidence to show that a person with a blood alcohol reading of 80 is not a fit and proper person to be managing a vehicle and it may therefore be difficult for the legislation to resist reducing the prescribed limit. It is the writers submission that any such reduction should not be made until we are in a position to solve some of the other problems.

Limited Licences

If a period of disqualification is to be a deterrent then limited licences should only be granted in cases of extreme hardship. Even in such cases it might be better to impose a very short total disqualification followed by a longer period covered by a limited licence.

Testing Procedure

There are now in existence breath testing machines which can give a more accurate result than a blood or urine test. It is therefore considered that these machines should be introduced. This would reduce the inconvenience to drivers and also to busy medical practitioners. Time delays would be kept to a minimum allowing prosecutions to be speedily brought. One objection might be that a driver would not be able to obtain a sample for verification. However, an option could then be given for a blood test.

Blood or Urine Tests

In New Zealand a driver must submit to a blood test, whereas in England a driver may elect either a blood or urine test. It has already been shown that a urine test can be just as reliable as a blood test. It is therefore conceded that the New Zealand driver should be given the choice as this would remove the necessity for disturbing a medical practitioner (usually late at night) and would save considerable time. It would also remove the obligation of some persons who are genuinely disturbed by an injection although not within the category laid down under the Act.

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Random Testing

It has already been suggested that the only real deterrent is the likelihood of apprehension. On this basis random testing could probably be justified. However, one must balance this against the desirability of persons not being stopped without some reasonable cause. This is particularly so when under the present system a breath test is usually administered on the side of the road with a 20 minutes gap between tests. If a positive breath test is obtained then it usually takes at least a further two hours before the blood test has been taken and other details completed.

It is submitted that some element of a "just cause to suspect" should be retained but that it should be simplified. It is considered important to retain some protection against any arbitrary and unreasonable interference by a traffic or police officer.

A Review of the New Zealand Legislation

The New Zealand legislation should be redrafted so as to simplify the procedures after a positive test has been obtained. The present legislation is far too technical, thus allowing many unjustified acquittals. A considerable saving in administrative time would then be made.

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