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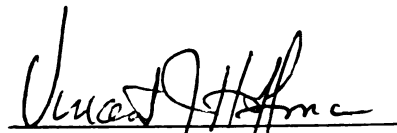
THE SUCCESS OF INTENSIVE
LEGAL EFFORTS TO CONTROL
DRUNK DRIVING

presented by

ELLEN FAYE VAN VALKENBURGH

has been accepted towards fulfillment
of the requirements for

Master of ~~Science~~ degree in ~~Criminal Justice~~


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THE SUCCESS OF INTENSIVE
LEGAL EFFORTS TO CONTROL
DRUNK DRIVING

By

Ellen Faye Van Valkenburgh

A THESIS

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ABSTRACT

THE SUCCESS OF INTENSIVE LEGAL EFFORTS TO CONTROL DRUNK DRIVING

By

Ellen Faye Van Valkenburgh

This research evaluated the impact of Michigan's drunk driving legislation, enacted in 1983, as measured by arrest, conviction, and traffic accident rates in Grand Traverse County. The new law was designed to facilitate and therefore increase arrests and convictions of drunk drivers, through the use of preliminary breath tests and per se charges. In this way, drunk driving behavior could be discouraged and alcohol-related traffic fatalities and injuries could be reduced.

This evaluation examined drunk driving arrests, convictions, and traffic accidents, as well as other case processing particulars, for a five-year period. A comparison was made of these variables before and after the new law.

In Grand Traverse County, after the new law, drunk driving arrests, convictions, bail amounts, and sentences increased. Alcohol-related traffic accidents and deaths, plea bargaining, and test refusals were reduced. While it was not clear that the new law was solely responsible for this, local efforts to control drunk driving appear successful.

Dedication

This thesis is dedicated to my parents,
Lois and Paul Van Valkenburgh, without
whose support and encouragement, this
work could not have been completed.

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Elaine Beardslee of the Mark Osterlin Library at Northwestern Michigan College very graciously and

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CHAPTER I

THE PROBLEM

In recent years, considerable public concern and controversy has been expressed about highway fatalities and injuries caused by drunk drivers. The criminal justice system has been perceived as unable to control this problem. Citizen lobby groups, such as Remove Intoxicated Drivers (RID) and Mothers Against Drunk Drivers (MADD), have been organized to promote tougher legislation, enforcement, and penalties [Amodei, 1982]. This effort has been supported by various police organizations and insurance companies. Many states have responded to that influence and have rewritten drunk driving laws. In 1982 alone, twenty-two states passed new legislation requiring more severe sanctions for drunk driving, such as mandatory jail time, higher fines, and mandatory license suspensions. [The Automobile Club of Michigan, 1982] Michigan's new drunk driving laws were part of that 1982 legislative effort, going into effect at 12:00 A.M. of March 31, 1983.

Michigan's legislative package seeks primarily to increase arrests and convictions and to decrease the incidence of alcohol-related traffic fatalities and accidents. [Michigan Office of Highway Safety Planning, et al, 1982] The several provisions to accomplish these purposes include: 1) A preliminary breath test to reduce the subjectivity of a police officer's arrest decision;

2) mandatory license sanctions for refusal to submit to alcohol testing; 3) the use of blood alcohol content evidence as per se or conclusive evidence for conviction; 4) clarification of charges; and 5) mandatory license sanctions upon conviction. [Mueller, 1983] This thesis shall examine, among other issues, the pre-law and the post-law arrest, conviction, and accident rates in Grand Traverse County, Michigan. This information will be gathered for the five year period from 1980 through 1984. Additionally, a sample of all persons arrested for drunk driving in the county during that time will be drawn to examine demographics, bail amounts, sentences, and breathalyzer test results. By examining this information, this researcher will attempt to test the success of Michigan's legislative efforts in Grand Traverse County.

The need to positively impact the drunk driving problem becomes obvious when one considers the national fatality rates in alcohol-related traffic accidents. According to the Final Report of the Presidential Commission on Drunk Driving, published in November of 1983, the annual death rate in such accidents is approximately 25,000 nationwide. This figure represents roughly half of all traffic deaths; thus, 50% of all traffic fatalities in this country are caused by or involve drunk drivers. (For purposes of comparison, the FBI's Uniform Crime Reports indicate that the rate of murders is less than the rate of alcohol-related traffic fatalities. During the years from 1978 to 1982,

for example, the annual number of murders fluctuated variously from 19,555 to 23,044.)

The National Highway Traffic Safety Administration (NHTSA) confirms these fatality statistics, noting that the national average number of drunk driving deaths is about 500 per week. [National Highway Traffic Safety Administration, 1981] The NHTSA also estimates that alcohol-related traffic accidents injure approximately 600,000 persons every year in the United States. The NHTSA and the Presidential Commission both assess the annual costs associated with drunk driving accidents as between \$20 to \$25 billion.

The overall trend, both nationally and in Michigan, was an increase in alcohol-related traffic fatalities during the 1970's. This increase was in the number of persons killed, in the numbers of such accidents, and in the percentages of both total killed and total fatal accidents. [National Highway Traffic Safety Administration, 1981; The Presidential Commission, 1983; and the Michigan Department of State Police, 1985] This was part of the reality that prompted the formation of various citizen action groups, such as MADD and RID.

The other part of the problem as perceived by the public and the new lobby groups, was the inability or unwillingness of the justice system to act upon the problem. [Amodei, 1982] There is some support for this proposition. The NHTSA reported in 1981 that only one in two thousand

drunk drivers is arrested for that offense. The Presidential Commission in 1983 estimated one arrest in a range of five hundred to two thousand drunk drivers. The Michigan Policy Report to the Governor determined, in its 1982 legislative recommendations, that one in five hundred drunk drivers gets caught. The report urged that increased arrests be a major priority for the new drunk driving legislation. The Presidential Commission similarly recognized this necessity and recommended the preliminary breath test, the implied consent provision, sobriety check lanes, and streamlined booking procedures as measures to encourage more arrests. The accurate detection and testing of drunk drivers is the prime goal and the key to increasing conviction and penalty risks as well.

According to a Michigan Automobile Club report in 1982, drunk driving cases in Michigan had traditionally been a low arrest priority. For the police officer, this was explained in terms of disincentives to arrest. These disincentives were determined to be: 1) time-consuming paperwork and booking procedures; 2) highly subjective and judgmental detection criteria to use in arrest decisions; 3) inability to admit evidence of blood alcohol content as conclusive proof of intoxication; and 4) the resulting poor conviction probabilities for drunk driving cases. This study shows that Michigan's 24,000 police officers made 55,000 drunk driving arrests in 1981, an average of two arrests per officer. The arrest process could require from

one to three or more hours. Delays jeopardize blood alcohol content (BAC) evidence, as the average person's body burns off alcohol at the rate of one ounce per hour, with a corresponding reduction in the BAC of .01%. A Michigan police officer's decision to arrest a drunk driver was based entirely upon the observations of the suspect's driving ability, behavior and condition. No field tests were available to provide more objective information. Legally, BAC test results could only be used as presumptive evidence of intoxication, to be substantiated by the officer's observations. The Automobile Club also studied conviction rates for the state in 1981. Only 22% of those 55,000 drunk driving arrests actually resulted in a conviction for an unreduced drunk driving charge. Seventy percent of those arrests were settled by plea bargains for reduced charges and reduced penalties. The remaining 8% of the arrests resulted in dismissal of drunk driving charges.

The Presidential Commission on Drunk Driving corroborates this assessment of arrest disincentives on a nationwide scale. To increase conviction risks and rates, the Commission recommended: 1) no plea bargaining; 2) the per se provision; 3) the use of a lesser included charge for those drivers whose BAC is .08% - .09%; and 4) appellate action to ensure that mandatory sentences are used. The Michigan Policy Report to the Governor confirmed the Automobile Club's findings on the arrest and conviction disincentives in drunk driving cases. This Report advised

that the prime goal of Michigan's (proposed) drunk driving legislation should be to reduce fatalities. The recommended means of accomplishing this was to create a situation conducive to the successful arrest and prosecution of drunk drivers.

The Michigan 1982 drunk driving legislation adopts this perspective and seeks to reduce alcohol-related traffic fatalities by increasing arrests and convictions of drunk drivers. The primary purpose of this research shall be to compare the effect of the new legislation upon these three variables. A research question can be stated at this point. In Grand Traverse County, the alcohol-related traffic fatality rate will decrease and the drunk driving arrest and conviction rates will increase in the post-law period. This thesis will additionally explore other research questions, based in part upon the situation in Grand Traverse County. The sample of drunk drivers arrested during the test period will be used to examine these issues.

On February 17, 1984, this writer interviewed Stuart Soule, Magistrate of the 86th District Court and Arnold White, Assistant Prosecutor, both of the county. In discussion of the new law, they confirmed that arrest and conviction rates in the county have increased since April of 1983. They both agreed that the new law has enforcement and prosecution teeth, making arrest and conviction easier to accomplish. It was suggested that other influences, besides the law, could be partially responsible for rate increases. Soule and

White observed further that bail bond amounts have increased and bail bond types have become more restrictive. They asserted that second offense convictions have increased and that plea bargaining, except on third offense charges, has been reduced. They also stated that people being convicted under the new law in the county are being sentenced to the full extent of the new law. Further, they believed that breathalyzer test result averages have decreased as have the test refusal rates. Soule and White asserted additionally that local police officers are more likely now to arrest anyone of drunk driving. They implied that previously, an officer's discretion was influenced by the personal characteristics of the suspect (sex, social standing, etc.) rather than by blood alcohol levels.

The additional research questions are thus as follows:

- 1) What other factors, in Grand Traverse County, may affect arrest, conviction, and accident rates in addition to the new legislation?
- 2) Have bail bond amounts increased in the post-law period?
- 3) Have bail bond types become more restrictive for drunk drivers?
- 4) Have second offense convictions increased?
- 5) Has plea bargaining, except on third offense charges, been reduced?
- 6) Are convicted persons being sentenced to the full extent of the law?
- 7) Have breathalyzer test result averages decreased, a possible result of using the PBT to detect the less visibly impaired driver who passes other field tests?
- 8) Have the test refusal rates decreased, reflecting the possible

deterrent effect of mandatory license sanctions for refusals? 9) Has the demographic profile of the arrested drunk driver become more representative of the county population?

The purpose of this thesis shall be, then, to test whether the avowed intent of Michigan's new drunk driving legislation has been accomplished in Grand Traverse County. The main variables to be tested are the major goals of the new law: the arrest rate, the conviction rate, and the alcohol-related traffic fatality rate. Other enforcement and prosecution variables of local interest will be examined for pre-law and post-law differences.

In Chapter II, the history of various efforts to control the drunk driving problem will be reviewed, including an analysis of Michigan laws. Evaluation research on the effectiveness of these control efforts will be examined, as will the research available on the deterrence of drunk driving.

In Chapter III, the research design will be presented and discussed in depth. The research site and other relevant background information will be considered before the presentation of hypotheses and analysis techniques.

The research finding will be examined in Chapter IV, with an appropriate data analysis and interpretation of results. The final summary of this thesis and research conclusions will be included in the last chapter.

CHAPTER II
LITERATURE REVIEW

Section One: History of Michigan's Drunk Driving Laws

Michigan, like the United States and most other countries, utilizes a legal approach to the control of drunk drivers. This approach is two-pronged; the law seeks to govern access to alcoholic beverages and to prohibit the operation of motor vehicles by intoxicated persons.

Michigan's first drunk driving law was passed in 1917; it basically only prohibited the act, which was punishable by up to \$100 in fines and/or up to 90 days in jail. Evidence of intoxication was qualitative and subjective in nature. A Michigan police officer had to base the arrest decision upon subjective judgments (driving errors, field sobriety tests) of a person's level of intoxication and ability to operate a vehicle. [Ruschmann, 1982]

This situation remained static for 50 years; then in 1967, the concept of implied consent and the use of the breathalyzer were approved in new legislation. [Barber and Fedderson, 1969] A minimum blood alcohol content (BAC) level was set at .15%; in 1970, this BAC level was reduced to the present .10%, a widely recognized standard of intoxication and reduced ability to operate a vehicle. [Dammann, 1972] The implied consent provision is a legal instrument to compel the arrested person to submit to alcohol testing. The new availability of a reliable

testing procedure in the 1960's (the breathalyzer) necessitated such an instrument. This provision states that any person, licensed or unlicensed, operating a motor vehicle in Michigan has therefore implicitly consented to such testing. The penalty for test refusal was a possible three month to two year license suspension, at the option of the Secretary of State. [Ruschmann, 1982] Despite the introduction of alcohol testing procedures, blood alcohol evidence was considered presumptive. Other competent evidence was required to show that consumption of the substance "substantially and materially affected" one's ability to operate the vehicle. [People v Lambert 395 Mich 296 (1975)] Alcohol test results had to be substantiated by an officer's observations of the defendant's behavior, condition, and driving ability. This legislation did not substantially reduce the subjectivity of the police officer's arrest decision.

The 1976 law refined the charge specifications and established a graduated system of sanctions tied to the severity or degree of the charge. Simple "drunk driving" was changed to three degrees of "driving under the influence of liquor" (DUIL), with 2 degrees of a lesser included charge, "driving while impaired" (DWI). The degrees of a particular charge were determined by the number of prior convictions. (Thus, a person charged with DUIL 2nd or DWI 2nd would have a prior conviction for DUIL 1st or DWI 1st.) The BAC for the DUIL charges was set at .10% and at

.08% to .09% for DWI in 1970 and remains unchanged. The basic penalty of a fine and/or up to 90 days in jail was retained for both DUIL 1st and DWI 1st; however, for DUIL 1st, the fine was raised to a range of \$100 - \$500. The new maximum fine for DWI 1st was set at \$300. The sanctions for second offenses of both DUIL and DWI were set to be no more than a \$1000 fine and/or up to one year in jail. The third degree of DUIL was classified as a felony, punishable by a \$500 - \$5000 fine and/or one to five years in jail. Most importantly, license sanctions were added to the penalty structure. For conviction of any degree of DUIL, the law required the suspension of the driver's license, for up to two years, and the addition of six penalty points to the driver's record. A penalty of four points was required upon conviction of any DWI offense. [MCL 257.625]

Michigan's 1967 drunk driving legislation made use of legal concepts utilized by other states for years.

[Ruschmann, 1982] The blood and urine tests for alcohol were developed in the 1920's. During the 1940's, such tests were accepted legally and a minimum BAC level of .15% was widely used as a standard to measure intoxication. By the mid-1950's, many states found it necessary to find a way to compel drivers to submit to alcohol testing, as such refusals often led to conflict with police officers. The concept of implied consent was introduced, with license sanctions for refusals, and became widely used throughout the United States in the next 15 years. During this time,

the BAC level was reduced to .10% as a new minimum standard of driving impairment [Ruschmann, 1982]

These legislative innovations were borrowed from the European effort to control drunk driving, as were the concepts that marked the next step in the development of effective American drunk driving laws. [Ross, 1981] European laws have traditionally been more stringent than American drunk driving laws, especially Swedish and Norwegian laws. Chemical test procedures and refusal penalties, supported by implied consent provisions, derive directly from pre-World War II Scandinavian legislation. In the mid-1970's, the per se concept was adopted from the 1936 Swedish legislation and is currently in use by most states. The preliminary breath test (PBT) was also developed in Europe and now provides American police with reliable BAC information to use in their arrest decisions. [Ross 1981; Ruschmann, 1982] Additionally, the Scandinavian effort to control drunk driving has consistently included mandatory license sanctions, based on the classical idea that punishment should involve deprivation. [Ross, 1981] A study done in California in 1978 [Hagen, 1978] discovered that mandatory license suspension was significantly effective in reducing the number of subsequent drunk driving convictions and of personal injury and fatal accidents for affected offenders. "The reported mean frequencies of convictions or crashes for the drivers who did not receive

mandatory license suspension/revocation were a minimum of 30% greater than those for the suspended drivers."

[Hagen, 1978, p.118]

The latest series of American drunk driving legislation incorporates the per se charge, the PBT, and mandatory license penalties from the European model. Michigan's latest drunk driving law revisions includes all three conditions. The 1982 law establishes that operating a vehicle while having a BAC of .10% or more is per se, by itself, a violation of the law. The per se provision does not make a presumption about driving ability, but simply makes it illegal to operate a vehicle with a certain blood alcohol level. In order to obtain a conviction, it is not necessary to prove actual driving impairment nor to produce behavioral, and therefore subjective, evidence of intoxication. [MCL 257.625(2)] The intention of this provision is to increase the likelihood of conviction by increasing the objectivity of admissible evidence. The per se provision is essentially a new, separate and distinct charge, punishable in the same manner as the basic drunk driving charge. The new law also changed the legal status of BAC evidence obtained through standard tests. This evidence is now admissible as conclusive evidence of intoxication.

This 1982 legislation also authorizes the use of the preliminary breath test (PBT), a portable breathalyzer. The PBT is intended to decrease the subjectivity of an officer's arrest decision by providing reliable BAC information. In

Michigan, PBT results are not admissible as evidence in Court at this time, but can be used to support the legality of the arrest. Refusal to take the PBT is a civil infraction punishable by a fine of up to \$100.

[MCL 257.625h] The PBT's reliability has been tested by the U. S. Department of Transportation in Hennepin County, Minnesota with highly satisfactory results. [Bradel, 1981] Only 12% of the PBT results were discovered to be erroneous, resulting in dismissal of charges. One-third of these false-positives were due to a nonfunctioning PBT unit, underscoring the need for proper maintenance. Thus, only 8% of the tests were in error due to the usual reasons of alcohol in the mouth (mouthwash, certain medicines) or improperly administered tests. The usefulness of the PBT was also tested in this Minnesota study. After introduction of the PBT, arrests in the first year rose by 62%. One interesting observation made in the study concerned officers' comments about certain drivers who failed the PBT (had a BAC of .10% or more). The officers stated that many of those persons did not appear intoxicated, so they were "frequently surprised when a suspect failed the PBT." Many of the drivers in this group had very high BAC levels, defined as .18% - .20%. Part of the study included a comparison of PBT results and field sobriety test results, which showed that 62% of the drivers who failed the PBT had passed the field sobriety tests. [Bradel, 1981] Studies done with the PBT in Nebraska, Alabama, New York and South

Dakota indicate the same findings. The arrest rate increased and the average BAC decreased, demonstrating how erroneous subjective judgments of intoxication can be. [National Highway Traffic Safety Administration, 1982] Supported by this type of evidence, the PBT is now seen as a reliable and useful tool in drunk driving law enforcement. The new Michigan legislation authorizes the PBT as a means of increasing drunk driving arrests.

Another major change in Michigan's new drunk driving laws involves the use of mandatory license sanctions. The law specifies, via the implied consent provision, that refusal to take any evidential alcohol test (urine, breath, or blood) will automatically result in a six month license suspension and the addition of 6 penalty points to the offender's driving record. In the event of a refusal, a Court order must be obtained in order to conduct any evidential test. [MCL 257.625d] Regardless of the outcome of such tests, the penalty for test refusal remains, although the penalty points are not accumulative upon conviction of drunk driving. Subsequent test refusals in separate incidents are punishable by a one year license suspension and 6 additional points. If two or more refusals occur within seven years, a restricted license is not available. (Under Michigan law, a person whose driver's license has been suspended can still obtain restricted driving privileges, i.e., to and from work or school only. When a license is revoked, all driving privileges are denied.) [MCL 257.625a]

The license penalties for conviction on a drunk driving charge are increased in the new law. Penalty points to be assessed to driving records are continued as in the old law, but the law now requires a minimum period of license suspension (or revocation) and sets new maximums as well. Michigan law now recognizes three basic drunk driving charges, with three degrees for each charge representing the number of prior offenses: unlawful blood alcohol level or per se (UBAL), operating under the influence of liquor (OUIL), and, OUIL's lesser included charge, operating while impaired (OWI). (The UBAL and OUIL charges are identical in all respects except evidentiary requirements; the per se provision simply makes it illegal to operate a vehicle with a BAC of .10% or more. The OUIL charge still requires additional evidence of impairment.) A first conviction of OUIL or UBAL requires a license suspension of at least six months and no more than two per year; an OWI 1st requires a ninety day to a one year suspension. A second conviction of OUIL or UBAL within seven years of a prior offense carries a minimum one year license revocation as penalty. A person who has two or more OUIL and/or UBAL convictions within seven years is defined as an habitual offender and under the new law can be denied reinstatement of the driver's license. The third degree of OUIL (and UBAL) is still a felony and requires a five year minimum license revocation. For a second conviction of the lesser charge of OWI, the license penalty

is a six to eighteen month suspension; the law requires a one year minimum license revocation for the third OWI conviction. A person who has three OWI convictions within seven years also risks being denied license reinstatement. This final threat, of never regaining a new license, is equivalent to a permanent loss of driving privileges and is intended as a deterrent. [MCL 257.625; MCL 257.625b; MCL 257.303(1)(e); MCL 257.625(2)]

All other non-administrative penalties (fines and jail time) remained essentially the same for all charge variations. In the 1982 law, all convicted drunk drivers are responsible for any and all costs associated with prosecution and treatment, as was also true in the previous law. Costs under the 1982 legislation include, however, more than the traditional Court costs. The new law mandates a substance abuse screening and assessment process, to be paid for by the offender. For all charges, the Court has the discretion to order alcohol education and/or treatment, the costs to be the responsibility of the offender. An additional penalty of twelve community service days (96 hours) is allowed for all charges; the offender bears the costs of donating that time, transportation, and other out-of-pocket expenses. [MCL 257.625] Reinstatement of a driver's license is not automatic, but must be applied for; the law now exacts a \$25 fee and demands a re-examination as part of that application. [MCL 257.320]

Section Two: A Review of Drunk Driving Control Efforts

Early History

In the earliest years of automobile use in the United States, the problem of drinking drivers was apparent almost immediately. Although records indicating alcohol involvement in fatal traffic accidents were infrequently maintained, the phenomenon was noted at least as early as 1904. That report, as documented by the American Automobile Association, noted that of 25 recent fatal car accidents, 19 of the drivers had been drinking prior to the accident. Public concern about this problem led to the earliest statutory prohibitions of drinking and driving, during the 1910's. These initial laws basically criminalized drunk driving, making this misdemeanor behavior punishable by fines and jail time. Various types of field sobriety tests, driving errors, and driver behavior provided the only evidence for arrest and conviction.

[Ruschman, 1982]

Development of Impairment Testing Procedures and Evidentiary Provisions

Chemical testing of blood and urine for the presence of alcohol was introduced in the late 1930's in the United States, and became widely used to provide legal evidence of intoxication during the 1940's. It was, however, difficult to compel drivers to submit to the tests and test results alone were not legally sufficient to convict.

It was necessary for the arresting officer to corroborate test results, or to substantiate the charges if the tests were refused. [Ruschman, 1982]. This problem was partially solved in the mid-1950's by the introduction of implied consent provisions, adopted from Scandinavian drunk driving legislation. New York authorized an implied consent provision in 1953; by 1971, all states, the District of Columbia, Puerto Rico, and the Virgin Islands had such provisions. [National Highway Traffic Safety Administration, 1981] These legal provisions stipulate that licensed car drivers, by virtue of applying for and accepting an operator's license, have therefore implicitly consented to alcohol testing. [Ross, 1981] Most United States legislation which utilized this concept also mandated license sanctions for test refusals. The first legal minimum standards for intoxication, based upon measurable blood alcohol concentrations, were established in the 1950's as well. [Ruschman, 1982]

Mandated chemical testing, implied consent provisions, license penalties for test refusals, and minimum standards of intoxication are all legal countermeasures borrowed directly from 1936 Norwegian and 1941 Swedish legislation. [Ross, 1981] These provisions are intended to create a situation of arrest and conviction certainty, a necessary deterrence element. (Ross claims that these innovative and widely-copied laws were based upon temperance ideals rather than any special problems or insights to solutions.)

Imprisonment, fines, and license revocations also characterize the Scandinavian model, as severity of punishment is viewed as essential for deterrence effectiveness. [Ross, 1981]

The development of chemical testing procedures led to research on the association between alcohol consumption and reduced ability to operate a motor vehicle. This correlation was first confirmed in the late 1930's by Scandinavian researchers. [Ross, 1981] Evidence was obtained from laboratory studies which clearly demonstrated that alcohol consumption negatively affected those motor skills and information-processing abilities necessary to driving. After the development of the breathalyzer in the middle 1950's, and its acceptance as a testing tool in the 1960's in the U.S., this research was continued and expanded. [Loomis, 1974] During the late 1960's and the early 1970's, legal standards of intoxication were lowered, generally to .10% blood alcohol concentrations, to conform with these research findings. [National Highway Traffic Safety Administration, 1981]

A review of the literature about impairment of driving skills caused by alcohol consumption shows consistent research results over the years. This latest series of testing included work done in Europe and the United States, some of the latter with the support and funding of the Federal government. Three studies which specifically tested the correlation between alcohol consumption and reduced ability to operate a motor vehicle are represent-

ative of this latest body of work. The first of these representative studies was conducted in Finland and demonstrated that alcohol, as well as a variety of other drugs, has an adverse effect upon information processing ability. [Linnoila, 1974] It is suggested the time lapse between a stimulus and a response, the reaction time of a driver, is extended by the use of alcohol. Thus, a drunk driver's actions in response to a driving problem are at least slowed and possibly impaired. This study confirms this hypothesis through simulated driving tests under laboratory circumstances.

An American study tested motor skills and reaction times of drivers in both laboratory and field conditions. [Zwahlen, 1976] In both situations, subjects were tested first under a no-alcohol condition and then with a .10% blood alcohol concentration. Blood alcohol concentrations were measured with breathalyzers. For all subjects, there were marked differences in reaction times and driving performances between the no-alcohol conditions and the alcohol consumption conditions. The study concludes that even a moderate blood alcohol concentration (.10%) negatively affects driving skills.

A more recent study done in Canada concentrated primarily on field test conditions. [Attwood, Williams, and Madill, 1980] The test subjects were administered calculated amounts of alcohol in order to produce blood alcohol concentrations of .04%, .08%, and .10%. The subjects performed a variety of driving tasks on a closed-course

several different times while under the influence of alcohol at each separate blood alcohol concentration. As a basis for comparison, subjects were also tested while sober. Blood alcohol concentrations were measured with breathalyzers. Driving skills were measured on a multivariate basis, including velocity maintenance and keeping a safe distance from a lead car. For these two tasks in particular, there were significant measurable differences between driving performances when sober and when under the influence of alcohol.

The results of these and other studies have been used to support ever-stricter legislation intended to control the drunk driver. In particular, per se provisions and preliminary breath testers have been adopted throughout the United States during the 1970's and the early 1980's. Per se provisions define the operation of a motor vehicle by a person with a specified blood alcohol level as an offense in and of itself. It is the presence of alcohol in the blood at certain levels, while driving, that constitutes the drunk driving offense. Thus, it is not necessary to prove in court that the driver was impaired. This new offense was created on the basis of the body of research demonstrating a correlation between alcohol consumption and impaired driving skills. Currently, more than half of the states utilize this provision. [National Highway Traffic Safety Administration, 1981] The preliminary breath tester was developed as a tool to provide more reliable field evidence of intoxication, thus enabling the arresting officer to

make more objective arrest decisions. [Ruschman, 1982]

Recent History

Most of the legal provisions and tools, as well as much of the research, have been enacted at the prompting of citizen and business groups. The highway death toll attributable to drunk drivers has been the prime cause of this private influence. Since 1970, approximately 25,000 traffic accident deaths every year have been ascribed to drunk drivers. [The Presidential Commission, 1983]

Currently, one of the best known citizen action groups is Mothers Against Drunk Drivers (MADD). MADD was founded by Candy Lightner after her daughter was killed by a drunk driver in 1980. The offender in this case had a record of multiple arrests and convictions for drunk driving; he was, in fact, out on bail at the time of the accident for another drunk driving accident. After some investigation, Lightner concluded that the California law and criminal justice system had been ineffective in controlling the drunk driver. As a result, she organized MADD as a lobby group to change drunk driving laws to facilitate arrest and conviction and to promote stricter punishment. Since early 1981, MADD has received nation-wide attention and support, with chapters established in every state. [Amodei, 1982] MADD, and other similar organizations, have been credited with influencing new legislation on drunk driving in many states. The major impact, according to Amodei, has been to alter the penalty

structures so that drunk drivers are punished for their often very serious crimes. Currently almost every state allows incarceration and punitive license sanctions for first convictions. [National Highway Traffic Safety Administration, 1981]

The early 1980's in the United States has been a period of major activity in the revision of states' drunk driving statutes. In 1982, almost half of the states responded to this social problem by changing the laws and penalties concerning drunk driving. By 1985, almost all states had done so. Most of this new legislation also includes provisions for the education and treatment of convicted drunk drivers. A review of some states' control efforts is in order at this point.

A Review of Recent Legislation

California enacted new drunk driving legislation, effective January 1, 1982. [Craig, 1982] The primary changes included: mandatory fines and either jail or loss of license for first offenders; an upgrading of blood alcohol evidence from presumptive to absolute evidence of intoxication; and a provision to record all drunk driving charges, even if reduced or dismissed, in order that subsequent arrests will be treated as second offenses. California has also utilized extensive publicity campaigns to discourage the public from drinking and driving and to encourage people to intervene when friends drive drunk. The California Highway Patrol has aggressively

participated in these campaigns, with the specific intent of increasing the perceived risk of arrest. A study by the California Business, Transportation and Housing Agency showed that alcohol related traffic accidents, especially fatal accidents, decreased markedly after the new law took effect. [Mothers Against Drunk Drivers, 1984]

Maryland passed new drunk driving laws in 1981, which introduced the preliminary breath tester, changed an express consent provision to an implied consent, reduced the blood alcohol standard to .08% for driving under the influence, and mandated treatment programs for convicted offenders. [National Highway Traffic Safety Administration, 1981] The Maryland State Police instituted a program in 1981 to reduce arrest disincentives among their officers. These counter-measures included streamlining arrest and test procedures, giving official recognition and approval to arresting officers, and targeting high accident areas for special enforcement attention. In a report by two top officials in the Maryland State Police, this program has been successful. [Clark and Rockel, 1982] Drunk driving arrests by the State Police increased in 1981 by 96.8% over 1980 (6,202 to 12,208) and, beginning in mid-1981, reductions in alcohol-related traffic fatalities were recorded. This demonstrated success, coupled with the new law provisions and the preliminary breath tester, has prompted the continuance of this program. In 1981, the use of sobriety check points was introduced on an experimental basis in specifically targeted,

high-accident areas. The State Police conducted the experiment on a 90-day basis and compared accident rates in the target areas with the prior history of the areas and with other high-accident, non-checkpoint areas. This comparison revealed that sobriety checkpoints had a positive impact on alcohol-related traffic accidents.

[Rockel, 1984]

New York similarly enacted new drunk driving legislation in 1981. [Passidomo and McEwen, 1984] Among other measures, the new law established mandatory minimum fines for convictions of a drunk driving offense. The lesser offense of driving while impaired, a per se offense measured by blood alcohol levels from .05% to .09%, has a minimum fine of \$250.00. Driving while intoxicated, another per se offense measured by blood alcohol levels of .10% or more, has a minimum fine of \$350.00. The unique feature of this legislation was that these fines did not go into state coffers, but were instead diverted to the county in which the conviction occurred. These monies were then utilized to fund efforts in the county to arrest, convict, punish, and treat offenders and to conduct public education and information programs. In 1982, over \$7 million were so directed to county use; in 1982, the amount of money so used increased to over \$10 million. At the same time, New York conducted a state-wide publicity campaign to discourage drunk driving. Since the implementation of these various measures, reductions in alcohol-related traffic fatalities

and injuries and increases in arrests have been recorded in 1982 and 1983.

Ohio has instituted training programs in alcohol testing procedures for law enforcement personnel. This has been accompanied by a publicity campaign about the social price in dollars and lives attached to drunk driving and by an aggressive law enforcement effort. [Whaley, 1982]

The Missouri State Highway Patrol has implemented a selective traffic enforcement program aimed at the drunk driver. Directed patrol in high accident areas was the basis of this effort. [Carso and Hoffman, 1984]

Summary

A wide variety of techniques are being tested nationwide to discover the most effective at controlling the drunk driver. These efforts are primarily intended to increase arrest and conviction risks, as well as to accomplish punishment, deterrence, and rehabilitation of the drunk driver. Law enforcement and prosecution efforts include: sobriety checkpoints; directed patrol in targeted areas; summary license suspension upon arrest; training in drunk driving detection and in alcohol testing procedures; videotaping of arrested drunk drivers; special grant monies for drunk driving enforcement; and methods of streamlining arrest and testing procedures. A similarly wide variety of endeavors are being instituted in the attempt to punish, deter, and treat the drunk driver. These efforts include:

mandatory jail time, fines, and license suspensions; bumper stickers and other methods of identifying drunk drivers to the public; publishing the names of convicted drunk drivers in newspapers; encouraging bars and taverns to eliminate happy hours, two-for-one prices on alcohol drinks, and pitchers; new civil liability laws which hold bartenders and party hosts responsible for serving drunks; publicity campaigns to alert the public to the risks of arrest and punishment and to educate people about the effects of alcohol; training bartenders to recognize intoxication; and programs to screen and identify problem drinkers and to provide alcohol treatment services. The effectiveness of these control techniques will be discussed in a subsequent portion of this paper.

The Federal government has been an active participant in the effort to control the drunk driving problem in the United States. The Department of Transportation, and its agency, the National Highway Traffic Safety Administration (NHTSA) has directed most of this work. These agencies have assisted in the implementation and funding of many of the law enforcement and prosecution programs intended to increase arrests and convictions. The NHTSA, however, identifies the underlying problem to be not one of law enforcement and prosecution effectiveness nor of punishment and treatment effectiveness. [Steed, 1984] The Presidential Commission on Drunk Driving supports this position and states that tacit social approval of drinking

is the true root of the problem. The Commission, in its final report published in November of 1983, blames social values and attitudes about the irresponsible use of alcohol and society's refusal to treat drunk driving as a serious problem. The Commission recognizes that, historically, the low likelihood of detection, arrest, conviction, and punishment has at least contributed to this problem.

"An even more pervasive problem is the social acceptability of intoxication and drunk driving. In a society where mass transportation is underdeveloped and underutilized, the person who drinks at a party or commercial establishment will most likely be a driver or passenger in an automobile. Americans are uncomfortable with those who overdrink, but by and large do not feel it is their responsibility - or even their right - to prevent intoxication among the members of their own social circles. In addition, Americans have a long tradition of laughing at 'funny drunks' in the movies, on the stage, and in their own social circles - constituting a tacit, albeit uncomfortable, societal OK to drunkenness. The combination of social acceptance of intoxication and the omnipresence of the individual passenger car adds up to the continued social acceptability of drunk driving."

[The Presidential Commission on Drunk Driving,
1983, p. 1]

The main issue, as far as controlling and solving the drunk driving problem, is then general deterrence. The NHTSA identifies this as the primary goal, to be accomplished by long-term public education and the coordination of criminal justice system efforts. [Steed, 1984] The issue of general deterrence is a complicated one and shall be discussed in depth in a subsequent portion of this paper.

Section Three: Effectiveness of Drunk Driving Control Efforts

In recent years, public and legislative attention has been given to improving justice system attempts at controlling the drunk driver. These efforts have been mostly directed at increasing the risks of arrest and conviction, at reducing alcohol-related traffic accidents, and at correcting the offender. Thus, the usual measures of the success of drunk driving laws have been arrest, conviction, accident, and recidivism rates. Most recent state legislation has also recognized the necessity of long-term efforts toward general deterrence. In the legislative policy proposal to the Michigan governor, the need for a long-range perspective was specified. [Michigan Office of Highway Safety Planning, et al, 1982] This report identified enforcement and judicial actions as necessary but of limited use on a long-term basis. Nonetheless, prevention and deterrence are sustained and achieved through enforcement and judicial action.

Law Enforcement Efforts

Much of the recent legislative action, in Michigan and nationwide, has been designed to increase the risks of apprehension. This has been identified as a prime goal by the Presidential Commission on Drunk Driving, the National Highway Traffic Safety Administration (NHTSA),

and various state task forces on drunk driving, including Michigan. The risk of being detected and arrested has historically been slight for drunk drivers. A study conducted by the Kansas City Alcohol Safety Action Project with grant monies from the NHTSA found that only one in two thousand drunk drivers is detected and arrested. [Beitel, Sharp, and Glauz, 1975] These findings have subsequently been confirmed by the Presidential Commission in 1983. The Michigan Policy Report, proposing certain legislative actions, estimated that one in five hundred drunk drivers is arrested. The variance in numbers, however, does not detract from the basic fact that considerably less than 1% of drunk drivers are caught. At best (one in five hundred), the apprehension rate is .2% and could be as low as .05% (one in two thousand).

The effectiveness of traditional drunk driving detection and arrest procedures has been seriously questioned in other aspects as well. The Michigan Policy Report and the Presidential Commission both specifically targeted law enforcement procedures as in need of improvement. The problem is seen as one of disincentives to arrest. In a study conducted with New Zealand police officers, where drunk driving laws are modeled upon Scandinavian law, found officers reluctant to administer alcohol tests to suspected drunk drivers. [Hurst, 1980] This reluctance was variously attributed, by the officers, to: a lack of evidence to justify testing;

a belief that the driver was probably not legally impaired; a perception of testing equipment unreliability; and lengthy paperwork and processing time. This general situation has been confirmed by research in the United States. Additionally, American police officers cite plea bargaining, low conviction probabilities, and lax sentencing as influential in their decisions not to test and arrest suspected drunk drivers. [The Presidential Commission, 1983; the Michigan Office of Highway Safety Planning, et al, 1982]

The major disincentives for police officers in drunk driving cases can thus be summarized as: detection and identification uncertainties; lack of confidence in alcohol testing procedures; lengthy processing times; and low conviction probabilities. In light of this information, the low apprehension rate, .05% to .2%, becomes comprehensible. The drunk driving case has been assigned a low priority by police officers because it is time consuming, difficult to prove, and likely to be handled indifferently and inadequately by the system. [Beitel, Sharp, and Glauz, 1975; the Michigan Office of Highway Safety Planning, et al, 1982]

In the preparation of drunk driving law reforms, these problems have been studied and a variety of solutions proposed. The detection and identification issue was addressed in a research project sponsored by the NHTSA. [Harris, 1980] The goal was to develop a practical guide for

officers to use in recognizing drunk drivers. The data were gathered from drunk driving arrest reports (1288 reports from nine police agencies in the U. S.) and from direct observations of drunk driving arrests (643 arrests in two states). From both sources, over 5300 visual detection cues were identified. Based upon frequency distributions, these detection cues were combined and compressed to a set of 23 items. As cues could be correlated to the blood alcohol level of arrested drivers, these 23 items were ranked according to the frequency of occurrence. Thus, as an example, 70% of detected drunk drivers were observed to make a stop in traffic for no apparent reason. This visual cue was assigned, therefore, a probability value of 70% for drivers with a blood alcohol level of .10%. Probability values increase in proportion to higher blood alcohol levels; the detection of 2 or more visual cues also increases the probability that the driver has an illegal blood alcohol level. Methods for calculating these rates were included on the cue list. The list was printed on a wallet size card, with an accompanying explanation on use. [The NHTSA has adopted this guide and now provides an explanatory film as part of the total training package.] This guide was field tested by 10 American police agencies, with a variety of patrol procedures, over a 3 month period. The results were compared with a control time period for each department. The researchers concluded after field testing

that the cue list and cue probability values had been accurately identified. The utility of the guide was also verified, as an overall increase of 12% was recorded in drunk driving arrests during the testing period.

In 1982 after Michigan's new drunk driving laws were enacted, the Prosecuting Attorneys Association of Michigan prepared a manual for law enforcement and prosecution use. The manual was designed to describe the new law and new detection and testing procedures and to recommend certain case preparation and trial tactics. The chapter on detection procedures was intended as training material for police officers. A total of 445 individual cues are presented; these cues identify vehicle maneuver errors and appearance and behavior indicators indicative of drunk drivers. (Vehicle maneuver errors include: weaving, failure to stop, loss of control, or improper turns. Appearance indicators may be: dilated pupils, disarranged clothing or vomitus on clothing. Behavior signs include: slurred speech, impaired coordination, hostility, hiccupping, vomiting, dizziness, or impaired memory.) This information was obtained from police officers in Michigan and other states, police research literature, and alcoholism treatment staff. The effectiveness of these particular detection procedures has not been tested, but the procedures were based upon such studies as the Harris report.

[Prosecuting Attorneys Association of Michigan, 1983]

The accurate detection of the drunk driver is only

the first step towards effective enforcement of the drunk driving laws. A police officer must be able to assess the degree of a driver's intoxication, both to make an arrest decision and to prove the charges in court. A variety of testing procedures have been developed over the years to substantiate drunk driving charges.

The Michigan Drunk Driving Manual discussed the use of field sobriety tests. [Prosecuting Attorneys Association of Michigan, 1983] These tests have been used in one form or another, by American police since the 1910's. These subjective procedures were the sole tests available until chemical tests for alcohol were developed. (Blood and urine tests were created in the late 1930's and the breath test in the middle 1950's.) Yet these chemical tests could not be conducted in the field and were only used to provide evidence for court. The officer in the field had to rely upon driving and behavior cues and upon sobriety tests for the arrest decision.

The field tests offered in the Michigan manual are fairly standardized and widely used in the United States. [Prosecuting Attorneys Association of Michigan, 1983] Such tests are designed to check more than physical dexterity or coordination. The officer can make observations of the suspected drunk driver's ability to comprehend and follow the instructions of the test. During performance of the test, one's ability to concentrate on two or more actions at the same time or to

remember a series of actions can be assessed. Balance, memory, distance perception, and ability to recognize errors are other factors about which tests can provide information to the officer. The test battery consists of variations on the following: 1) walking heel-to-toe in a straight line; 2) standing with head tilted back and with eyes closed; 3) touching finger-to-nose with eyes closed; 4) standing on one foot; and 5) reciting the alphabet.

The Los Angeles Police Department (LAPD) conducted a training program for its officers in which a variety of field sobriety tests were taught or reviewed. [Studdard, 1984] The program's test battery has seven procedures. Four of the tests are variations on the first four tests described above. Another test is designed for use in detecting drug use other than alcohol; the officers take the pulse of the driver. (Use of depressant drugs slows the pulse; amphetamines, PCP, and marijuana cause an increase in the pulse rate.) The last two tests are used to identify alcohol and certain other drug use. The "gaze nystagmus" test involves measurement of the involuntary jerking of the eyeball when one looks sideways. Alcohol, PCP, and barbituates cause these involuntary movements. The last test checks pupil size and reaction to light; constriction or dilation of pupil or slowed reactions may indicate use of heroin, amphetamines, alcohol or barbituates. The test battery was based upon NHTSA studies and field

officers' experiences. The program emphasized a standardized administration of the tests and the use of a test evaluation form. An in-house evaluation report states that drunk (and drugged) driving arrests have increased since the training program. Additionally, trained officers were found to be spending less time in court and had fewer of their cases contested.

The cities of Largo and Clearwater, Florida combined resources and established an anti-drunk driving campaign based on increased enforcement and media publicity. The program was funded by the Florida Bureau of Highway Safety and the NHTSA. [Vaughn and Klein, 1984] As in the Michigan manual and the Los Angeles program, officer training in detection and testing procedures was the key factor. Officers were taught detection cues and their probability values for prediction of intoxication, in the manner of the Harris study discussed above. Training was given in the use of the basic five field sobriety tests and the gaze nystagmus test; a standard evaluation form was used in each testing incident, as in the LAPD program. (Breathalyzers were used to obtain evidence of blood alcohol content; but also, interestingly, videotaping of sobriety tests was done.) Other features of this anti-drunk driving campaign were: directed patrol in high accident areas, sobriety checkpoints, reduced paperwork, and new breathalyzer locations. The program's goals were to reduce alcohol-related traffic accidents by 20% and to increase drunk driving arrests by 25%. This enforcement effort began

September 29, 1983; the chiefs of the Largo and Clearwater police made a preliminary report in July, 1984. The chiefs reported early success; arrests had increased by more than the goal of 25% and accidents appeared to be decreasing. (No statistics were offered in this article.) Interestingly, two neighboring cities have joined the Largo-Clearwater partnership since its inception. [Vaughn and Klein, 1984] At this time, there appears to be no way to measure the impact of the individual features of this campaign; a formal evaluation report on the program's first year is anticipated.

The most objective field sobriety test currently available is the preliminary breath test (PBT), a portable breathalyzer. The PBT was developed in the early 1970's as a tool to provide reliable evidence of driver intoxication. Both the Michigan Policy Report and the Presidential Commission recommend its use for arrest decisions, primarily; both also suggest that PBT results should be used as evidence in court. The PBT has been widely accepted as an arrest tool, but very few jurisdictions will yet accept PBT results at trial. The reliability of the PBT has been tested by the NHTSA and independently. [Bradel, 1981] The most interesting finding of Bradel's study was that the PBT was useful in identifying legally drunk drivers who had managed to pass more subjective field tests. The utility of such a tool for police officers is evident. In Bradel's report, the only problems with the PBT were maintenance and improperly

administered tests. Michigan now mandates monthly inspections and control tests of the PBT; PBT operators must be trained, examined, and certified. [Michigan Administrative Code, 1979 as amended 1984] Thus properly used and maintained, the PBT can be a useful and effective law enforcement tool.

Another suggested technique for improving the detection and identification of drunk drivers is the sobriety checkpoint. This involves the use of strategically located roadblocks in areas with a high incidence of alcohol-related driving problems. This allows a police officer to make observations of vehicle maneuvering, driver appearance and behavior, and other visible signs of intoxication. The use of checkpoints, but not the times or locations, is usually well publicized. The purpose of checkpoints is more than just catching drunk drivers; these are intended to deter people by increasing the perception of arrest risks. The Presidential Commission recommends checkpoint use, with guidelines; the Michigan Policy Report states that checkpoint use should be decided locally.

Several police departments nation-wide have experimented with sobriety checkpoints. The Maryland State Police initiated an anti-drunk driving campaign in late 1982 that included checkpoints. A few Maryland police departments had used checkpoints successfully

during 1981 and 1982; based on this experience, the State Police program was approved. [Rockel, 1984] The pilot test consisted of a series of time and location targeted checkpoints, conducted during a ninety-day period. Motorists were stopped, observed, and either arrested or polled as to their opinion of the checkpoints. The State Police reported three findings of interest: 1) the public responding to the poll overwhelmingly approved (86%) of the checkpoints and thought they would be successful deterrents (92%); 2) although the data were scanty, alcohol-related traffic accidents appeared to decrease in checkpoint areas; and 3) about .4% of the motorists stopped at checkpoints were arrested for drunk driving. Based on this success, the Maryland governor approved the use of sobriety checkpoints. The constitutionality of checkpoints was disputed, but unresolved, in the Maryland lower courts. Recently, however, the Maryland Court of Appeals approved checkpoints as a minimal intrusion balanced against the state's interest in preventing drunk driving. [Michigan Association of Chiefs of Police, 1985]

The Arizona Highway Patrol has utilized sobriety checkpoints since mid-1982. At that time, Arizona had enacted new drunk driving legislation, aimed particularly at increasing penalties and reducing plea bargains. [Deitch and Thompson, 1984] The Highway Patrol had also been concentrating on the drunk driver problem and had succeeded in increasing arrests. The alcohol-related

traffic accident rate, however, had remained constant, despite extra enforcement attention. Highway Patrol officials decided to try a more proactive technique that also had deterrent value: the sobriety checkpoint. Labor Day weekend was chosen for a pilot experiment. As the police hoped to reduce alcohol-related accidents by deterring drunk driving, the roadblock plan was well-publicized. Exact locations were not revealed; but the public was informed that roadblocks would be placed on well-traveled roads and near recreation areas. The Patrol officials declared this experiment to be successful; all accidents were down 26%, alcohol-related accidents were reduced by 42%, and no traffic fatalities occurred. Subsequently, local Patrol commanders began using checkpoints. In one case, randomly placed sobriety checkpoint produced 71 license and registration citations and 33 repair tickets, but only 11 drunk driving arrests. Legal challenges arising from this case led to an Arizona Supreme Court decision on the use of sobriety checkpoints. The Court disapproved of the random placement and the broad, intrusive nature of the roadblock. The Court did, however, approve the sobriety checkpoint concept if the locations were based upon a statistical analysis of accidents and other drunk driving problems. The Court additionally said such roadblocks must be established so as to be minimally intrusive upon the public. Guidelines for the planning and operation of sobriety checkpoints were prepared by the

Arizona attorney general. The Highway Patrol then identified five high-accident locations and planned to deploy roadblocks there for the Christmas and New Year's week-ends of 1983. This campaign was widely publicized, especially for the New Year's weekend. As compared with the 1982 holidays, traffic accidents were reduced considerably in the high accident areas. At Christmas, all accidents declined 37%, alcohol-related accidents were reduced by 12%, and there were no fatal accidents. The New Year's week-end was even better; total accidents were down 60%, alcohol-related accidents declined 66%, and no traffic fatalities occurred. This success has ensured the continuation of the Arizona checkpoint program. Fourteen additional target sites were identified for 1984 and plans were made to operate roadblocks on various holidays and at other times. As in the Maryland experiment, about .4% of the motorists stopped at the Arizona roadblocks were subsequently arrested for drunk driving. This low arrest rate is double the usual apprehension rate, indicating the utility of checkpoints for detection purposes. Certainly, sobriety checkpoints seem useful in reducing traffic accidents, especially alcohol-related accidents. As such, it would appear checkpoints are an effective anti-drunk driving enforcement technique.

Another disincentive for police officers to arrest drunk drivers concerns alcohol testing procedures and equipment. In both Beitel's and Hurst's studies, [Hurst,

1980; Beitel, 1981], police indicated a general lack of confidence in alcohol tests. Traditionally, the lack of reliable evidence has led to a police officer perception that drunk driving cases are bargained or dismissed. There are several reasons for this situation. Reliable breath-lyzers have been available for police use since the mid-1950's. Yet breathalyzers are expensive and delicately tuned mechanisms, which are often scarce, malfunctioning, or unattended by a qualified operator. The NHTSA, through the 1970's and the 1980's, has been assisting police departments to buy replacement or first breathalyzers. [National Highway Traffic Safety Administration, 1984;] Smith and Wesson Company, the main supplier of the machines, has improved the design and technology. The NHTSA developed performance standards, adopted in full by Michigan [Michigan Administrative Code, 1979 as amended 1984], which provide for the inspection, control testing for accuracy, and certification of the breathalyzer. The NHTSA urged that breathalyzer operators be trained, tested, certified, and periodically retested. It was also recommended that departments train sufficient personnel to ensure a qualified operator would always be present. The purpose of these machine and personnel standards is to instill confidence in their performance and to render alcohol testing available and inevitable. No evaluative work on these methods has been done, however. [Prosecuting Attorneys Association of Michigan, 1983]

There are other reasons why the police may believe drunk driving cases are hard to prove, and may therefore be disinclined to arrest. Implied consent provisions in the U. S. were introduced in the mid-1950's and were universal by 1971. Yet, many states provided no penalties for test refusals or routinely suspended such penalties when the case was later bargained. The Presidential Commission recommended immediate, severe, and mandatory license penalties be exacted for alcohol test refusals, regardless of the case outcome.

Often arrested drunk drivers would refuse to take the breathalyzer, and would demand a urine test. Not only is this a less reliable test, but it can be unpleasant to administer. The Presidential Commission advised that the arresting officer should determine the appropriate test, not the suspect. The new Michigan law did enact this suggestion.

All of these measures and recommendations are intended to counteract a police officer's disinclination to arrest and test drunk drivers. Presumably, the officer's job can be made easier by having a means to require certain tests and by having reliable equipment and operators available. The accuracy of the breathalyzer itself, assuming it is functioning properly, is seldom an issue in court currently. [Caplan, Yohman, and Schaefer, 1985] The qualifications of the operator are more often called into question by the defense attorney.

[Prosecuting Attorneys Association of Michigan, 1983]
Thus, Michigan has complied with the NHTSA's standards for operator certification, [National Highway Traffic Safety Administration, 1984] and Michigan breathalyzer operators are tested for competency once per month.
[Michigan Administrative Code, 1979 as amended 1984]

Another factor which interferes with effective law enforcement of drunk driving cases is the length of processing time and the amount of paperwork. This problem was cited by police officers in Beitel's and Hurst's reports and was discussed in the 1982 Michigan Policy Report and by the 1983 Presidential Commission. In some states, police officers are required to be present through the entire booking and testing process; this down-time from patrol could amount to two-three hours. The Presidential Commission suggested that the officer's presence during breathalyzer testing was not necessary when a qualified operator was available. This was considered an inefficient use of the trained police officer and a duplication of services provided by the trained operator. The Commission recommended that police officers be allowed to transfer custody of the driver to security officers at the test site as soon as possible. (This also necessitates that breathalyzer test sites should have trained security staff and detention or transport resources.)

Other factors which increase the processing time of drunk driving cases are: the degree of driver cooperation;

the distance from the breathalyzer site; the weather and road conditions; the availability of an alternative driver or a towing service; and the administration of the field test battery. Each of these elements may vary considerably and unpredictably from case to case. Local jurisdictions can influence some of these factors and reduce down-time in the field. A reliable and prompt towing service can be utilized; sufficient and accessible breathalyzer sites can be provided; the field test battery can be standardized and the PBT included. The other factors are too variable to be positively influenced by such enforcement techniques. As the length of processing time is essentially a unique local problem, the solutions too have been unique locally. While not discussed extensively in any one report, this issue was addressed in most of the drunk driving programs reviewed by this researcher. This literature shows that local solutions, tailored to local conditions, is probably the most effective way to decrease processing time. [Clark and Rockel, 1982; Passidomo and McErven, 1984; Walen, 1982; Carso and Hoffman, 1984; Studdard, 1984; Vaughn and Klein, 1984]

Excessive paperwork is identified as well by police officers as a disincentive to arrest drunk drivers. In addition to the usual paperwork associated with an investigation and arrest, the officer may have to prepare special forms just for drunk drivers. This may vary from department to department, as well as state to state. Drunk

driving paperwork may include: field sobriety test reports; PBT reports; suspect's test rights; preliminary breath test inquiries; towing vouchers; breath test reports; drunk driving case logs; blood test warrant work; and medical reports when the suspect is ill or injured. An alcohol-related traffic accident, especially one with a fatality, will involve even more special paperwork. Some of this problem can be handled at the department level, but the state can do much more. The Michigan Policy Report recommended that the Office of Highway Safety Planning (OHSP) prepare a statewide-use, uniform drunk driving arrest report form. This would be accomplished by consolidating and simplifying the existing paperwork into a standard report form. The goal would be clarity and ease of completion; the form should also be amenable to statistical analysis at the local and state level. The Michigan OHSP is currently working to reduce the amount of drunk driving paperwork by preparing such an arrest report form. [Michigan Office of Highway Safety Planning, et al, 1982]

To summarize briefly at this point, efforts to improve police effectiveness are multiple and varied. As conviction and corrective success depends, in part, upon police performance, much attention has been given to reducing disincentives to arrest drunk drivers. Police are discouraged by: 1) the difficulty in detecting and field testing drunk drivers; 2) lengthy processing time and paperwork in

drunk driving cases; 3) breathalyzer machine and operator problems; and 4) low conviction probabilities. To deal with the first issue, the police have developed detection cue guidelines and field sobriety tests. The PBT has been added to the field test battery and sobriety checkpoints have also proved to be useful tools. The low conviction probabilities in drunk driving cases may also discourage police from spending two to three hours off the road, doing extra paperwork. Thus, efforts are being made to streamline the processing of drunk drivers. The accuracy of breathalyzers and the competency of the operator may be questioned, possibly resulting in reduced charges or dismissal. By improving the alcohol testing procedure, to produce reliable and consistent evidence, it is hoped that police officers would be less inclined to ignore drunk drivers. It can be seen that the arrest rate and the conviction rate mutually affect each other. Police disincentives can be reduced by improving the conviction rate; prosecutors can deal more effectively with drunk drivers if the arrest is legally correct and the evidence is sufficient and accurate.

Prosecution Efforts

The Presidential Commission states in its final report that prosecutors have treated drunk driving cases as a low caseload priority. [The Presidential Commission, 1983]

This, and the difficulty of proving such cases, has led to extensive plea bargaining. The Michigan Policy Report points out that, of all arrested drunk drivers in Michigan, about 20% are convicted on the original charge. Another 55% are convicted on non-alcohol charges. Plea bargaining is responsible for only one in five cases resulting in a conviction on original charges. This is seen as minimizing the consequences of illegal behavior and as reinforcing the social acceptability of drinking and driving. Thus, the public (and police) perception is that drunk driving is not a serious offense and will not be treated as such.

The Presidential Commission urges prosecutors to not plea bargain drunk driving cases unless there is no proof beyond a reasonable doubt. In addition to securing accurate proof of intoxication (from reliable field and breathalyzer tests), several proposals are made which are intended to facilitate conviction. The per se provision is recommended as the single best way to improve conviction probabilities. This type of law specifies that an individual with a blood alcohol level of .10% or more may not legally operate a motor vehicle. At this time, almost all states now have such a law, modeled on European drunk driving laws. With the per se provision, it is not necessary for the prosecutor to prove in court that the suspected drunk driver was impaired or incapacitated by alcohol. It is only necessary to demonstrate the driver

had a certain blood alcohol level. This legal concept is based in research which correlates alcohol consumption with the impairment of driving skills. The Michigan Policy Report in 1982 recommended the adoption of the per se provision as an offense equivalent to the basic drunk driving charge, OUIL. Michigan did so, thus legally recognizing blood alcohol levels as valid measures of intoxication and of driving impairment. The Policy Report referred to the success of per se laws in increasing the conviction rates in other states; however, this was unreferenced and other evaluations of the per se provision could not be located.

Another suggestion made in the Michigan Policy Report is the use of videotape equipment to record the appearance and behavior of an arrested drunk driver. It is further recommended that such visual evidence be admitted in court, by law, for the use of the prosecutor. Although not expressly allowed under Michigan drunk driving laws, videotaping of drunk drivers has been done by local police agencies since the early 1970's. In a rather anecdotal report, the use of videotapes by Genesee County police agencies was discussed. [Dammann, 1972] Using volunteers from the local media, these "test drunks" were filmed while taking standard sobriety tests. All of the participants expressed surprise later when they viewed the films of themselves under the influence of alcohol; most said they had not thought they were so obviously impaired. The

article also mentioned four other Michigan counties which were using videotapes with good success. Marquette, Tuscola, Sanilac and Bay counties reported a larger than usual proportion of drunk drivers pled guilty after viewing themselves on tape. This suggestion was not adopted in Michigan's new law.

The Michigan Policy Report further suggested that Michigan's lesser included charge of operating while impaired (OWI) be eliminated. This charge specifies that persons who have a blood alcohol level of .08% to .09% while operating a motor vehicle are impaired, but not necessarily intoxicated. Michigan and New York are the only states that have a two-tiered charging system. This system is seen as conducive to plea bargaining, as it makes available to the prosecutor a lesser charge to use in legally weak cases. By utilizing the per se charge, backed by reliable breathalyzer evidence, the need for plea bargaining is reduced. This recommendation, however, was not followed by the legislature in the preparation of Michigan's 1982 drunk driving law.

Correction Efforts

Improvement of arrest and conviction rates is a necessary part of an effective campaign against drunk driving. This effort can be undermined, however, if legal sanctions are not applied. Much of the public attention recently (RID, MADD) being paid to the drunk driver

focuses on repeat offenders, especially those who cause fatal accidents. Many of these chronic offenders have received lenience, even substantial immunity, from legal penalties. Citizen action groups, often representing the outraged families of drunk driving victims, have called for severe and mandatory punishments. Most of the legislative action in recent years has concentrated upon increasing the certainty and severity of punishment. Michigan's recent legislative reform primarily focused upon punishment and correction of the offender.

The application of punishment and the effectiveness of those sanctions, therefore, is a crucial issue. If drunk drivers are leniently sanctioned, police officers are less inclined to arrest them and prosecutors are more likely to dismiss or plea bargain. Deterrence of drunk driving behavior is also negatively affected by the lessened risk of punishment. The Presidential Commission places responsibility for this situation upon the judiciary, which "fails to view driving under the influence as a serious offense meriting certain, swift, and appropriate punishment." [The Presidential Commission, 1983, p. 17] As one remedy to this problem, the Commission suggests the use of appellate action by prosecutors in order to ensure judicial compliance with mandated sanctions. This is intended to prevent judges from imposing too lenient sentences, especially without regard for the offender's record or possible alcohol problems or for the damage caused to a traffic accident victim.

Another method to ensure the certainty of punishment is the use of mandatory sentences. The Presidential Commission recommends a system of minimum sanctions for first offenders, with progressively more severe penalties for subsequent offenses. Among the proposed sanctions are mandatory minimum fines, license suspensions, and jail sentences, not to be subject to suspension. The Commission's report states that license suspensions are more effective than fines or jail in reducing drunk driving. Even so, between 70-80% of drivers with suspended, revoked, or restricted licenses continue to drive, illegally. For this problem, the Commission suggests a minimum mandatory jail sentence of at least 30 days. Further, a drunk driver who causes death or injury should be charged with a felony-class offense, subject to a prison term.

In addition to punishment of the drunk driving offender, correction and treatment are also necessary. Problem drinkers and alcoholics represent one-third of all drunk drivers who are involved in fatal traffic accidents, according to the Michigan Policy Report and the Presidential Commission. Both reports, therefore, urge that alcoholism screening and treatment be a condition of sentencing (the Commission also suggests that pre-conviction diversion to alcohol treatment programs should cease). Conviction is seen as necessary to reducing the likelihood of continued drunk driving; punitive sanctions alone have less impact upon problem drinkers than upon social drinkers. Problem drinkers and alcoholics are people who

cannot control their alcohol consumption without treatment. The threat of punishment has virtually no impact upon uncontrolled alcohol use.

A review of the various corrective and punitive measures currently in use is in order at this point. The most effective of these sanctions seems to be license restriction, suspension, or revocation. The Presidential Commission recommends summary suspension of the driver's license upon a showing that the person was driving with a blood alcohol level of .10% or higher. About one-third of the states currently require this, regardless of the ultimate disposition of the case. Additionally, about one-fourth of the states require automatic license suspension for a refusal to submit to alcohol testing. The legal right to operate a motor vehicle is viewed as a privilege granted by the government. This privilege entails the driver being responsible for the safety of others by operating a vehicle in accordance with traffic safety laws. The right of the government to summarily revoke this privilege has been disputed in court, but has always been upheld. The state's action in suspending driving licenses has been ruled as reasonable as the intent is not punitive, but remedial. The state's interest in preserving public safety has been consistently upheld by state and Federal appellate courts. Removing from a driver the privilege of operating a motor vehicle is compatible with that interest. The major tests of this concept were the U. S. Supreme

Court cases of Mackey v Montrym (1978) and Dixon v Love (1977). The Supreme Court held that the state's interest in public safety outweighed the individual's interest in retaining the privilege of driving. [Reese, 1984]

Thus, the legality of license suspensions for drunk drivers has been well established, as has the effectiveness of this control method. A study was done in California for the Department of Motor Vehicles in order to evaluate the utility of license controls for drunk drivers. [Hagen, 1978] From over 11,000 persons convicted of second or subsequent drunk driving offenses in the first six months of 1970, 1,501 demographically matched pairs of persons were identified. The demographic variables used were: county of conviction; the number of prior drunk driving convictions; the age and sex of the offender; and the other penalties assessed in the case (fines and/or jail). The control group, at the time of the study, had had their drunk driving convictions expunged and so were treated as first offenders. Mandatory license action was not required for first offenders in California at that time; expungement was a common judicial action used to circumvent sanctions required for repeat offenders. The experimental group's records were not expunged, so license action was taken in their cases. Thus, one-half of the study group had their licenses suspended; the other half did not. The subsequent driving, accident, and conviction records were followed for a six year period. Significant differences in these

records were found between the two groups. The group which had been subjected to license suspension had 30% fewer drunk driving convictions and accidents. For most of the persons, these positive effects lasted beyond the term of suspension. The study concluded that "mandatory licensing actions in addition to fines and/or jail sentences for multiple DUI offenders have a more positive traffic safety effect than fines and/or jail sentences alone." [Hagen, 1978, p.120]

License suspensions for drunk drivers seem to be effective in positively influencing two of the success measures for drunk driving controls: the alcohol-related traffic accident rate and the drunk driver recidivism rate. Restricting or withdrawing the driving privilege is a useful corrective and public safety tool. The correction of the drunk driver is also dependent upon accurately identifying and treating problem drinkers and alcoholics. Michigan has developed a screening test for the purpose of discovering alcoholics or probable alcoholics. In an experiment with this test in 1971, a group of 838 problem drivers were screened for alcoholism. [Selzer, Vanosdall, and Chapman, 1971] These drivers had either accumulated 12 penalty points for traffic violations or had been involved in multiple accidents within a two year period. Of the total group, 14% tested as definitely alcoholic and another 7% as probably alcoholic. Additionally, 209 persons in this group (25%) had a record of at

least one drunk driving or drunk and disorderly conviction. Of this group, 42% were identified as definitely alcoholic and another 18% as probably alcoholic. This study confirms the information presented by the Presidential Commission, that the problem drinker is responsible for a large proportion of the drunk driving problem. The screening test also appears to be useful in identifying drunk drivers who have problems controlling their drinking.

Effective detection techniques must be accompanied by treatment and rehabilitation of the irresponsible drinking driver. The necessity of treatment, as a supplement to punitive measures, is recognized by the Presidential Commission and the Michigan Policy Report. The Michigan legislature acted upon these recommendations in the 1982 drunk driving law. All persons convicted of any drunk driving charge in Michigan are required to undergo screening and assessment for alcoholism. Further, for those persons who do not have a drinking problem, the new law mandates an alcohol education class. This is intended to provide information on the effects of alcohol consumption, especially upon driving skills. The Michigan Office of Substance Abuse Services (OSAS) supervises the operation and content of the class. This Alcohol Highway Safety Program consists of ten hours of film and lecture and is administered by qualified local agencies. In Grand Traverse County, the Community, Family, and Children Services (CFCS) agency provides both pre-sentence screen-

ing and alcohol education classes, as well as outpatient counseling for problem drinkers. When screening tests reveal that a convicted drunk driver has a drinking problem, the Court can require alcohol treatment. These programs are also supervised by the OSAS and services are provided by qualified local agencies. In Grand Traverse County, CFCS offers outpatient group or individual counseling. A residential treatment program is operated by another local agency, the Alcohol Treatment Service (ATS). Both CFCS and ATS are private, non-profit organizations that receive some funding from the OSAS for the alcohol education and treatment programs. By law, convicted offenders are required to pay for these services. The efficacy of these education and treatment programs is unknown, although local program staff anecdotally report good success rates.

A 1979 report on the effectiveness of a similar alcohol education program in Florida, however, suggests that such programs may not be very useful. [Michelson, 1979] With the funds from the Florida Department of Transportation, Broward County has operated an education program for convicted drunk drivers. This was rehabilitative in intent rather than punitive. In order to ascertain the efficacy of this program, 30 first offenders assigned to the class were randomly selected. The subsequent driving records of these subjects were tracked for three years and compared with a control group who had not attended

the class. Although the differences between the two groups' driving records were not statistically significant, the treatment group had one-fourth as many subsequent drunk driving convictions as the control group. The authors of this report cautioned that these negative results may not be conclusive evidence of failure, as subjects were not randomly assigned to the program.

A more intensive study of corrective measures for drunk drivers was sponsored by the NHTSA in Tennessee. [Holden, 1983] All first offenders (4,126) arrested and convicted of drunk driving in Memphis from September, 1976 through the end of 1978 were referred to the project. The driving records of these persons were then tracked for two years subsequent to project entry. The program concluded at the end of 1980. All subjects were tested for alcoholism, although this did not affect program assignment. Subjects were identified as either social drinkers or problem drinkers. About 85% of the subjects were assigned to a conditional diversion program if they had no misdemeanor or felony record. The remaining subjects were placed on probation. All subjects were then randomly assigned to one of four treatment programs as a condition of diversion or of probation. These treatment programs were:

- 1) a control group in which no further contact with the legal system was required after disposition;
- 2) an alcohol education class for social drinkers, supplemented by group counseling for problem drinkers;
- 3) standard

probation supervision only; and 4) standard probation supervision supplemented by the alcohol education and counseling programs. At the end of the project, it was concluded rehabilitative efforts were generally ineffective. The lowest recidivism rate for social drinkers was found in the control group, in which no treatment was given. In the problem drinker group, the lowest recidivism rate was recorded in the probation with treatment category, although the control group's recidivism rate was only 1% higher. The implications of this experiment are that rehabilitative efforts are generally ineffective, even though the differences in recidivism rates were not statistically significant.

Corrective measures, however effective or useful, are only part of the legal response to the drunk driving problem. Traditional punitive methods are also used, and are, in fact, being demanded by citizen action groups. Various state legislatures have responded by increasing the severity of punishment and often by requiring punishment. As discussed above, these punishments are mandatory and minimum fines and jail sentences. Monetary loss as a punishment has been used in the U. S. since colonial times. Often, judges have sentenced people to either a fine or to jail, a situation which is favorable to the more affluent. The U. S. Supreme Court declared this to be discriminatory in Tate v Short (1971). Nonetheless, fines continue to be widely used throughout the nation, and are recommended

as a useful deterrent to and punishment for drunk driving. The intention is to make a drunk driving conviction an expensive experience. The usefulness of fines, for any criminal or civil offense, has been questioned, however, as a rehabilitative, punitive, or deterrent tool. An affluent person may not be affected in any way by even a substantial fine. An indigent person may be unable to pay even a small fine. Fines are seemingly unconnected to any rehabilitative goal, especially for the drunk driver. The new Michigan law, and most other state legislation, established higher minimum and maximum fines for drunk driving convictions. In Michigan, court costs assessed from drunk drivers are divided between the state government and the local court. Fines are shared with the state and the local community; typically, the public library is the recipient of such monies. New York state has a creative approach use for fines paid by drunk drivers. These funds are used in the county of conviction for the arrest, prosecution, and penalization of drunk drivers. Other states are finding similar uses for fine monies, with the idea that even if fines don't control the offender, the money can still be put to good use.

Jail sentences, mandatory or not, for any length of time are frequently proposed as a punishment befitting the drunk driver. While drunk driving is not often thought of as a serious offense, the death and damage tolls suggest otherwise. More people, by several thousands, are killed

by drunk drivers every year than are murdered. Conservative estimates of the dollar loss caused by drunk drivers are about \$21 billion every year. The dollar loss due to the four property Index Crimes annually is only \$9 billion. [Senna, 1984] This information in recent years has influenced the public demand for more severe punishment of the drunk driver. Incarceration in jail, or in prison for the worst offender, is seen as an appropriate punishment for those who show continued and willful disregard for other's lives and property.

Incarceration can accomplish several purposes: incapacitation, retribution, rehabilitation, and deterrence. Incapacitation may be the only goal achieved by locking up the drunk driver. In this way, multiple offenders or those who have harmed someone can be removed from the opportunity to drink and drive, temporarily. Retribution, or the just deserts model, refers to an offender receiving punishment that fits the crime and that is deserved for the crime. This highly theoretical goal is difficult to translate to the reality of sentencing. It is therefore more often considered a justification for punishment. Rehabilitation involves the correction of the offender, in an institutional setting, so that more criminal action is not repeated after release. The non-institutional correction of the drunk driver has been shown to be unsatisfactory, as discussed above. Rehabilitation during incarceration has also generally failed. [Senna and Siegel, 1984] Deter-

rence of the drunk driver will be discussed in a separate section of this paper.

Jailing the drunk driver is intended to achieve incapacitation and correction, the latter primarily by clearly demonstrating the consequences of drunk driving. This purpose is one usually expressed by judges during sentencing. In late 1970, Chicago traffic courts initiated a policy of mandatory seven day jail terms for all drunk drivers. [Robertson, 1973] This was a limited project, directed first at the holiday season and later extended through the summer of 1971. This policy was widely publicized and was aimed at reducing traffic fatalities. Chicago judges had determined that social drinkers constituted 80% of their drunk driving caseload. They presumed that the threat of jail would most affect the behavior of the social drinker. A study was conducted after the conclusion of this rather informal project. An analysis revealed that this judicial policy had no apparent effect upon alcohol-related traffic fatalities.

A more rigorous inspection of mandatory confinement of drunk drivers found that the legal system and systemic efforts at control are more affected than the offender may be. The National Institute of Justice conducted a study in Washington, Tennessee, Ohio, and Minnesota where jail time is required for drunk drivers. [The National Institute of Justice, 1984] The findings can be summarized briefly as:

1) arrest rates increase after mandatory jail sentences have been implemented, especially if this sanction is well publicized; 2) court caseloads increase; 3) not guilty pleas and requests for jury trials increase; 4) the effects on conviction rates may vary; 5) incarceration rates increase putting strain on correctional facilities; 6) the demand for probation services increases; 7) the demand for special services in jails increases; and 8) alcohol-related traffic fatalities may decrease. Based upon observations in several of these jurisdictions, the Institute stated that planning and preparation in advance may lessen the negative impacts upon court and probation caseloads, jail space, and the demand for services. The positive effects on arrest and accident rates may be especially enhanced by publicity and consistent application of sanctions.

This last point was underscored in a study done by the National Institute on Alcohol Abuse and Alcoholism. [Shover, Bankston, and Gurley, 1977] In 1971, Tennessee mandated incarceration and license revocation for all convicted drunk drivers. Yet arrest and accident rates remained unaffected by the new and severe sanctions. Investigation revealed that judges consistently circumvented the required penalties by suspending jail sentences and allowing limited driving privileges.

The NHTSA sponsored an evaluation of another judicial policy to require the incarceration of drunk drivers. [National Highway Traffic Safety Administration, October,

1984] Without a specific mandate from, but not in violation of, state law, the Municipal Court judges of Hennepin County, Minnesota agreed to impose two-day jail sentences on first offense drunk drivers. This policy was adopted unanimously in January of 1982 and reviewed and continued one year later. The evaluation was conducted after this judicial policy had been in use for two years. In light of the Tennessee experience with judicial circumvention of mandatory incarceration, the Hennepin County experiment is particularly interesting. Despite a large turnover of judges during the two year period, commitment to the policy remained consistent. There was also an increase in police enforcement activity, simultaneous with the judicial policy; thus, drunk driving arrests increased as well. Furthermore, it was discovered that alcohol-related traffic injuries were significantly reduced during this period. Alcohol-related traffic fatalities declined, but not significantly. The impact of this policy upon the court and jail system of the county was not found to be especially negative, as in the study by the National Institute of Justice. Although the number of court cases and incarcerations increased, there was no apparent increase in court processing time nor was there any serious overcrowding problem in the jail. Most interestingly, a survey showed that incarcerated drunk drivers favored the policy and believed that it should be continued. A public opinion survey of county residents also indicated a high aware-

ness of and support for the policy. This survey further showed a reported change in drinking and driving behavior that was associated with awareness of the policy and an increase in the perception of likelihood of punishment. The only group of drinkers that was seemingly unaffected by the judicial policy was the chronic daily drinker. Overall, this policy was deemed successful in increasing public safety.

In light of the mixed and uncertain effectiveness of the various techniques to control the drunk driving problem, one Illinois prosecutor suggested decriminalization. [Hall, 1977] He noted the failure of rehabilitative efforts, the disincentives for the police to arrest, the inconsistency of penalties, and the system overload problems. Decriminalization is offered as an alternative solution, as civil prosecution is allegedly at least as effective as criminal prosecution. Most importantly, the author believed the problem drinker could thus most effectively be helped. To date, no jurisdiction has tried this unique and apparently lone suggestion.

Summary

It is difficult to make any general conclusions about the efficacy of anti-drunk driving efforts. Historically, the drunk driver has been treated with tolerance and lenience, often far out of proportion to the damage and injury caused. Public awareness of the true

dimensions and seriousness of the problem has been heightened only in recent years. This has stimulated new legislation and a variety of anti-drunk driving campaigns throughout the country. One thing is clear from a review of the literature on these efforts: attempts to control the problem must be systemic, long-term, and carefully planned. The actions of any component of the justice system affect all other components. The ability and willingness of the police to arrest drunk drivers is influenced by the law, the conviction rate, sentencing policies, and even community attitudes. The prosecutor cannot successfully convict offenders if the cases are evidentially weak. Judges can undermine the work of the police and the prosecutor by dismissing cases or suspending sentences. Even if the legal system acts in a consistent and coordinated manner, the continued social acceptability of drinking and driving can defeat those efforts. The threat of arrest, conviction, and punishment, however, should presumably act as a deterrent to this behavior. Deterrent efforts and their success is discussed in the subsequent portion of this paper.

Section Four: General Deterrence

Introduction

The Presidential Commission on Drunk Driving maintains the position that law and justice system improvements are

short-term solutions to the problem of drunk driving. The only remedy seen to have long-term effectiveness is prevention and deterrence of the behavior. The Commission's report includes a variety of suggestions to accomplish public education and prevention. The Commission does not disregard the value of short-term efforts, however; about half of its final report is concerned with recommendations for enforcement, prosecution, judicial, and corrections changes. The entire body of recommendations constitutes a comprehensive program to control drunk driving, while the main focus is on deterrence.

The National Highway Traffic Safety Administration (NHTSA) similarly urges that a long-term deterrence and education approach be utilized. The NHTSA developed six major recommendations for the control of drunk driving. Two of these concern deterrence and public education directed at changing social attitudes. (The remaining four refer to: legal system coordination; local community support of and responsibility for programs; and the use of drunk driving fines to finance those programs.) These suggestions were made in an article by the administrator of the NHTSA, in which the necessity of long-term, consistent efforts was recognized. [Steed, 1984] The main goal is seen as a major alteration in social attitudes towards drunk driving and in the behavior itself.

The newsletter of the Michigan Coalition for Prison Alternatives, sponsored by the American Friends Service Committee, takes a stronger stand. In an article about the problem of appropriate sanctions for drunk drivers, the value of legal and punitive reactions is questioned. [American Friends Service Committee, 1984] It is asserted that the criminal justice system can have only a limited and even ineffective impact on drunk drivers. The focus of anti-drunk driving campaigns should be upon civil or administrative penalties for offenders, substance abuse treatment for alcoholic drivers, and changing the social acceptability of drunk driving. Although more strongly stated, the American Friends Service Committee agrees on the need for long-term deterrence.

Classical Deterrence

While there is general agreement about deterrence being the major goal, there is no consensus of opinion on how to best achieve deterrence. The concept of deterrence as a purpose of punishing the social deviant was first delineated by Cesare Beccaria and Jeremy Bentham in the late 1700's. [Reid, 1985] The writings of these men comprise the classical school of thought about crime and punishment. Criminal behavior is viewed as a purposive and rational choice, based upon an assessment of risks and gains. Punishment of offenders is considered most effective

if it is applied with certainty, swiftness, and sufficient severity as to outweigh the benefits of the crime. Punishment should not be excessive, but should fit the crime. Deterrence is thus achieved, as a rational person will not choose behavior which brings more pain than pleasure. The success of this abstract philosophy depends in reality upon achieving certain, swift, and severe, but not excessive, punishment. A sufficient number of offenders must be so punished in order to increase the perception of the risk of punishment. A realistic threat of punishment, therefore, will prevent people from choosing criminal behavior.

This philosophy has had a profound influence on the development of U. S. law and penal codes. This abstract set of beliefs is, however, difficult to translate into practice. Achieving certain, swift, and fair punishment has proven to be an almost impossible task to accomplish, for a variety of reasons. Punishment of criminal offenders is by no means certain, as the risk of apprehension and arrest is low. Swift justice is a largely unrealized goal, mostly because of heavy caseloads in the court system. The penal codes have traditionally specified penalties which are certainly severe, but are seldom selected for their appropriateness to the offense. The questions of what punishments are suitable and proportionate to which offenses are complex, controversial, and unresolved. Despite the difficulties of accomplishing and proving

deterrence, the concept remains an important aspect of current correctional theory.

Andrew von Hirsch reformulated the classical position on punishment in his capacity as the executive director for the Committee for the Study of Incarceration. [von Hirsch, 1976] Variouslly referred to as neo-classicism or the justice model, von Hirsch's ideas are predicated on the assumption that rehabilitation and indeterminate sentences are unfair and ineffective. On both a philosophical and practical basis, it is argued that deterrence and just deserts are more defensible as appropriate reasons for punishment. The just deserts concept refers to the notion that punishment is deserved for offenses and is justifiable if the punishment is proportionate to the crime. Deserved and proportionate punishment of criminal offenders, coupled with certain and swift justice, should also function to deter criminal behavior. Von Hirsch advocates the use of sentencing guidelines and a system of graduated penalties, with the severest punishments reserved for the most serious offenders. This is called the principle of commensurate deserts and is fundamental to the success of deterrence. If the same severe penalty is allocated to all criminal offenders, regardless of the offense, then potential offenders will be unable to distinguish between crimes. When pickpocketing is punishable with death, the pickpocket may consider he has nothing to lose by committ-

ing the murder of a witness. It is for this reason that von Hirsch asserted that the certainty of punishment is a more effective deterrent than severity.

Much of the research conducted to test deterrence effectiveness has concentrated upon the death penalty. [Reid, 1985] The threat of this severest of penalties is presumed to have a chilling effect upon potential murderers. Yet, research on correlations between executions and homicide rates has produced mixed results. For the most part, it has been demonstrated that capital punishment has no effect upon homicide rates. Other studies have shown that severe punishments may have only short-term positive effects upon crime rates. Another interesting finding in this body of research is that increasing the severity of punishment may result in a point of diminishing returns. In other words, the more severe a punishment is, the less likely there will be a positive deterrent effect upon the behavior. This phenomenon is related to the actual and perceived likelihood that a particular punishment will indeed be imposed. Thus, the certainty of punishment, not severity, seems to be the most crucial factor for deterrence effectiveness. [von Hirsch, 1976] This is, essentially, the key finding of research on deterrence of drunk driving. Traditionally, the consumption of alcohol has been considered a private affair and more of a moral issue than a criminal one. Yet, the criminal law has frequently been used to control various

behaviors related to alcohol consumption. This has been primarily justified on the basis of public and personal safety, especially public drunkenness and driving while intoxicated. The criminalization of such behaviors constitutes a recognition of the negative impact upon society by alcohol usage; this is a safety issue, not a moral issue. The criminal law can probably do little to impact alcoholism (or drug addiction), but does attempt to deter and control potentially hazardous behaviors.

General Deterrence of Drunk Driving

The deterrence of drunk driving is seen to be conditional upon two factors: public understanding and support for legislation and penalties for drunk driving; and successful law enforcement practices. A discussion of effective deterrence measures was published in 1977, which reviewed U. S. and Canadian efforts in this regard.

[Ennis, 1977] Those two factors were identified as fundamental. For a law, and its threatened punishment, to be effective in deterring particular behavior, first the public must be cognizant of the law and penalties. It is also necessary for the public to support such legislation. Widespread opposition to a law, such as the 18th Amendment, often results in high violation rates and vicarious sympathy for the offender. This occurs when drunk driving is viewed as a personal and moral decision,

rather than as dangerous and unsafe behavior. When this situation exists, successful enforcement of such a law is undermined. Police officers, judges, and juries are reluctant to pursue drunk driving cases to the full extent of the law. This in turn reduces the real and perceived risks of arrest and punishment and further weakens deterrence.

Based upon a review of the literature on deterrence effectiveness, Ennis recommends two intervention strategies to improve deterrence. [Ennis, 1977] The first of these strategies seeks to prevent drunk driving behavior through public education. This programming would provide information about the law, the penalties, and the actual seriousness or dangerousness of the offense. The purpose of such a campaign would be to reduce the sense of vicarious identification with and sympathy for the offender that research has discovered. Several of the studies reviewed by Ennis found that people consistently underestimated the amount of alcohol that must be consumed in order to attain an illegal blood alcohol level. These studies also indicated that the public did not know the legal definition of intoxication nor the penalties for drunk driving. This suggests an extensively-held belief that drunk drivers are not so very different from social drinkers who have indulged a little too much. Such a "there but for the grace of God go I" attitude does not encourage social condemnation nor enforcement of the law.

The second strategy involves the improvement of law enforcement efforts in order to increase the legal risks and consequences. This would also serve to emphasize the seriousness of the offense and its potential threat to public safety. The major purpose of this strategy, however, is to remove the impaired driver from the road and thus reduce potential hazards. The deterrence utility of police practices was examined in several of the studies reviewed by Ennis. This research suggests that general deterrence can be achieved by increasing enforcement efforts, especially if these efforts are publicized and visible. However, when these efforts are relaxed, the perception of risk is reduced and the violation rate begins to increase. Deterrence effectiveness is related to the subjective and objective probability of apprehension and punishment. It is not known, however, what apprehension rate must be attained in order to achieve deterrence nor at what level of arrests deterrence will decrease. [Ennis, 1977]

A more recent and specific study of the general deterrence of drunk driving focuses upon the decision making process of the drunk driver. [Summers and Harris, 1979] The study posits a functional relationship between the anticipated utility of driving while intoxicated and the perceived risks associated with such a trip. This relationship is further affected by the risk aversion characteristics of the individual driver. (Anticipated utility is defined as the value expected from making a

trip while intoxicated. Perceived risk is defined as the assessed probability of arrest or accident, combined with the possible severity of consequences. Risk aversion refers to one's reluctance to take potentially serious risks, even when the probability of consequences is low.) The effectiveness of deterrence through legal countermeasures must relate to these decision factors, most especially the assessment of risks. Risk assessment, for an individual, is based upon direct and indirect information about law enforcement actions, potential consequences, and likelihood of detection. This study found that legal countermeasures were most effective when accompanied by information feedback about police and judicial action in drunk driving cases.

The Success of Deterrence Efforts

This finding of the importance of publicity and information was echoed in an international survey of deterrence effectiveness. [Ross, 1981] The drunk driving laws of Norway, Sweden, Great Britain, Canada, Australia, New Zealand, France, the Netherlands, Denmark, Finland, Austria, West Germany, Czechoslovakia, and the United States were examined. The drunk driving control efforts of these nations are mostly modeled after pre-World War II legislation and utilize the Scandinavian legal approach. The legal approach criminalizes drunk driving and seeks to accomplish several goals. The first goal is general deter-

rence, in which the threat of punishment is intended to restrain people from driving while intoxicated. Success is measured by a reduction in the violation rate and in the accident rate. The second goal is retribution or the idea that the offense merits punishment because public safety is threatened. The third goal is specific deterrence, in which legal sanctions are used to correct the offender and to prevent subsequent offenses. This last goal can be achieved by incapacitation and rehabilitation. The drunk driver can be incapacitated through jail time, license suspension, or vehicle impoundment. Rehabilitation efforts would seek to modify the behavior and incentives of the individual by education as to the risks or by alcoholism treatment. Success here is measured by a reduction in the recidivism rate.

The major finding of Ross's survey concerns general deterrence. He found that drunk driving legislation and enforcement efforts can create a deterrent effect. However, this success is short-lived, no matter whether legal efforts are temporary campaigns or permanent law changes. Deterrence success can nearly always be found, as measured by alcohol-related accidents and casualties. Ross explains this in terms of an increase in the perceived risks of apprehension and punishment. This perception of risk is crucial to an individual's decision to drive while intoxicated. Ross attributes the increase in perceived risks to the publicity and newsworthiness that accompanies new

legislation or enforcement campaigns. Yet, in all of the nations whose drunk driving control efforts were examined, deterrence success is not permanent. Subsequently, there is a measurable reversion to driving while intoxicated behavior, similar to the level of such behavior prior to the new legal efforts. This phenomenon is also related to the individual's perception of risks, according to Ross. He posits that individuals learn by experience that the probability of detection and arrest remains low. Thus, the perception of risk is reduced and general deterrence is undermined. Ross's work raises the idea that general deterrence is a function of multiple variables and is not the result of a simple cause and effect relationship between two variables. It is this multiplicity of variables that affect drunk driving behavior which makes general deterrence difficult to achieve and sustain through legal efforts alone. [Ross, 1981]

Other Variables Affecting Deterrence Success

The complexity of achieving and maintaining deterrence of drunk driving was discussed in several articles based upon Ross's work. The first of these re-examined the British legislation reviewed in Ross's international survey. [Phillips, Ray and Voety, 1984] The British Road Safety Act of 1967 adopted the per se provision, modeled on the Scandinavian laws, making the operation of a motor vehicle,

with a blood alcohol level of .08%, a criminal offense. This study confirmed Ross's findings for successful deterrence of drunk driving, especially as measured by a decrease in alcohol-related traffic fatalities. The impermanence of deterrence success was disputed, however, on the basis of a new statistical analysis. This new study indicates that factors, other than the law, intervened to create the appearance of deterrence failure. These variables include: traffic density, alcohol consumption, weather, road conditions, total mileage driven, the number of drivers, and the demographic profile of the driving public.

Another study scrutinized more closely the transitory success of deterrence as found by Ross. [Votey, 1984] The findings of this study are similar to those discussed above. The apparent decline in deterrence effectiveness cannot be attributed to the ineffectiveness of drunk driving control efforts. The subsequent rise in alcohol-related traffic accidents and fatalities is explained by rises in alcohol consumption, mileage driven, and numbers of drivers, as well as increased traffic density. Votey cautions that legal efforts to control drunk driving can be devitalized by the erroneous belief that deterrence success is temporary. This can create a self-fulfilling process in which deterrence success will indeed be temporary. The major finding of Voety's paper is that deterrence is not simple to measure, as its effects may be masked by a variety of intervening variables.

The problem thus becomes one of identifying these variables and developing techniques to control these influences upon drunk driving behavior and alcohol-related accident rates. This issue is extensively explored in another study prompted by the two above articles. [Snortum, 1984] Two major sets of variables are identified: those which influence alcohol consumption and those which influence driving behavior. Snortum posits that many of these variables can be controlled by public policy, either directly or indirectly, while others are simply a matter of chance. The first category includes: per capita alcohol consumption; the availability of alcohol; the cost of alcohol, including taxes; the minimum legal age for alcohol consumption; the proportion of alcoholics and abstainers in the population; the demographic characteristics of the consumers; social attitudes and customs about drinking; and the physical and mental state of the drinker. Those variables which influence driving behavior include: traffic laws; annual mileage per driver; the availability, costs, and taxes of gasoline; the number, type, and use of cars; the availability of public transportation; the demographic characteristics of the driving public; the construction, maintenance, and condition of the roads; weather conditions; and driving habits and training.

Many of these variables interact and are mutually influential, often unpredictable. Population growth rates, for example, can directly influence the numbers and

characteristics of the driving public. An increase in the number of male drivers between the ages of 18 to 44 can aggravate the accident rate. The oil embargo of 1973 sharply reduced the average mileage driven by Americans, resulting in lower accident rates. Scandinavian and other European countries maintain comparatively high tax rates on both alcoholic beverages and gasoline. (A bottle of whiskey in Sweden costs four times as much as the same commodity in the United States. Most European governments assess gasoline taxes at \$1.00 or more per gallon, as compared to \$0.05 per gallon for United States federal taxes.) This has the effect of reducing alcohol consumption and driving mileage in Europe.

Snortum also discusses the pre-conditions necessary for deterrence success: knowledge of the law; moral agreement with the law; the perception of the risk of arrest or accident; and the credibility of sanctions. [Snortum, 1984] Of these, Snortum asserts that moral agreement with the law may be the most influential. (Moral agreement is defined as an individual's concurrence with the legal definition of a behavior as dangerous or immoral or unsafe.) This assertion is based upon the concept that voluntary compliance with a law because of moral belief is more compelling than compliance because of fear of punishment. Long-term deterrence of drunk driving behavior, while dependent upon multiple and varied influences, can most effectively be accomplished if there is a social consensus

about the danger and seriousness of the offense.

This is the general conclusion of the Presidential Commission on Drunk Driving, which final report was published late in 1983. Social attitudes towards drunk driving must be changed in order to effect a long-term solution to the problem. This does not mean that legal efforts do not work. The literature on the effectiveness of control and deterrence techniques demonstrates otherwise. Nonetheless, public policy, legislation, and citizen action can impact many of the variables which influence drunk driving.

Snortum reports that the yearly per capita consumption of alcohol in Scandinavian countries is slightly over one-half the rate of consumption in the United States. Strict government regulation, higher taxes, and social attitudes are credited for this. In the United States, increased taxes and tighter controls on the distribution and sale of alcoholic beverages could influence a lower rate of consumption. A variety of other proposals have been made to accomplish this. For instance, some states are considering a prohibition of beer pitchers, two drinks for the price of one specials, and happy hours. These are viewed as an encouragement to consume large quantities of alcohol. Licensed servers of alcoholic beverages by the glass are being held civilly liable for damage and injury caused by drunks they have served. Private party hosts are similarly being sued. TIME magazine of August 20, 1984, (page 104) reports on new training programs for bartenders, which

teach how to recognize and to not serve intoxicated persons. The use of non-alcoholic beverages at parties, especially for teens, is being encouraged, as is the serving of food and time limits on the serving of alcohol. The Federal government is urging the states to raise the minimum drinking age to 21 years, in order to reduce fatalities in drunk driving accidents among young people.

A variety of suggestions are being proposed to discourage people from driving while intoxicated. Public transportation systems could be developed. In some locations, free transportation is offered to those too drunk to drive. At parties and social functions where alcohol is served, designated drivers are being asked to remain sober. Methods are being developed which could prevent intoxicated persons from starting and operating motor vehicles. One such proposal involves attaching a small breathalyzer unit to the ignition system of cars, so that persons with illegal blood alcohol levels cannot turn on the engine. New York state, among others, allows the impoundment of the car used by a drunk driver. A man in Leelanau County, Michigan, convicted of a second drunk driving offense, was sentenced, among other penalties, to not own or possess a motor vehicle.

Moral agreement with drunk driving laws can also be influenced by public action. The Federal government has been conducting a public education campaign to inform the public of the dangers and true seriousness of drunk

driving. Changing social attitudes seems to be one of the results of this public education and of citizen lobby group action. The impact of MADD upon social attitudes has been unmeasured, but certainly seems to be considerable. The Michigan Association of Chiefs of Police newsletter of February, 1985, (page 12) reported that drunk driving is currently being viewed as willful and wanton behavior, rather than simply negligent action. This opinion is confirmed in a TIME magazine article of May 20, 1985, (page 76-78) about the lessening social acceptability of drunkenness and drunk driving.

For control and deterrence of drunk driving to be successful, efforts must be carefully planned, coordinated, and evaluated. The public must understand and agree with the various legal measures taken, or these measures will be ineffective. General deterrence can be achieved only if there is a certainty of punishment and if there is moral agreement about the law.

Section Five: Literature Review Conclusion

Historically, legal methods have constituted the primary approach to controlling drunk driving in the United States and internationally. The entire criminal justice process has been involved in these efforts, as well as the civil justice process. The ultimate goal of these legal

efforts is to discourage drunk driving and to achieve general deterrence.

The Law

Legislatures originally criminalized the act of operating an automobile while one is intoxicated and provided legal penalties for that crime. This United States legislation was contemporary with Prohibition, strong temperance lobbies, the federal narcotics legislation (Harrison Act, 1914), and the first evidence of the dangers posed by drunk drivers. Subsequent legislative efforts have occurred periodically in response to improved technology and to proposals for closing loopholes in the law. The second period of statutory action on drunk driving occurred in the late 1930's and early 1940's. This legislation attempted to improve the objectivity of evidence by legally recognizing new alcohol testing procedures. Chemical tests of blood and urine had been developed as part of the on-going research on the effects of alcohol.

The third period of legislative activity was the direct result of having testing procedures to provide evidence of intoxication. Feedback from the police and the courts indicated several problems. How can drivers be compelled to submit to alcohol testing procedures? How is intoxication to be defined? Beginning in the middle 1950's, state legislatures began to adopt implied consent provisions, test refusal penalties, and minimum blood alcohol levels. In the middle 1960's, while this process

was on-going, the breathalyzer was legally recognized.

The fourth period of activity in drunk driving legislation began in the middle 1970's and continues today. These latest laws have been directed at the detection of drunk drivers and at the objectivity of evidence. Thus, the preliminary breath test and per se provisions have been adopted. Concurrent with this legislative action has been increases in the severity of criminal penalties. This latest stage has also been exemplified by: the availability of federal grant money; intensified law enforcement efforts; research and development of new detection techniques; a new awareness and disapproval of the high level of death, injury, and damage caused by drunk drivers; intensified citizen lobby action; increasingly successful civil lawsuit action; and public education campaigns to teach alternatives to drunk driving and to discourage the behavior.

Law Enforcement

As the agents of the law, police officers are the persons who detect, apprehend, and often test suspected drunk drivers. These crucial actors in the drunk driving control process have historically been hindered in their efforts. The arrest and conviction of drunk drivers has long been difficult to achieve, which situation legislation has been intended to change. In light of the relative social acceptability of drunk driving, the police have assigned a low arrest priority to drunk driving. This

decreases the certainty of detection and arrest, a major factor in the deterrence of drunk driving.

This situation has changed in the last decade. The availability of federal grant money has prompted considerable research and program experimentation in drunk driving law enforcement. While individual police officers have been sensitive to the dangers and tragedies of drunk driving, administrators are not insensitive to recent citizen action. Public opinion, in recent years, has begun to swing towards relative social disapproval of drunk driving.

Recent efforts at improving police performance cover three major areas of concern: detection and identification problems; testing reliability and subjective evidentiary problems; and lengthy processing time and paperwork. Detection cue systems have been developed for use in identifying impaired driving and drunkenness. A variety of field sobriety tests have been developed and refined. The preliminary breath test, for use in the field, is providing reliable evidence of intoxication, enabling more objective arrest decisions. The use of sobriety checkpoints is currently being experimented with and debated about in several states. Methods have been developed to ensure the reliability of alcohol testing procedures, equipment, and operators. Most states now have created or increased test refusal penalties. These various efforts have largely been successful, in that drunk driving arrests

in the United States have been increasing. The third problem, of lengthy processing time and paperwork, is one that is being dealt with mostly on a local basis, in various creative ways and with varying degrees of success.

Prosecution and Conviction

The conviction rate of drunk driving cases is also influential in the campaign of legal control efforts. If a prosecutor or judge has a record of low conviction rates or of extensive plea bargaining in OUIL cases, the police officer has interpreted this to mean these cases are a low priority. The public's perception of the seriousness of the behavior and the certainty of sanction is negatively affected. On the other hand, a "get tough" attitude on the part of the judge or prosecutor can encourage police activity and can discourage drunk drivers. Prosecutors traditionally have been hampered by the subjectivity of evidence in these cases. For years, the evidence consisted of a police officer's testimony about the driver's appearance and behavior, driving errors, and sobriety test performance. The evidence from chemical testing procedures for blood and urine (1940's) and breath (1960's) could only be used presumptively, to corroborate subjective testimony. Proof of impairment remained essentially subjective.

The lack of evidence in criminal cases provides an

incentive to prosecutors to plea bargain, especially so in drunk driving cases. The per se provision, widely adopted in the last decade, is designed to correct this problem. The per se provision creates essentially a new criminal offense: it is illegal to operate a motor vehicle if one has a blood alcohol level of .10% or more. The effect of this provision is two-fold. First, blood alcohol evidence produced by standard testing procedures is legally authorized as conclusive evidence of impairment. Second, the prosecutor need no longer prove that the driver's ability to operate a motor vehicle was impaired. The need for subjective testimony and evidence is reduced, if not eliminated. It is hoped that this will reduce plea bargaining and the negative side effects of this practice upon drunk driving control efforts.

Correction and Treatment

This last step in the criminal justice process is of equal importance in drunk driving campaigns. Lenient, and even ineffective, punishment can undermine the efforts of the police and prosecutor. The public's perception of the seriousness of drunk driving can be negatively altered. A failure to correct convicted drunk drivers contributes to a recidivism rate.

In recent years, citizen lobby groups, police organizations, and public opinion have supported stricter penalties for drunk drivers. Mandatory sentences and appellate

reviews to ensure compliance are being used to enforce that strictness. The need for treatment, as well as punishment, is being recognized, especially for those offenders who are alcoholics or exhibit pre-alcoholic drinking patterns.

The effectiveness of the punishment and treatment of drunk drivers is difficult to ascertain, as concerted efforts in this regard are relatively recent. The efficacy of alcoholism treatment is simply unknown at this time. Of the traditional criminal penalties used for drunk drivers, the most effective seems to be the loss of one's driving privileges, or vehicle operation license suspension. In the classical sense, this penalty is rationally related to the offense and is of sufficient severity as to outweigh any possible gain. Jail sentences seem to be effective as temporary incapacitators. Fines and court costs seem to have little or no impact as a control effort, yet often provide funds for use in creative projects.

General Deterrence Effectiveness

The object of legal efforts to control drunk driving is to prevent, or at least decrease, the incidence of such behavior. By criminalizing and punishing drunk driving, the justice system defines this behavior as unacceptable and seeks to prevent its occurrence. The concept of general deterrence derives from classical philosophy about crime and punishment. This idea has been incorporated into our

legal codes, that swift and certain punishment of sufficient severity can affect criminal behavior. Yet criminal behavior, like all behavior, is the function of a multiplicity of variables, only one of which may be the possibility of punishment. A driver's decision to drive while intoxicated may be influenced by the anticipated value of driving, one's perception of the risks involved, one's degree of risk aversion, and one's degree of concurrence with the laws on drunk driving. (A variety of other factors can also affect this behavior, including weather, road and traffic conditions, the availability of alternate transportation, or the amount of alcohol consumed.)

These complex variables, and their interactions, create a situation in which it is very difficult to measure the deterrence effectiveness of arrest and punishment. International and United States research on the general deterrence effectiveness of punishment on drunk driving seems to indicate that often success is temporary. Deterrence success is often dependent upon law enforcement and publicity campaigns, which tend to lose momentum after a period of time. When persons realize that the risks of arrest and sanction are actually lower than believed, the incidence of drunk driving increases. Thus, general deterrence is seen as being achievable only if there is also an effort to alter public attitudes about drunk driving. Considering the effect of public opinion upon police efforts, an attempt to increase social disapproval of drunk driving

is necessary. The general conclusion of the literature on deterrence of drunk driving is that control efforts must be planned on a long-range basis and must coordinate public education with justice system actions.

Due to the complexity of measuring deterrence, the scope of this research was necessarily limited to measuring justice system actions. The enactment of new drunk driving legislation in Michigan provided the opportunity to measure differences in justice system actions before and after this law. These actions were examined in depth in Grand Traverse County. An attempt was made to discover any other factors, in addition to the new law, which could have influenced differences in these actions. What effect the new law and local justice system actions have had upon drinking and driving behavior in Grand Traverse County can only be speculated about at this point. A discussion of the research site, questions, design, and methods follows in Chapter Three.

CHAPTER III

RESEARCH DESIGN AND METHODS

In this chapter, a discussion of how the present research was designed is presented. In the first section, the setting for this research, Grand Traverse County, is described with details on population characteristics, the local police agencies, and other justice system and community efforts. The research questions are then presented for examination. The chapter is concluded with a discussion of the research design and of the methods utilized in the data analysis.

Section One: Research Site Description

The research site, Grand Traverse County, is located in the northwestern section of Michigan's lower peninsula. A predominantly rural region, the county has only one city, Traverse City with 26% of the county population, and nine small incorporated villages. The county covers 468 square miles, including over 300 lakes; state land comprises about 25% of the county. There are 956 miles of county roads (including 431 miles of unpaved roads) and almost 91 miles of state roads in the county.

Population Characteristics

The United States Census of 1980 indicates a county

population of 54,899, a 40% increase over the 1970 population of 39,175. This increase is more than double the increases recorded in previous censuses. The area is projected to continue to experience a high population growth rate. Grand Traverse County's population in 1970 constituted .4% of Michigan's total population; in 1980, this increased to .6%. The majority (78%) of the population increase during the 1970's is attributed to migration, or people moving into the region.

Grand Traverse County's population is composed of 52% females and 48% males, according to the 1970 census. Females outnumber males in every age group. In the 1970 census, the largest age group was the 10-19 year old group (21%); the second largest group were those under 10 years of age (18%). While all age groups increased in number, in 1980 the age groups with the largest growth rates were those 20-29 years of age (up 108%) and those 30-39 years of age (up 89%). The largest age group was the 20-29 group, comprising 19% of the total population. The median age was 28.8 years. The racial composition of the 1980 county population was overwhelmingly white (97.9%), with .5% Hispanic, .2% black, .8% Native American, and .6% Asian constituting the remainder. Of the county population that was over 15 years of age (41,962 or 76% of the total), 26% were single, 60% were married, 1% were separated, 6% were widowed, and 7% were divorced.

According to the Michigan Employment Security Commission, the unemployment rates for Grand Traverse County are as follows: 1980, 8.5%; 1981, 11.2%; 1982, 13.3%; 1983, 13.8%; and 1984, 10.9%. The 1980 census provides information on the occupations of those county residents who are employed (23,950). The census identifies six occupational categories: 1) managerial and professional, 24%; 2) sales, semi-professional, and technicians, 31%; 3) service, 15%; 4) farm work, 3%; 5) precision production and skilled labor, 13%; and 6) factory production and unskilled labor, 14%.

Law Enforcement Description

Grand Traverse County is served by three law enforcement agencies with road patrols and traffic arrest authority. The Traverse City Police Department (TCPD) has nineteen sworn police officers and has jurisdiction within the city limits. The Grand Traverse County Sheriff's Department (GTCSD) has jurisdiction over the remainder of the county; the GTCSD has sixteen deputies for patrol duties, with another six officers contracted for patrol only in certain townships. The Michigan State Police (MSP) post in Traverse City fields twenty seven troopers, but has responsibility for a four county area. In Grand Traverse, the MSP essentially has jurisdiction over the 84 miles of state highway that lies outside the city limits. All three agencies have utilized special enforcement

techniques to catch drunk drivers. The MSP use directed patrol, concentrating patrol officers on the highway approaches to the city limits during the midnight to 3:00 AM time period. (These areas have been developed commercially and contain a large number of bars, restaurants and motels.) The GTCSD has since 1981 received Federal Alcohol Enforcement Road Patrol grant monies for special drunk driving enforcement; the TCPD has been a co-recipient since 1982. These monies provide for directed patrol, each department fielding one patrol car at certain times for the express purposes of arresting drunk drivers and reducing accidents. These patrols, while available for emergency calls, concentrate primarily upon drunk drivers. Inspections of bars and taverns are also conducted, during which officers check identifications and ensure that minors are not being served alcohol. The presence of uniformed officers in drinking establishments is intended as a deterrent, to remind people that the police are alert to drunk drivers.

According to several local police officers, the major drunk driving enforcement tool to be introduced within recent years is the preliminary breath tester (PBT). Although PBT use was authorized by the new law as of April 1, 1983, units were not installed in sheriff's or city police cars until August 11, 1983. The State Police put PBT units in their patrol cars locally on June 18, 1983.

Two standard breathalyzer machines are located in the target county: one at the jail, used by the GTSD and the TCPD, and another at the MSP post. State troopers usually test arrested drunk drivers at their post and then transport to the jail for booking and detention. The GTSD and TCPD transport arrestees directly to the jail for testing, booking, and detention. Both machines are subject to State law certification and required periodic verification of testing accuracy. State law also requires that a record of all breathalyzer tests be kept and that breathalyzer operators be trained and certified.

Outside of these efforts, none of the local police agencies have an official policy mandating special law enforcement attention to the drunk driver. However, in interviews with executives from the three police agencies, this writer was told that such policies exist unofficially. Additionally, when this writer rode with the GTSD drunk driving patrol to observe procedures, a deputy stated that GTSD road officers had agreed informally to "go after" drunk drivers. While anecdotal and unmeasurable in impact, this unofficial policy contributes to general deterrence by increasing the risks of arrest. In the last several years, Grand Traverse County locally gained a reputation for being a place where drunk drivers get caught and get punished to the full extent of the law.

Other Community Factors

In addition to police efforts, at least two other factors have contributed to this rigorous enforcement reputation. In February of 1982, the 86th District Court judges, Richard Benedict and James McCormick, publicly announced a "get tough" policy on plea bargaining and sentencing in drunk driving cases. This was in response to growing public pressure, locally and nationwide, to more effectively control drunk driving; this was best symbolized by the creation of Mothers Against Drunk Driving (MADD). The local newspaper, the Traverse City Record Eagle, made this new judicial policy a headline subject. Indeed, the newspaper must be considered another major contributor to the atmosphere of deterrence and the public perception of risks. The Record Eagle has consistently supported and extensively publicized the efforts of MADD and the local justice system. Since the new legislation on drunk driving went into effect in 1983, the newspaper has repeatedly referred to the "local crackdown" on drunk driving. In July of 1984, in response to public opinion, the newspaper adopted the policy of publishing the names of all persons convicted of drunk driving in the county. Prior to that time, only the names of prominent public officials who were so convicted were published. The clear intent of this policy, as stated by both the editor, Jim Herman, and the Chief of Police, Ralph Soffredine, is to deter drunk drivers through the

threat of public exposure. It is unknown how much of an effect these judicial and newspaper policies have had upon the drunk driver in Grand Traverse County. It is beyond the scope of this research to measure that impact. In the opinion of this writer, however, these factors have at least contributed positively to the public perception of the increased riskiness of drunk driving.

Section Two: Research Questions

Primary Research Question

In Grand Traverse County, since the new Michigan drunk driving law became effective, have arrests and convictions increased and have alcohol-related traffic accidents decreased? These anticipated changes reflect the prime intent of the new law: to improve law enforcement efforts and to reduce deaths and injuries caused by drunk driving. In order to ascertain if these goals were accomplished locally, a comparison was made of these variables before and after the new law. An effort was made to identify any other variables, besides the new law, which could have affected drunk driving arrests, convictions, and accidents.

Secondary Research Questions

These questions concern changes in the processing of drunk drivers in Grand Traverse County after the new law

went into effect. Information about these questions was obtained from study of a sample of arrested drunk drivers.

1) Have bail bond amounts increased? 2) Have bail bond types become more restrictive? 3) Have second offense convictions increased? 4) Has plea bargaining, except on third offense charges, been reduced? 5) Are convicted drunk drivers being sentenced to the full extent of the law? 6) Have breath-analyzer test result averages decreased? 7) Have test refusal rates decreased? 8) Has the demographic profile of the arrested drunk driver become more representative of the county population?

Section Three: Research Design and Methods

This research is essentially evaluation research, as it seeks to determine whether the intervention of Michigan's new drunk driving legislation has produced the intended results in Grand Traverse County. A time series evaluation design was utilized, which measured the dependent variables throughout a five year period.

Primary Question Analysis

The primary independent variable was defined as the new drunk driving law, which went into effect on March 31, 1983. This legal intervention had three primary purposes, which were defined as the three primary dependent variables.

These were the drunk driving arrest and conviction rates and the alcohol-related traffic accident rate.

Research on Grand Traverse County has revealed several possible influences, in addition to the new law, upon these dependent variables. These influences are: 1) the Alcohol Enforcement grant, April of 1981; 2) the 86th District Court policy, February of 1982; 3) the installation of PBT units in local police cars, June and August of 1983; and 4) the name publication policy of the newspaper, July of 1984. These variables were presumed to have had some effect upon law enforcement efforts, as well as general deterrence; data analysis in this research attempted to measure that influence upon law enforcement efforts. The determination of that influence upon deterrence success. was considerably beyond the scope of this research, however, basic univariate description statistics were used to determine the effects, if any, of these variables. Information regarding the first variable was obtained from quarterly progress reports, filed with the Michigan Office of Highway Safety Planning, which administers the grant monies.

The time period from January 1, 1980 through December 31, 1984, was chosen for the analysis of these variables. The pre-intervention, or pre-law period was from January 1, 1980 through March 31, 1983, a term of 39 months. This was compared to the post-law period of 21 months from April 1, 1983 to December 31, 1984. As two

time periods of disparate length (65% and 35% of total, respectively) were compared, an explanation of time frame choice is in order.

The end date of December 31, 1984 was chosen simply because data collection began in early 1985. Whole calendar years were used largely for convenience, as the data sources were organized on that basis. The beginning date of January 1, 1980 was chosen as being at least one year prior to the first identifiable variable of local influence. It was also found that the total number of arrested drunk drivers (2,029 for the five year period) was divided almost equally between the pre-law and the post-law periods (48% and 52% of the total, respectively). This discovery confirmed the acceptability of the chosen time frame for comparison purposes, despite the disparate lengths.

The outcome variables were defined as the anticipated changes in the primary dependent variables. The new legislation was intended to produce an increase in the arrest and conviction rates of drunk drivers and a decrease in the alcohol-related traffic accident rate. The total number of drunk driving arrests, convictions, and accidents were counted for the entire five-year period and divided appropriately into the pre-law and post-law periods. For each dependent variable, these two sets of data were compared, utilizing univariate description statistics.

Information on the arrest rates was obtained from the Grand Traverse County jail records. All persons who are arrested for drunk driving in the county are booked at the jail. The jail officers maintain a chronological record of all persons who are released from the jail. This release log lists the name, age, sex, and race of the inmate, as well as the charge, date of release, length of detention, and the method of release. While this records all movement out of the jail, it is possible to identify arrested drunk drivers. These cases can be identified by charge (OUIL), length of detention (one day), and the method of release (bond). The release log is the only condensed record which can be used to locate arrested drunk drivers. (Officers also maintain an ongoing log of all daily activity in the jail; but this comprehensive and detailed record is difficult to use for that purpose.)

Data on the conviction rates were acquired from 86th District Court records of dispositions. The MSP Traffic Services Division in Lansing, Michigan was the source of information about alcohol-related traffic accidents. These data were separated into two categories: non-alcoholic-related and alcohol-related, as assessed in police reports. These categories were further subdivided into types of accidents, specifically fatal, personal injury, and property damage accidents.

Secondary Questions Analysis

The secondary research questions were derived from interviews with Grand Traverse County criminal justice personnel, during which certain assertions were made. These statements concerned changes in the process of prosecuting and sentencing of drunk drivers as a result of the new law. The independent variable was again defined as this new legislation. The secondary dependent variables were defined as: 1) bail bond amounts; 2) bail bond types; 3) conviction charge reductions; 4) sentences; 5) breathalyzer test results; 6) breathalyzer test refusals; and 7) certain demographic characteristics of arrested drunk drivers. For each variable, pre-law data were compared to post-law data to discover whether the predicted changes have occurred. Univariate and multivariate description statistics were used in the analysis of these data.

The data for the secondary questions were obtained from a random sample, drawn from the sampling frame of 2,029 drunk drivers arrested in Grand Traverse County during the 1980-1984 time period. The sampling frame was drawn from the jail release log. A simple sampling procedure was used; in order to draw a 10% sample, every tenth arrested drunk driver was selected from the log. This resulted in a sample of 202 persons, from which seven cases were dropped. These cases were persons who were arrested in neighboring

counties and were lodged temporarily in the Grand Traverse County jail. (Four of the cases were females from Benzie County, which jail has a capacity of 12 and cannot easily accommodate females. The remaining three cases were males from Kalkaska County, which only has a 72-hour lockup with a capacity of 5.) These cases represented 3.5% of the sample; the net total of the sample was 195 persons.

After the sample list of names was compiled from the release log, another record was consulted to obtain jail file numbers. The jail file listing is an alphabetized record of every person who has been booked since the current record-keeping system was begun in 1965. (By the end of 1984, this totalled almost 13,400 persons.) Jail files provided most of the required information. (For a few cases, it was necessary to consult the two breathalyzer logs and the 86th District Court records.) The primary sources of information in these files were booking sheets and disposition reports; bond receipts, breathalyzer test reports, and criminal history reports were also used.

A data collection form was created for this sample information. For each case, the following pieces of information were recorded: name and jail file number; arrest date; booking charges; bail amount and type; conviction date and charge; sentencing dates and penalties; prior OUIL record; accident types; breathalyzer test results or refusals; sex; race; age; marital status;

employment status; occupation; and county of residence.

(See the Appendix for an example of collection form.) Not all of this information was utilized in this particular research. Confidentiality of names was respected.

CHAPTER IV

RESEARCH FINDINGS

In this chapter, the major findings of this research will be discussed. The purpose of this research was to discover whether or not there were any differences in arrests, convictions, traffic accidents, or other drunk driving case processing elements after the new law as compared to before that law. Certain changes were predicted: 1) arrests, convictions, bail bond amounts, bail bond restrictiveness, second offense convictions, and sentencing strictness will increase in the post-law period; 2) alcohol-related traffic accidents, plea bargaining, breathalyzer test results averages, and test refusal rates will be reduced in the post-law period; and 3) the demographic profile of drunk drivers arrested after the new law will become more egalitarian. The findings for each of these variables were discussed in detail in the following sections.

Section One; Drunk Driving Arrests

Arrest Rates

One of the major purposes of the new law was to encourage and to increase arrests of drunk drivers. The primary research question concerns increased arrest rates.

A total of 2,029 persons were identified as arrested drunk drivers in the Grand Traverse County (GTC) jail records from January 1, 1980 through December 31, 1984. Data on these persons were compiled on a monthly basis, detailing race, sex, and the arresting department for each case. This extract was utilized as the sampling frame for the secondary research questions. Data collection for the sample revealed that certain cases (3.5%) had been erroneously included. These cases involved persons who had been arrested in neighboring counties and lodged in the GTC jail. The primary reason for this practice has been lack of space in other local jails. Soon after this problem was discovered, the 86th District Court Magistrate published drunk driving arrest figures for the five-year period of this study. The magistrate's count was based upon his records of arraignments and included only those drunk drivers arrested and prosecuted in the county. In the process of rechecking the GTC jail records, it was found that another group of persons had also been wrongly included. These were persons who had been arrested on drunk driving warrants from other counties. By eliminating these cases, the discrepancy of 87 cases (4.3%) was resolved. The revised total was 1,942 arrested drunk drivers in GTC for the five-year study period.

The outcome variable, or the criterion of success of the new legislation, was predicted to be an increase in

drunk driving arrests. In GTC, there has certainly been an increase in such arrests, as is shown in Table 1. Over the five-year study period, drunk driving arrests increased by 294.6%; there were four times as many such arrests in 1984 as there were in 1980. The arrest totals for 1981 and 1982 were double the number of arrests for 1980; the number of arrests doubled again in 1984. The average number of arrests per month also quadrupled during the same time period, from 13.9 per month in 1980 to 54.9 per month in 1984, an increase of 295.0%.

Figure 1 below displayed these drunk driving arrests on a monthly basis throughout the five year study period. An examination of this revealed a pattern of steadily increasing numbers of arrests. The most dramatic increase in arrests began in the last quarter of 1983. This occurred six months after the new law and two months after PBT units were installed in local police cars. Clearly, the new law and the PBT units have had some impact upon law enforcement efforts to control drunk driving. Yet, drunk driving arrests began to increase before the new legislation took effect. It should also be noted that this high level of arrests was only maintained for one year. Beginning in the fourth quarter of 1984, the number of arrests declined, a pattern which was sustained in 1985.

Table 1

Arrest Rates before and after March 31, 1983,
Date of Onset of Anti-Drunk Driving Laws in Michigan

	<u>All</u> <u>Arrests</u>	<u>Percent</u> <u>Change</u>	<u>Mean Arrests</u> <u>per Month</u>	<u>Percent</u> <u>Change</u>
<u>Pre-Law</u>	905		23.2	
January, 1980				
-March, 1983		+14.6		+112.9
<u>Post-Law</u>	1037		49.4	
April, 1983				
-December				
1984				
<u>1980</u>	167		13.9	
		+86.8		+87.1
<u>1981</u>	312		26.0	
		+5.8		+5.8
<u>1982</u>	330		27.5	
		+43.6		+43.6
<u>1983</u>	474		39.5	
		+39.0		+39.0
<u>1984</u>	659		54.9	
<u>Percent Change</u>				
<u>1980-1984</u>		+294.6		+295.0

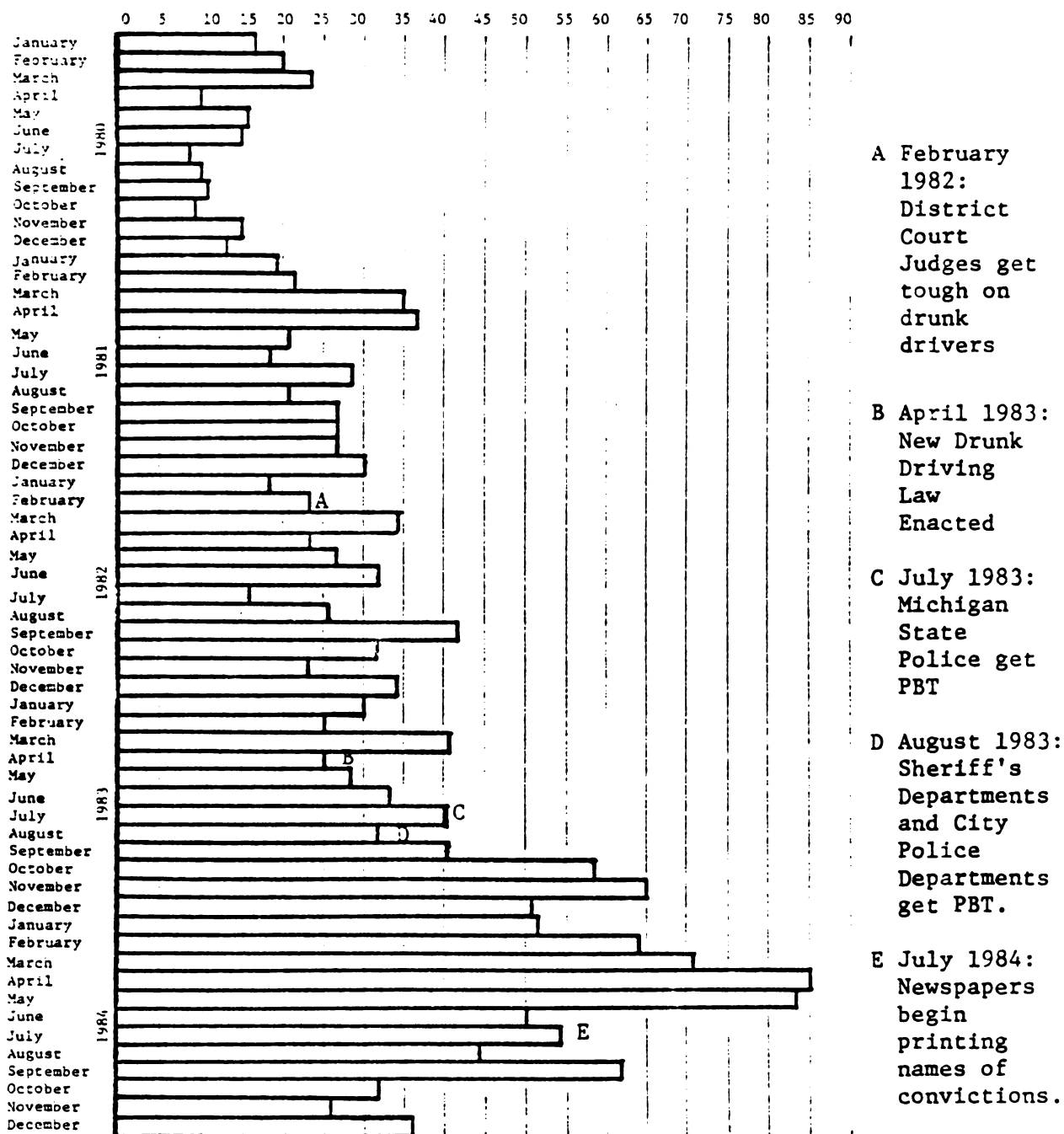


Figure 1
Drunk Driving Arrests by Month
in Grand Traverse County,
with Significant Affective Events

Other Factors Affecting Arrest Rates

The Grand Traverse County Sheriff's Department (GTSD) began receiving Alcohol Enforcement Road Patrol grant funds in April of 1981. The Traverse City Police Department (TCPD) became a co-recipient of these monies beginning with the second grant, in July of 1982. During the five year study period, three separate grants were received; each grant lasted for one year, with a three month gap between each grant. Thus, the first grant ran from April 1, 1981 through March 31, 1982; the second grant began on July 1, 1982 and ended on June 30, 1983; the third grant lasted from October 1, 1983 through September 30, 1984. An examination of Table 2 showed that for the first grant year, officers in grant-funded patrol cars were responsible for 12.5% (39) of the drunk driving arrests. During the second grant year, this rose to 23.4% (83). For the third grant year, the number of road grant arrests rose again, to 108, but this constituted only 14.5% of the total arrests for that time period. During the three grant years, a total of 1405 persons were arrested for drunk driving; 230, or 16.4% of these persons were arrested by officers funded through the grants.

Thus, the Alcohol Enforcement Road Grant has had some impact upon drunk driving arrests. Yet, this extra and special patrol effort did not account for all of the increase prior to the new law. Table 3 provides a comparison between total arrests and road grant arrests.

Table 2

All Drunk Driving Arrests and Road Grant
Drunk Driving Arrests by Grant Year

	<u>All</u> <u>Arrests</u>	<u>Percent</u> <u>Change</u>	<u>Road Grant</u> <u>Arrests</u>	<u>Percent</u> <u>Change</u>	<u>Percent of</u> <u>All Arrests</u>	<u>Percent</u> <u>Change</u>
<u>First Grant</u> <u>Year</u> *	311	+14.1	39	+112.8	12.5	+87.2
<u>Second Grant</u> <u>Year</u>	355	+108.2	83	+30.1	23.4	-37.6
<u>Third Grant</u> <u>Year</u>	739		108		14.6	
<u>Total</u>	1405		230		16.4	

* The first grant year was from April 1, 1981 through March 31, 1982; the second grant year was from July 1, 1982 through June 30, 1983; the third grant year was from October 1, 1983 through September 30, 1984.

Table 3

All Drunk Driving Arrests Compared to Road
Grant Drunk Driving Arrests by Calendar Year

	<u>All</u> <u>Arrests</u>	<u>Percent</u> <u>Change</u>	<u>Road Grant</u> <u>Arrests</u>	<u>Percent</u> <u>Change</u>	<u>Non-Road</u> <u>Grant Arrests</u>	<u>Percent</u> <u>Change</u>
<u>1980</u>	167	+86.8	0	--	167	+67.1
<u>1981</u>	312	+5.8	33	+66.7	279	-1.4
<u>1982</u>	330	+43.6	55	+12.7	275	+49.8
<u>1983</u>	474	+39.0	62	+29.0	412	+40.5
<u>1984</u>	659		80		579	
<u>Total</u>	1942		230		1712	
<u>Percent</u> <u>Change</u> <u>1980-1984</u>		+294.6		+142.4		+246.7

When arrests made by road grant officers were subtracted from total arrests, substantial increases were still evident. For example, including these arrests, the total number of arrests rose 87% from 1980 to 1981; without the road grant arrests, total arrests rose 67.1% from 1980 to 1981. When all road grant arrests were subtracted from total arrests, an overall increase of 246.7% was found for

the entire five-year period.

Summary

The data seem to indicate that one of the major purposes of Michigan's new drunk driving law, an increase in drunk driving arrests, has been accomplished in Grand Traverse County. It is not clear, however, that the increase in arrests can be solely attributed to the new law nor to any other single variable. In comparison to drunk driving arrests on a state-wide basis, however, GTC law enforcement efforts have been very successful. During the five years from 1980 through 1984, when drunk arrests quadrupled in GTC, such arrests increased by only 52% in Michigan. [Michigan State Police, 1985]

Section Two: Drunk Driving Convictions

Conviction Rates

As with the arrest rates, the drunk driving conviction rates were supposed to increase after the new law. In Grand Traverse County, conviction information from the 86th District Court records proved difficult to extract and compile. Beginning with 1982, the magistrate has kept drunk driving conviction records separate from all other records. Prior to that time, drunk driving conviction information was recorded in a chronological ledger, along with all other court activity. These early records did not contain the same information as the more recent records.

The newer records were not kept in any particular order. It was impossible to ascertain reliably any information beyond a simple count of convictions on a yearly basis. For example, it was hoped that information could be obtained on charge reductions over the five-year study period. This information was not available prior to 1982, unfortunately, as it appears since then that convictions on lesser charges have been reduced. In 1982 in Grand Traverse County, 60% of convicted drunk drivers were convicted of the lesser included charge of impaired driving. In 1983, this was reduced to 32% of all convicted drunk drivers; and in 1984, only 24% were convicted on this lesser charge. This information seems to imply that less plea bargaining on drunk driving charges has occurred concurrently with the new law. This is a contention of the magistrate, which cannot be supported due to the lack of information for comparison purposes.

For the five-year study period, a total of 1,892 convictions for drunk driving were recorded. Table 4 presented a compilation of the data on drunk driving convictions in Grand Traverse County. Such convictions increased by 276.9% from 1980 through 1984, from 182 to 686. The 1980 monthly average number of convictions was 15.2. This increased to a monthly average of 57.2 convictions, a gain of 276.9%.

Table 4

Drunk Driving Convictions in Grand Traverse County
1980 through 1984

	<u>Total</u> <u>Convictions</u>	<u>Percent</u> <u>Change</u>	<u>Mean Convictions</u> <u>Per Year</u>	<u>Percent</u> <u>Change</u>
<u>1980</u>	182	+85.7	15.2	+85.5
<u>1981</u>	338	-16.3	28.2	-16.3
<u>1982</u>	283	+42.4	23.6	+42.4
<u>1983</u>	403	+70.2	33.6	+70.2
<u>1984</u>	686		57.2	
<u>Percent Change</u>				
<u>1980-1984</u>		+276.9		+276.9

Summary

The effects of other influential variables upon the conviction rate could not be assessed with any certainty. This was primarily because conviction information could not be compiled on a monthly basis, as was arrest information. Thus, a more detailed analysis could not be done. However, some information on convictions was obtained from the sample of drunk drivers, which will be discussed later in this chapter. The conviction rate in the sample of arrested drunk drivers was 96.4%. Seven cases, of the

sample total of 195 cases, were dismissed. In four of these cases, there was an inability to prove drunk driving, either because the blood alcohol content was too low (3) or a not guilty finding at a jury trial. In one case, the defendant was deceased in a car accident before the case could be processed. The remaining two cases involve persons, with prior drunk driving records, who failed to appear in court. Bench warrants for both persons were issued. One person forfeited a \$100.00 interim bond; the other person had been released on personal recognizance.

Section Three: Alcohol-Related Traffic Accidents

The new Michigan drunk driving legislation was intended to reduce deaths and injuries caused by drunk drivers in traffic accidents. A reduction in alcohol-related traffic accidents, particularly fatal accidents, has been the prime concern of legislators and citizen groups, among others. From 1972 through 1982, some 250,000 persons were killed in drunk driving accidents in the United States. During those years, such deaths represented an average of 50% of all traffic fatalities. The problem became even more apparent when statistics on single-car crashes were examined. Nationwide, 65% of single-car fatal accidents involved intoxicated drivers. [The Presidential Commission, 1983] A study done in Wisconsin discovered that such accidents constituted 54% of passenger car fatal

accidents and typically involved young male drivers who had relatively high blood alcohol levels. [Rosenberg, Laessig, and Rawlings, 1974] Fifty-seven percent of the single-car crashes involved a driver under the age of 25; of these drivers, 46% had a blood alcohol level of at least .15%. The authors suggest that young drivers lack experience in drinking and in determining their level of intoxication. This combined with their relative lack of driving experience, can lead to a fatal episode of driver error.

Alcohol-Related Traffic Accidents in Michigan

The 1982 Michigan Police Report to the Governor presented similar statistical information concerning fatal traffic accidents involving drunk drivers. In Michigan during 1980, drunk drivers were involved in 58%, or 1,025, of the traffic deaths. These 938 drunk drivers either killed themselves or caused the death of others. Yet, of Michigan's some six million licensed drivers, only 0.9% had drunk driving accidents of any type. These very few drunk drivers are responsible for a disproportionately large percentage of traffic deaths. As determined by post-mortem blood tests, 77% of these drunk drivers had blood alcohol levels at .10% or more. Eighty-seven percent of these drivers were males and almost one-half (47%) were under the age of 25. The peak crash times, not surprisingly, were found to be Friday, Saturday, and Sunday evenings,

between 9:00 P.M. and 3:00 A.M. (65% of alcohol-related fatal traffic accidents). Interestingly, 67% of these accidents occurred on rural roads and 80% of those drunk drivers involved in fatal accidents had no prior records of drunk driving arrests and convictions. The 1980 statistical profile of the drunk driver in a fatal accident in Michigan was thus: a young male, with a relatively high blood alcohol level, who is driving on back roads on a week-end night. [Michigan Policy Report, 1982]

One of the major purposes of Michigan's new drunk driving laws was to reduce traffic deaths caused by drunk drivers. Information on Michigan traffic accidents was obtained from the Michigan State Police. Table 5 displayed information on alcohol-related fatal accidents and fatalities in Michigan from 1974 through 1984. An examination of this table showed that the numbers of accidents and deaths peaked in 1978. From 1974 through 1978, alcohol-related fatal accidents rose from 791 to 933, an increase of 18%; the number of deaths in these accidents rose 20.7% from 895 to 1080. From 1978 through 1984, such accidents and related fatalities have both decreased in number, respectively down 24.5% and 25.9%. In 1984, slight increases in drunk driving fatal accidents and fatalities were recorded, but their proportion of all fatal accidents and fatalities decreased. As a percentage of all fatal accidents, drunk driving fatal accidents peaked at 57% in 1980. As of the end of 1984, this percentage had

decreased to 51% of all fatal accidents. In 1980, traffic deaths caused by drunk drivers peaked at 58% of all traffic deaths; this had declined to 51% at the end of 1984.

Table 5

Alcohol-Related Fatal Traffic Accidents and
Traffic Fatalities in Michigan, 1974 through 1984

	<u>Fatal Accidents</u>	<u>Percent of All Fatal Accidents</u>	<u>Fatalities</u>	<u>Percent of All Fatalities</u>
<u>1974</u>	791	48	895	49
<u>1975</u>	810	50	919	51
<u>1976</u>	883	51	1,011	52
<u>1977</u>	853	50	970	50
<u>1978</u>	933	51	1,080	52
<u>1979</u>	901	54	931	50
<u>1980</u>	900	57	1,025	58
<u>1981</u>	814	56	899	57
<u>1982</u>	712	56	799	56
<u>1983</u>	636	53	708	53
<u>1984</u>	704	51	800	51
Percent Change <u>1974-1978</u>	+18		+20.7	
Percent Change <u>1978-1984</u>	-24.5		-25.9	

Information on alcohol-related personal injury and property damage accidents was not readily available prior to 1980. Table 6 presented data on these accidents in Michigan since then; these data were compared to the total number of personal injury and property damage accidents. Generally, all types of traffic accidents involving drunk drivers in Michigan have decreased. Personal injury accidents (PIA) have declined 23.5% and property damage accidents (PDA) have increased 30.1%. As a percentage of all personal injury accidents, those involving a drunk driver declined from 25% to 18%. Similarly, alcohol-related property damage accidents decreased from 13% to 9%. Overall, alcohol-related accidents decreased in number by 27%. As a percentage of all traffic accidents, total alcohol-related accidents have declined from 17% to 12%. Even though all types of traffic accidents, both alcohol and non-alcohol related, increased slightly in numbers during 1984, drunk driving accidents continued to decline as a percentage of all accidents.

Table 6

Alcohol Related Personal Injury and Property
Damage Traffic Accidents in Michigan, 1980 through 1984

	<u>PIA</u>	<u>Percent of ALL PIA</u>	<u>PDA</u>	<u>Percent of ALL PDA</u>	<u>Total Alcohol- Related Accidents</u>	<u>Percent of all Accidents</u>
<u>1980</u>	24,331	25	28,917	13	54,148	17
<u>1981</u>	22,109	24	26,119	12	49,042	16
<u>1982</u>	19,212	22	22,630	11	42,554	14
<u>1983</u>	18,006	20	20,116	10	38,758	13
<u>1984</u>	18,604	18	20,220	9	39,528	12
<u>Percent Change 1980-1984</u>	-23.5		30.1		-27	

Table 7

Alcohol Related Fatal Traffic Accidents, Traffic Fatalities,
and Total Traffic Accidents in Grand Traverse County,
1980 through 1984

	<u>Total Alcohol Related Accidents</u>	<u>Percent Change</u>	<u>Total Alcohol Related Fatal Accidents</u>	<u>Percent Change</u>	<u>Total Alcohol Related Fatalities</u>	<u>Percent Change</u>
<u>1980</u>	458	-18.3	12	-25.0	14	-35.7
<u>1981</u>	374	- 6.9	9	-11.1	9	-11.1
<u>1982</u>	348	-15.8	8	-62.5	8	-37.5
<u>1983</u>	293	-23.2	3	no change	5	-40.0
<u>1984</u>	225		3		3	
<u>Percent Change 1980-1984</u>		-50.9		-75.0		-78.6

Table 7A

Selected Alcohol Related Traffic Accidents as Compared
to Selected Non-Alcohol Related Traffic Accidents
in Grand Traverse County, 1980 through 1984

	<u>Alcohol Related Fatal Accidents</u>	<u>Percent of all Fatal Accidents</u>	<u>Alcohol Related Traffic Fatalities</u>	<u>Percent of All Traffic Fatalities</u>
<u>1980</u>	12	86	14	87.5
<u>1981</u>	9	64	9	64
<u>1982</u>	8	50	8	50
<u>1983</u>	3	37.5	5	50
<u>1984</u>	3	27	3	25
<u>Percent Change 1980- 1984</u>	-75.0	-68.6	-78.6	-71.4

Alcohol-Related Traffic Accidents in Grand Traverse County

In Grand Traverse County, an analysis of alcohol-related traffic accidents revealed trends similar to Michigan at large. Table 7 and Table 7A exhibits the data on local fatal accidents, fatalities, and total accidents involving drunk drivers. An examination of these tables revealed substantial decreases in all three categories. From 1980 to 1984, fatal accidents declined by 75%; as a

proportion of all local fatal accidents, those involving drunk drivers were diminished from 86% to 27%. In the same period, alcohol-related traffic fatalities were reduced by 78.6% and their proportion of all fatalities dropped from 87.5% to 25%. All alcohol-related traffic accidents decreased locally by slightly over 50% from 1980 to 1984.

In the sample of arrested drunk drivers utilized for the secondary research questions, 24 persons were identified as having been involved in an alcohol-related traffic accident. In the pre-law subset of the sample, 2 persons had personal injury accidents and 11 persons had property damage accidents. After the new law, the sample contained 3 personal injury accidents and 8 property damage accidents. No fatal accidents were found in the sample.

Summary

Accident information for Grand Traverse County was only available on a yearly basis, so it was not possible to determine precisely the pre-law and the post-law differences. Certainly, tangible decreases in the accident rates were found in 1983 and 1984. Yet, these appear to be a continuation of a trend found in the entire study period. It should also be noted that, except for the total alcohol-related accident rate, the numbers involved in this analysis were very small. Thus, these trends may be only apparent. It was also not possible to precisely

identify any other variable that may have influenced this reduction in traffic fatalities and accidents, such as local police efforts or seat-belt use.

Section Four: Case Processing Elements

A sample of arrested drunk drivers in Grand Traverse County (GTC) was taken in order to examine the secondary research questions. These questions concerned certain drunk driving case processing elements. It was predicted that bail bond amounts, bail bond restrictiveness, second offense convictions, and sentencing strictness would increase. Plea bargaining, breathalyzer test result averages, and test refusal rates were expected to decrease. The sample was based upon the original count of 2,029 arrested drunk drivers. However, it was necessary to adjust the sample by eliminating certain cases which were erroneously included. The original sample totaled 202 persons. After removing persons who were arrested by nearby counties and lodged temporarily in the GTC jail, the total sample was 195 persons. (Information on these cases was drawn primarily from booking sheets and court disposition records. See Appendix for samples of these forms.) This sample, for the purposes of most of the secondary questions, was divided into two subsets. The pre-law subset contained 39 months (65%) of the five-year period and had 96 cases, or 49% of the total cases. The post-law subset constituted 35% of the five year study period and contained 51% (99) of the cases.

For some of these questions, a comparison of two sample subsets was made to check the possible influence of another intervening variable. The 86th District Court judges announced a "get tough" policy on negotiations and sentences for drunk drivers. This occurred in February of 1982. Thus, the pre-judicial policy time period in the sample numbered 26 months or 43% of 60 months and had 56 cases, or 29% of 195 cases. The post-judicial subset was 34 months in length and had 139 cases.

Bail

The first of the secondary research questions concerned bail bond amounts, which the magistrate asserted had increased since the new law took effect. A comparison of bail amounts during the two time periods in Table 8 revealed a slight increase in the average amount of cash bail. In the pre-law subset, 90 persons paid an average of \$112.43 bail; after the new law took effect, 96 persons paid an average of \$128.13 bail. These figures, however, include those persons who paid interim bonds. In GTC, an interim bond is paid by those persons who do not wish to wait until morning for the magistrate to set bail, usually a 10% cash bond. The amount of the interim bond is almost always \$100.00 in cash, must be approved by the jail sargeant, and is allowed only for those who are sober enough to drive or have other transportation arrangements. When those persons paying interim bonds were excluded from mean calculations,

the mean amount of cash bail paid rose 86% from the pre-law subset (\$74.78) to the post-law subset (\$139.06). The median amount of 10% cash bail paid in the pre-law subset was \$50.00, as opposed to \$100.00 in the post-law subset. From the magistrate's point of view, bail amounts have increased.

Table 8

Bail Bond Types and Amounts in the
Pre-Law and Post-law Subsets

	<u>10% Cash</u>	<u>Interim</u>	<u>Cash Surety</u>	<u>Total</u>	<u>Personal Recognizance</u>
<u>PRE-LAW *</u>					
<u>Number</u>	50	39	1	90	5
<u>Mean Cash Bond</u>	\$74.78	\$99.49	--	\$112.43	--
<u>Median Cash Bond</u>	\$50	\$100	--	--	--
<u>POST-LAW</u>					
<u>Number</u>	64	32	--	96	3
<u>Mean Cash Bond</u>	\$139.06	\$106.25	--	\$128.13	--
<u>Median Cash Bond</u>	\$100	\$100	--	--	--

* One case was excluded from the pre-law subset, as the charges against the person were dropped at booking and before bail was set, due to a low blood alcohol measurement.

The second question pertained to the type of bail bonds required of arrested drunk drivers. It was the contention of the magistrate that bail bonds had become more restrictive since the inception of the new drunk driving law. The answer to this question was more difficult to ascertain than the one concerning bail amounts, possibly due to the size and composition of the sample.

Table 9 displayed information from the sample on the use of 10% cash bonds and of interim bonds. In the post-law subset, the use of the 10% cash bond increased by 28%. As a percentage of those drunk drivers posting these bond types, the proportion increased from 56% to 67% in the post-law period. Thus, the use of this relatively more restrictive bond type increased in comparison to the less restrictive personal recognizance bond.

Interim bond use was reduced in the post-law subset, but by only a small amount (18%), as shown in Table 9. As a proportion of all those posting bonds, use of this bond type decreased from 44% to 33%. Interim bonds involve a 100% cash payment, so it must be considered a more restrictive bond type than the 10% cash bail most often used by the magistrate.

Table 9

Bail Bond Type Usage in the
Pre-Law and Post-Law Subsets

	<u>10% Cash</u>	<u>Interim</u>	<u>Total</u>
<u>Pre-Law</u>			
<u>Number</u>	50	39	89*
<u>Percent</u> <u>of Total</u>	56	44	--
<u>Post-Law</u>			
<u>Number</u>	64	32	96*
<u>Percent</u> <u>of Total</u>	67	33	
<u>Percent</u> <u>Change</u> <u>in Number</u> <u>from Pre-Law</u> <u>Post-Law</u>	+28.0	-17.9	

* Those cases were excluded where a cash surety bond was posted or where no cash bail was required.

The only other bond type discovered in the sample was the cash surety type, in which a person is required to post cash or real property as collateral. Only one such person was found in the entire sample, in the pre-law subset. This case involved an employed county resident with an extensive prior drunk driving record, who refused breathalyzer testing and who was charged also with leaving the scene of a personal injury traffic accident. This person was required to post \$2,500.00 as cash surety. If this bond type was used more extensively in the post-law period, there was no evidence of this in the sample.

Convictions and Charge Reductions

The third question in this section concerned the issue of convictions on second drunk driving offenses. The magistrate asserted that such convictions had increased since the new law. Under Michigan law, if a person is arrested for drunk driving within seven years of a prior such conviction, that person can be charged with the second offense of drunk driving charges (OUIL 2nd). This charge carries stiffer legal penalties and license sanctions than a first offense. Unfortunately, it was not usually possible to discover in the sample the legitimacy of second-offense charges according to this seven year parameter.

In GTC, after the new law took effect, such second offense convictions were alleged to have increased. In Table 10, a comparison of conviction charges in the sample was done to ascertain any differences between the pre-law and post-law subsets. In the pre-law subset, nine persons were charged at arrest and booking with OUIL 2nd offense. Of these nine persons, only two were convicted on that charge. The remaining seven were convicted on lesser charges, such as OUIL 1st offense or the lesser included charge of impaired driving (OWI). In the post-law subset, 6 persons were charged with OUIL 2nd offense; three of those persons were convicted on that charge, two were convicted on OUIL 1st, and charges were dropped for the

Table 10

Changes in Charge Reduction Rates for Offenders
Charged with Operating under the Influence, Second
Offense (OUIL 2), before and after Implementation
of Stronger Anti-drunk Driving Laws in Michigan,
March 31, 1983.

	<u>Number Charged</u>	<u>Number Reduced</u>	<u>Percent Reduced</u>	<u>Percent Change in Proportion</u>
<u>Pre-Law</u>	9	7	77.8	
				-35.7
<u>Post-Law</u>	6	3	50.0	

sixth person for lack of evidence. While these numbers are too small to provide valid evidence of increased convictions of second-time offenders, there does appear to be a slight increase.

The fourth research question concerned a possible reduction of plea bargaining in drunk driving cases since the new law took effect. While no records per se are kept of plea negotiations, the reduction of charges from arrest to conviction can be examined. Review of Table 11 revealed that 70 of the 96 persons in the pre-law subset were convicted on lesser charges than were recorded at booking. These 70 persons, or 72.9% of the pre-law subset, included two persons who were convicted of non-drunk driving offenses. Only 22 (23%) persons were convicted on the original charge as recorded at booking. The remaining 4 cases were dismissed or resulted in no disposition: one person was

deceased before proceedings were concluded, one person was found not guilty at trial, and charges were dropped due to low blood alcohol levels for the remaining two.

Table 11

Changes in Charge Reduction Rates for Offenders
Charged with any OUIL Offense, before and after
Implementation of Stronger Anti-drunk Driving
Laws in Michigan, March 31, 1983

	<u>Number Charged</u>	<u>Number Reduced</u>	<u>Percent Reduced</u>	<u>Percent Change in Proportions</u>
<u>Pre-Law</u>	96	70*	72.9	
				-65.3
<u>Post-Law</u>	99	25*	25.3	

* An additional four persons had the charges against them dismissed before the law; after the law, charges were dropped in two cases.

Further examination of Table 11 showed that in the post-law subset, with a total of 99 cases, only 25 persons (25%) were convicted on reduced charges. The majority of persons in this sample subset were convicted on original charges (72 persons or 73%). The remaining 2 cases were dismissed: one person failed to appear in court and the other person's case was dismissed due to a low blood alcohol measure. It is evident, however, in a comparison of pre-law charge reductions, that this practice has been curtailed. Overall, there has been a 65.3% decrease in charge reductions in this sample.

It was not possible to ascertain whether or not plea negotiations are occurring in cases involving OUIL 3rd offense. A third drunk driving offense is considered a felony under Michigan law and carries a penalty of prison time and a minimum five-year license revocation. In the entire sample, there were only 3 persons charged with this offense; each of these persons was ultimately convicted on OUIL 2nd offense. The reasons for these charge reductions could not be determined.

Sentences

The fifth question in this section was related to the sentences in drunk driving cases. It was asserted that such sentences had become more severe in GTC after the new law took effect. An examination of Table 12 on page 135 showed that, for the most part, legal drunk driving penalties did not increase greatly in severity in the new law. The fines authorized for OUIL 1st and OWI 1st were increased. License action became mandatory for all offense levels. A minimum of suspension or revocation of license and the assessment of penalty points is required for any drunk driving conviction. In both the old and the new legislation, judges were authorized to use any or all of the sentence options: jail time, fines and costs, and license action (now mandatory). Probation is optional for all criminal charges in Michigan. (The new law also mandates alcoholism screening for all convicted drunk drivers, and treatment if necessary, payable by the offender.) Thus,

Table 12

Legal Penalties for Drunk Driving in Michigan

	<u>Pre-1982 Legislation</u>			<u>Post-1982 Legislation</u>		
	<u>Fines*</u>	<u>Jail</u>	<u>License Action</u>	<u>Fines</u>	<u>Jail</u>	<u>License Action**</u>
OUIL & UBAL 1st +	Maximum \$100	Maximum 90 days	Maximum 2 year suspension	\$100 - \$500	Maximum 90 days	6-24 months suspension & 6 points
OUIL & UBAL 2nd	Maximum \$1000	Maximum 1 year	Maximum 2 year suspension	Maximum \$1000	Maximum 1 year	Minimum 1 year revocation & 6 points
OUIL & UBAL 3rd	\$500 \$5000	1-5 years	Minimum 5 year revocation	\$500 \$5000	1-5 years	Minimum 5 year revocation & 6 points
OWI 1st	Maximum \$100	Maximum 90 days	Mandatory 4 points	Maximum \$300	Maximum 90 days	3-12 month suspension & 4 points
OWI 2nd	Maximum \$1000	Maximum 1 year	Mandatory 4 points	Maximum \$1000	Maximum 1 year	6-18 month suspension & 4 points
OWI 3rd	No OWI 3rd offense before 1982 legislation			Maximum \$100	Maximum 1 year	Minimum 1 year revoca- tion & 4 points

* Before and after the new law, convicted offenders are assessed for all court costs.

** The 1982 law authorized mandatory license action.

+ Before the 1982 law, there was no UBAL, or per se charge; the new law authorizes the same penalties for UBAL as for the OUIL charge.

the severity of sentence can vary considerably within the ranges of legal penalties. Any difference in sentence severity between the pre-law and the post-law subset can not be attributable to the existence of harsh new penalties.

Table 13 presented sentence information from the total sample. The information was divided into two basic sections for comparison purposes. In order to ascertain any differences in sentences, the pre-law subset can be compared to the post-law subset as a test of the basic question.

An examination of Table 13 showed relatively slight changes in drunk driving sentences from the pre-law to the post-law subset. For example, the percentage of persons receiving fines as part of their sentence increased by 5.6% after the new law. So, a larger proportion of sentenced drunk drivers paid fines after the new law, but the average amount of those fines only increased by 0.4% to \$98.89.

The proportion of persons paying court costs increased by 7.9%. In the pre-law subset, offenders on the average paid \$182.10 in court costs and \$98.46 in fines (costs being 85% higher on the average). Offenders in the post-law subset on the average paid even higher court costs; the average amount increased by 13% to \$205.71.

Table 13

Sentencing Patterns for Drunk Drivers in Grand
Traverse County before and after the New
Michigan Law of March 31, 1983

	<u>Pre-Law</u> 91 cases	<u>Percent Change</u>	<u>Post-Law</u> 96 cases
<u>Fines</u>			
Percent with Fines	89	+5.6	94
Mean	\$98.46	+0.4	\$98.89
Total	\$7,975.00	--	\$8,900.00
<u>Court Costs</u>			
Percent with Costs	89	+7.9	96
Mean	\$182.10	+13.0	\$205.71
Total	\$14,750.00	--	\$18,925.00
<u>Probation</u>			
Percent with Probation	85	-2.4	83
Mean	13.7 months	+13.9	15.6 months
Total	1,055 months	--	1,248 months
<u>Jail</u>			
Percent with Jail	40	no change	40
Mean	54 days	-4.3	51.7 days
Total	1,944 days	--	1,964 days
<u>License Suspension</u>			
Percent with Suspension	61.5	+57.7	97
Mean	10.5 months	+19.1	12.5 months

The percentage of persons receiving probation decreased only slightly in the post-law subset (-2.4%), but the average length of the probation terms increased by 13.9%. The percentage of persons receiving jail time as part of their sentence did not increase in the post-law subset, however, the average length of jail sentences decreased by 4.3%.

The only exception to these slight changes in the usage and severity of sentence options was in license action. The percentage of persons receiving license suspension as part of their sentence increased by 57.7%. Ninety-three persons (97% of the convicted persons) received a license sanction in the post-law subset, as opposed to 56 persons (61.5%) in the pre-law subset. The average length of license suspension time increased from 10.5 months to 12.5 months (+19.1%). These changes, in license action, are most probably a result of the only significant penalty change in the new law: mandatory minimum license suspension.

A comparison can also be made between a pre-judicial policy time period and a post-judicial period. This can provide information on sentence differences before and after the 86th District Court judges announced their "get touch" policy. The differences between the pre-judicial and post-judicial subsets were generally greater than those between the pre-law and post-law subsets, with interesting

Table 14

Sentencing Patterns for Drunk Drivers in Grand
Traverse County before and after the Official
Change in Judicial Sentencing Policy in February, 1982

	<u>Pre-Judicial</u> 53 cases	<u>Percent Change</u>	<u>Post-Judicial</u> 134 cases
<u>Fines</u>			
Percent			
with Fines	87.5	+4.0	91
Mean	\$65.31	+71.6	\$112.09
Total	\$3,200.00	--	\$13,675.00
<u>Court Costs</u>			
Percent			
with Costs	87.5	+6.3	93
Mean	\$190.82	+2.8	\$196.17
Total	\$9,350.00	--	\$24,325.00
<u>Probation</u>			
Percent			
with Probation	83	+1.2	84
Mean	11.9 months	+31.9	15.7 months
Total	524 months	--	1,774 months
<u>Jail</u>			
Percent			
with Jail	28	+57.1	44
Mean	58.7 days	-12.6	51.3 days
Total	881 days	--	3,027 days
<u>License Suspension</u>			
Percent with			
Suspension	43	+118.6	94
Mean	13.5 months	-9.6	12.2 months
Total	311 months	--	1,537 months

exceptions. A study of Table 14 showed that the proportion of convicted persons paying fines as part of their sentence increased by 4% in the post-judicial subset. This increase was less than the increase between the pre- and post-law subsets. Yet, the average amount of a fine increased by 71.6%, from \$65.31 to \$112.09. Those persons who paid court costs and the average amount paid by them increased only slightly in the post-judicial subset. These increases were also less than the increases between the pre- and post-law subsets.

However, the proportion of people receiving a probation term increased only slightly in the post-judicial subset (by 1.2%), but the average length of the probation term increased by 31.9%. The percentage of persons receiving jail time increased by 57.1%; 44% of the persons convicted after the judges' policy received a jail sentence. The average length of their jail sentences decreased by 12.6%, or 7.4 fewer days. License sanctions were used more than twice as often in the post-judicial period than in the pre-judicial period. The proportion of persons thus sentenced increased by 118.6%. The average length of license suspensions decreased by 9.6%, a reduction of 1.3 months.

The severity of drunk driving sentences may also depend upon a previous record. Table 15 presents sentence information according to prior record. Those persons with prior drunk driving records generally received harsher sentences than most persons without records. In the pre-law subset, those with records on the average served more time on

probation and in jail, lost their license for more time, and paid more in fines and court costs. The same was true for those with records in the post-law subset, except these persons paid slightly less in fines and costs than those without records. A further examination of Table 15 showed that first offenders were more likely to receive probation, fines, and costs as a sentence than those persons with records. This was true before and after the new law. Second offenders were much more likely to receive jail time and a license suspension as a sentence. Table 15 also showed that sentences generally increased in severity between the two time periods for both those with and without records. In the post-law period, the only exceptions to this were: second offenders had to pay about \$30 less in fines and first offenders spent about one week less in jail than in the pre-law period.

The main question about sentences involved more than just an increase in severity, but also whether persons convicted under the new law were sentenced to the fullest extent of the law. Michigan's new drunk driving law specifically authorized fines and/or jail time, and mandatory license sanctions. Table 12, on page 135, presented these penalties, according to the conviction charge.

Table 15

The Impact of a Prior Drunk Driving Record on
Sentencing of Convicted Drunk Drivers in Grand
Traverse County before and after the New
Michigan Law of March 31, 1983

		<u>Fines and Costs</u>		<u>Probation</u>		<u>Jail</u>		<u>License Suspension</u>	
		<u>Percent</u>	<u>Mean</u>	<u>Percent</u>	<u>Mean</u>	<u>Percent</u>	<u>Mean</u>	<u>Percent</u>	<u>Mean</u>
<u>Pre-Law</u>									
<u>No Record</u>		95	\$260.45	88	10.4 months	12	28.4 days	52	5.6 months
58 cases									
<u>With Record</u>		79	\$323.08	79	20.1 months	88	47.8 days	79	16.2 months
33 cases									
<u>Post-Law</u>									
<u>No Record</u>		99	\$306.62	94	16.3 months	20	21.1 days	100	9.6 months
69 cases									
<u>With Record</u>		89	\$290.63	56	22.4 months	93	66.9 days	* 89	21 months
27 cases									

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* Three persons with prior records did not have their licenses suspended for these offenses, as prior license suspensions were still in effect.

In the post-law subset, drunk drivers were convicted of only three separate drunk driving charges: OUIL 1st offense, OUIL 2nd offense, and OWI 1st offense. The law authorized a maximum fine of \$300 and/or a maximum jail term of 90 days, and required a 3-12 month license suspension with 4 penalty points on the driver's record for an OWI 1st offense. (Information on penalty points was not included in the jail records.) Twenty-one persons were convicted of OWI 1st offense in the post-law subset. While 95% paid fines, none paid the maximum of \$300. Only three persons received jail time: two persons with 90 days and 1 with 4 days. Thus, two persons were sentenced to the legal maximum of jail time; but 86% of the persons sentenced on OWI 1st did not receive any jail sentence. (All persons technically received a 1 day jail sentence, marked as time served, to account for time spent in jail at booking.) Of the 20 persons whose licenses were suspended, 11 received suspension terms which were less than the maximum allowed. Six persons received the maximum of 12 months suspension and the remaining three had suspension terms longer than the maximum.

The penalties for OUIL 1st offense were set to be a fine from \$100 to \$500 and/or a maximum of 90 days in jail, with a required license suspension of 6-24 months plus 6 penalty points. Seventy-one persons were convicted on OUIL 1st offense charges in the post-law subset. Sixty-five of these persons paid fines of only \$100 and 2 other persons

paid less. Almost half of these convicted drunk drivers received jail sentences. Four persons received the maximum sentence of 90 days; 25 persons, however, got jail sentences that were 30 days ($1/3$ of the maximum) or less. Seventy persons (99%) had their licenses suspended; 17 of these persons received the maximum of a 24 month suspension. All but two of the remaining 53 persons had their licenses suspended for 12 months ($1/2$ of the maximum) or less.

There were only 4 convictions on OUIL 2nd offense charges in the post-law subset. These persons generally received relatively harsh sentences. One person, originally charged with OUIL 3rd offense and failure to report a property damage accident, had more than two prior convictions. He received a sentence of 1 year in jail, part to be served in the local alcohol treatment residential program. The remaining three persons all paid fines (\$100 each), served time in jail, and had their licenses suspended. One person had a 6 month jail sentence and a 2 year license suspension; another served 9 months in jail and had a 2 year license suspension. The third person, who had failed to appear and was later arrested on a bench warrant, received a 3 week jail sentence and a 1 year license suspension.

Breathalyzer Test Results and Refusals

The sixth and seventh questions to be considered in the sample analysis concerned alcohol testing. Test result averages and test refusal rates were supposed to decline after the new law. The new law permits the use of the preliminary breath test (PBT), which can detect legally drunk drivers who are not visibly impaired or who pass field sobriety tests. Research on the PBT has shown that this often results in a decrease in test averages, as the less visibly impaired drunk drivers become more detectable. The sixth research question in this section asks whether this has occurred in GTC since the new law took effect. Table 16 presents breathalyzer testing information found in the sample. Throughout the five-year study period, the percentage of people who were tested increased by 44.3%. A comparison of the drivers' average blood alcohol content (BAC) in the pre-law and post-law subset showed a slight decrease (-3.7%). The changes in the average BAC from year to year through the sample indicated a different pattern. The average BAC in the 1980 sample subset was .133%; the average BAC increased by 28.6% in 1981. Thereafter, the average BAC generally declined through the end of the last year subset, 1984. Local police had the use of PBT units for the last four months of 1983 and all of 1984. This could explain the lower average BAC in the post-law subset and in the year 1984. However, the average BAC in 1984 was still higher than the 1980 average BAC.

Table 16

Breathalyzer Test Results in Grand Traverse County before and after
the New Michigan Law of March 31, 1983 and by Calendar Year

	<u>Percent Tested</u>	<u>Percent Change</u>	<u>Blood Alcohol Content Mean</u>	<u>Percent Change</u>
<u>Pre-Law</u> 96 cases	67	+28.4	.161%	-3.7
<u>Post-Law</u> 99 cases	86		.155%	
<u>1980</u> 18 cases	61	+6.6	.133%	+28.6
<u>1981</u> 34 cases	65	+12.3	.171%	-5.3
<u>1982</u> 34 cases	73	+5.5	.162%	+1.9
<u>1983</u> 43 cases	77	+14.3	.165%	-7.9
<u>1984</u> 66 cases	88		.152%	
<u>Percent Change 1980-1984</u>	+44.3		+14.3	

The seventh question pertained to the breathalyzer test refusal rate. The new drunk driving law required certain license penalties for refusal to submit to breath testing procedures. As BAC evidence is essential for conviction purposes, the law was designed to provide a method to compel testing. The refusal rate was supposed to decrease as a result of this legal action. An examination of Table 17 showed that a 20% smaller proportion of arrested drunk drivers in Grand Traverse County refused to be tested in the post-law subset. Over the five-year period of the sample, a 35.3% decrease in the proportion of test refusals was found in the county.

Information on test refusals in Michigan was obtained from the State Police and included in Table 17 for comparison purposes, although the data were available only on a yearly basis. Interestingly, the proportions of arrested persons refusing alcohol tests on a statewide-basis were consistently higher than the proportions in the sample for GTC. For Michigan, the test refusal rate had decreased for each of the five years; over-all the proportion of arrested drunk drivers who refused testing declined by 18.1%. Although the proportion of refusals was higher and the percent of decrease was smaller, the pattern for Michigan was the same as the sample. As the changes occurred prior to the new law and continued consistently across the sample time frame, it cannot be determined if the new law is responsible.

Table 17

Breathalyzer Test Refusal Rates in Grand Traverse County before and after the New Michigan Law of March 31, 1983 and by Calendar Year, as Compared to the Statewide Test Refusal Rates

<u>Grand Traverse County</u>			<u>Michigan</u>	
	<u>Percent of Refusals</u>	<u>Percent Change</u>	<u>Percent of Refusals</u>	<u>Percent Change</u>
<u>Pre-Law</u>	15	-20.0		
<u>Post-Law</u>	12			
<u>1980</u>	17	-11.8	22.7	-4.4
<u>1981</u>	15	no change	21.7	-4.2
<u>1982</u>	15	+6.7	21.0	-9.5
<u>1983</u>	16	-31.2	19.0	-2.1
<u>1984</u>	11		18.6	
<u>Percent Change 1980-1984</u>	-35.3		-18.1	

Demographic Profile

The last question in this section pertained to possible changes in personal and social characteristics of arrested drunk drivers. This profile was alleged to have changed since the new law. The magistrate asserted that local police officers have become more impartial, now that they have a reliable testing procedure for detecting alcohol impairment. In other words, these officers are now basing their arrest decision on PBT evidence of drunkenness and not upon age, sex, race, or social status. To test this question, certain demographic data were gathered in the sample: sex, race, age, marital status, employment status, occupation, and county of residence. Table 18 presented these raw data, which were compiled from booking sheets in the jail files. The categories for age and occupation were derived from U. S. Census categories. (See the Appendix for a description of these categories.) This table can be used to determine the proportions of persons within the various categories. A modal description of persons in the sample can therefore be constructed. In the pre-law subset, the modal profile of arrested drunk drivers was a young white male, who was either single or married, was a county resident, and was employed in a service occupation. This profile did not change substantially in the post-law subset. After the new law, the arrested drunk drivers was more likely to be single than married. Additionally, these

Table 18

The Proportions of Selected Characteristics of Drunk Drivers in Grand Traverse
County, before and after the New Michigan Law of March 31, 1983, and as
Compared to the County Population

<u>Percent</u>		<u>Pre-Law</u>	<u>Percent Change</u>	<u>Post-Law</u>	<u>Sample</u>	<u>1980 County</u>
<u>Sex</u>		<u>96 cases</u>		<u>99 cases</u>	<u>Total</u>	<u>Population</u>
Male		84	+7.1	90	87	48.4
Female		16	-37.5	10	13	51.6
<u>Percent</u>					<u>195 cases</u>	<u>54,900 cases</u>
<u>Race</u>						
White		99	-	99	99	97.9
Native American		1	-	-	0.5	0.8
Hispanic		-	-	1	0.5	0.5
<u>Percent</u>						
<u>Age Groups</u>						
*16 -20		12.5	+28.0	16	14	-
16 - 19		7	+71.4	12	10	7.9
20 - 29		47	+10.6	52	49	19.2
30 - 39		31	-22.6	24	27.5	14.7
40 - 49		12	-33.3	8	10	.7
50 - 59		3	-	3	3	8.7
over 60		-	-	1	0.5	14.6

* These persons are minors under the legal drinking age and counted separately from the other age groups.

Table 18 (continued)

<u>Percent</u>					
<u>Marital Status</u>					
Single	38.5	+29.9	50	44	** 26
Married	38.5	-27.3	28	33	60
Separated	1	-	1	1	1
Divorced	20	-	21	21	7
Widowed	2	-	-	1	6
<u>Percent</u>					
<u>Residents</u>					
GTC	79	-26.6	58	68	-
Other	21	+100	42	32	-
<u>Percent</u>					
<u>Employment Status</u>					
Employed	72	+9.7	79	75	+91.5
Unemployed	17	-41.2	10	13	8.5
Self-Employed	7	-	2	5	-
Student	2	-	7	5	-
Retired	2	-	2	2	-

** The percentages for marital status in the county were based upon 41,962 persons, or all those over age 15.

+ Employment and unemployment rates were based upon 1980 information, obtained from the Michigan Employment Security Commission. The percentages were based on a labor force of 26,235. No information was available on retired persons, students, self-employed persons, or military personnel.

Table 18 (continued)

<u>Percent Occupation</u>	9		8	9	24
Professional	9		8	9	24
Semi-					
Professional	12		10	10	31
Service	31	-17.7	25.5	28	15
Farm	4		3	4	3
Skilled Labor	19	+7.9	20.5	19	13
Unskilled					
Labor	14	+14.3	16	15	14
Military	2		2	2	-
Student	2		7	5	-
Retired	2		2	2	-
None	5		6	6	-

persons were a little more likely to be young and employed males. However, the arrested drunk driver was less likely to be a county resident and to be in a service occupation.

Information on these demographic particulars in the county population was provided in Table 18 for comparison purposes. It was of interest to note the differences between the sample modal profile and the county population modal profile. The modal profile of a county resident consisted of a white married female, between age 20-29, who was employed in a semi-professional occupation.

As can be seen in Table 18, males and persons age 16 to 29 each represent substantial proportions of the sample. As both of these groups increased in size in the post-law subset, Table 19 was prepared to provide an analysis of these arrested drunk drivers. Of the total sample, 87% were men and 59% were between age 16 to 29. Males, aged 16 to 29, constituted 51% of the sample, but only 13% of the county population. From the pre-law subset to the post-law subset, the proportion of young males increased by 27.1%.

In reference to Table 18 again, several other demographic characteristics were included in the modal profile of the sample. In the total sample, 44% of the arrested drunk drivers were single, as compared to 26% of the county population. Examination of Table 19 revealed that one-

Table 19

The Proportions of Young Male Drunk Drivers in Grand Traverse County,
before and after the New Michigan Law of March 31, 1983, and as
Compared to the County Population

	<u>Pre-Law</u> 96 cases	<u>Percent Change</u>	<u>Post-Law</u> 99 cases	<u>Sample Total</u> 195 cases	<u>1980 County Population</u> 54,899 cases
<u>Percent Males</u>	84	+7.1	90	87	48.4
<u>Percent Age</u> <u>16-29</u>	54	+18.5	64	59	27
<u>Percent Males</u> <u>Age 16-29</u>	45	+26.7	57	51	13
<u>Percent Single</u> <u>Males Age</u> <u>16-29</u>	27	+44.4	39	33	unavailable
<u>Percent Single</u> <u>Employed Males</u> <u>Age 16-29</u>	25	+28.0	32	29	unavailable
<u>Percent of</u> <u>Their</u> <u>Occupations</u>					
Professional	0		0	0	unavailable
Semi-					
Professional	2		1	1.5	
Service	12		10	11	
Farm	2		0	1	
Skilled Labor	4		7	5.5	
Unskilled					
Labor	4		6	5	
Students	1		6	3.5	
Military	0		2	1	

third of the sample were young single males. After the new law, the proportion of young single males among arrested drunk drivers increased by 44.4%.

Table 18 also showed that arrested drunk drivers were most likely to be employed. As shown in Table 19, 56 of the 65 young single males were employed; these persons constituted almost 3 out of every 10 arrested drunk drivers (29%). The proportion of these persons increased by 28% in the post-law subset. Table 19 provided information on the occupations of these young, employed, single males. These persons tended to be employed in service or skilled labor occupations, such as retail clerks, bartenders, or construction workers. Unskilled laborers and students were also notably represented among these persons.

Section Five: Summary

This discussion of research findings leads this writer to the conclusion that most of the predicted results did occur. Since Michigan's new drunk driving law became effective, the arrest, conviction and traffic rates of drunk drivers have been affected in the manner predicted. In GTC, drunk driving arrests increased in number from the pre-law to the post-law subset by 14.6%; however, the average number of arrests per month increased by 112.9%. The average number of drunk driving convictions per month increased by 84.8% in the post-law subset. Alcohol-related traffic accidents

continued to decline after the new law. Fatal accidents and fatalities were especially reduced, by 75% and 78.6% respectively over the five-year study period.

Certainly other factors, in addition to the new law, may have affected these variables. Locally, federal grant monies have been available for drunk driving enforcement. The District Court judges and magistrate have encouraged local determination to impact this problem. While it was difficult to measure the influence of these factors, there is no doubt in this writer's mind that local efforts to control drunk driving have been successful. It may be that the new law has simply provided a new tool for these control efforts.

Most of the predicted changes in the local processing of drunk drivers have also occurred. Bail amounts have increased overall by 14%; however, the type of bail required has not necessarily become more restrictive. Convictions on second offense charges have increased slightly. The incidence of charge reductions in drunk driving cases decreased by 64.3%, an indication perhaps that less plea bargaining occurred after the new law. Generally, sentences for drunk drivers were more severe after the new law. More people paid more in fines and court costs and lost their driver's licenses for longer periods of time. There was no change in the percentage of people receiving jail sentences after the new law; these persons spent 2.3

fewer days in jail on the average. Slightly fewer people were put on probation, but these persons on the average spent 1.9 months longer on probation. The average blood alcohol content of drunk drivers decreased slightly (-3.7%), indicating perhaps that the detection of less visibly impaired drivers has improved. The breathalyzer test refusal rate declined by 20%, thus enabling more objective evidence to be brought in drunk driving cases. The demographic profile of the drunk driver did not change as predicted, however. Instead of finding a more representative profile as compared to the county population, the arrested drunk driver was more likely to be a young, single male after the new law. Local police officers may be less impartial in arresting drunk drivers, but they have managed to arrest those drivers who are the most implicated for such behavior.

CHAPTER V

CONCLUSIONS

Section One: Introduction

The problems caused by drunk drivers have only recently been recognized as serious and as a cause for public concern. Reports from the federal government indicate that approximately 25,000 persons are killed every year in alcohol-related traffic accidents, a figure that is about 50% of all traffic deaths in the United States. Additionally, 600,000 persons are injured annually in alcohol-related traffic accidents and the yearly costs of such accidents are approximately \$20 to \$25 billion. In recent years, citizen lobby groups, insurance companies, and various justice system organizations have worked to solve these problems. As a result, most of the states have enacted new legislation designed to improve law enforcement and judicial efforts to control and prevent drunk driving. These latest legislative actions have included a recognition of the need for effective treatment of alcoholic drivers and for long-term prevention efforts.

Michigan's 1982 drunk driving legislation was intended to improve justice system control efforts, specifically arrest and conviction rates. The prime purpose, however, was

to reduce alcohol-related traffic accidents, especially fatalities and injuries. In order to increase arrests, the new law authorized the use of preliminary breath testers and mandated tougher penalties for refusals of testing procedures. The per se charge and improved evidential standards were adopted as means to facilitate convictions. New mandatory license sanctions and substance abuse assessment programs were also created in the new law, as part of the effort to establish meaningful correction of drunk drivers. These improvements were designed to affect not only justice system efforts, but also the public's perception of the risks involved in drunk driving. In this manner, general deterrence of the behavior could be achieved and alcohol-related traffic fatalities and injuries could be reduced. Media publicity has accompanied this effort, as has the use of a toll-free "hot line" for the reporting of suspected drunk drivers. Throughout the state, local communities have initiated a variety of programs designed to discourage drunk driving. These include publication of the names of convicted drunk drivers, alternative transportation and designated driver programs, voluntary restrictions on alcoholic beverage specials in bars, and programs to discourage teenagers from drunk driving. However, the use of sobriety checkpoints, intended as a law enforcement and deterrence tool, was recently ruled to be unconstitutional by a Wayne County Circuit Court judge.

Section Two: Summary of Findings

Preliminary analysis of drunk driving arrests and alcohol-related traffic accidents in Michigan since the new law shows that these rates have been affected as intended. The arrest rate increased in 1983 to 65,451 in the state, an increase of 23.2% over 1982. The number of drunk driving arrests in 1984 was 79,812, an increase of 21.9%. The alcohol-related traffic accident rate, and especially fatalities, decreased after the new law when measured as a proportion of all accidents. Information on drunk driving convictions in Michigan was not available nor was any data on the success of other control efforts. Yet by positively affecting arrests, traffic accidents, and traffic fatalities, the major purposes of Michigan's new legislation were accomplished, at least on a short-term basis. It remains to be seen if this can be sustained on a long-term basis.

The primary intent of this investigation has been to discover any changes in arrest, conviction, and accident rates in Grand Traverse County since the new law. Additionally, changes in the processing of drunk driving cases were examined. The research question predicted that after the new law: 1) arrests, convictions, bail bond amounts, second offense convictions, and sentence severity would increase; 2) alcohol-related traffic accidents and fatalities, plea bargaining, breathalyzer test result

averages, and test refusal rates would be reduced; 3) bail bond types would be more restrictive; and 4) the demographic profile of arrested drunk drivers would become more representative of the county population.

In Grand Traverse County after the new law, most of the anticipated changes did occur. The average number of arrests per month increased by 112.9%; the average number of convictions per month increased by 84.8%. The alcohol-related traffic accident and traffic fatality rate continued to decline (over the five-year study period, down 50.9% and 78.6% respectively.) Bail bond amounts increased, although bail bond usage was not necessarily more restrictive. Second offense convictions increased slightly, but plea bargaining, as measured by the rate of charge reductions, was reduced. After the new law, drunk drivers were generally punished more severely than previously, especially in regards to license suspensions. The average breathalyzer test result has decreased, as has the test refusal rate. The demographic profile of arrested drunk drivers, however, has not changed as predicted in Grand Traverse County. After the new law, this profile became less representative of the county population, with a 44.4% increase of young single males. These persons constituted 33% of the post-law subset in the sample. The county population has 7,247 males, age 16 to 29 (13.2% of total), and has 5,672 single males over age 15 (10.3%).

Section Three: Discussion of Findings

Clearly, important changes in the handling of drunk driving cases have occurred since the inception of Michigan's new drunk driving law. While it appears that, statewide, the goals of this legislation have been accomplished, even more substantial results were found in Grand Traverse County. The rate of increase for arrests and the rate of decrease for alcohol-related traffic accidents were higher in the county than for the state. Other findings in the county regarding case processing changes indicate local success in drunk driving control efforts. Grand Traverse County has been cultivating a reputation of being tough on drunk drivers. Extensive media publicity, unofficial police policies, grant money for patrol, official judicial policies, and word-of-mouth have contributed to this reputation. This investigation seems to indicate that there is substance to that reputation. Whether the new Michigan drunk driving law is the cause of this, or only the mechanism for this, cannot be determined. In the opinion of this writer, local justice system officials have taken good advantage of the new law and its attendant publicity. Their reputation is well-deserved, especially as measured by the reduction in the alcohol-related traffic fatality rate.

Currently in Grand Traverse County, a first conviction

of a drunk driving offense can be a costly and inconvenient experience. Most first offenders are paying \$300 or more in fines and costs, as well as the costs of alcoholism screening and treatment. Many local persons are required to perform community service work, as allowed by law; the costs of this labor are also borne by the offender. Most persons receive a term of probation, which at least inconveniences the offender. Almost all of convicted drunk drivers are losing their driving licenses, although many can obtain restricted driving privileges for work, school, or alcohol classes and counseling. In a town with limited public transportation and a county with none, this too is an inconvenience for offenders. Traverse City is a small community; over the five-year study period, one out of twenty-seven persons in the county were arrested and punished for drunk driving. The local newspaper publishes the names, addresses, and sentences of all convicted drunk drivers on a weekly basis. These are the essential elements of creating deterrence, of affecting the public's perception of the risks of drunk driving. The writer holds the opinion that general deterrence has been achieved, at least on a short-term basis, in Grand Traverse County.

Section Four: Conclusion

In the course of this investigation of drunk driving control efforts in Grand Traverse County, several other items

of interest were noted in addition to the research questions. This information should be considered anecdotal in nature. For example, this writer rode with local police officers on various occasions in order to observe arrest and testing procedures for drunk drivers. Several times, suspected drunk drivers were observed to have open intoxicants in their possession, such as unconsumed beer, wine, or even mixed drinks. These containers were found variously in their cars or on their persons, hidden in clothing pockets. Having open and unconsumed alcoholic beverages in a motor vehicle is a misdemeanor in Michigan. Invariably, after these persons flunked the preliminary breath tests (PBT) and were arrested, the open alcoholic beverages were emptied. In none of these cases was this extra charge filed against the drivers. According to the police officers, the extra charges was not "needed for conviction", as the evidence of drunken driving was sufficient.

Similar circumstances were found in those cases involving minors suspected of drunk driving, both in the sample and of those observed personally. Under Michigan law, persons under the age of 21 may not legally possess or consume alcoholic beverages; to do so is a misdemeanor offense. Two separate charges can be brought in such circumstances: minor in possession of alcohol (MIP) or minor under the influence of alcohol (MUI). Neither of these charges were filed against any of the minors found in the

sample nor any of the minors observed being arrested. The rationale offered by the police officers was the same as for the open intoxicant charge: it was not needed for conviction due to sufficient evidence of drunk driving. These items are of particular interest, as the implication is that local police officers have confidence in the PBT as a reliable tool, which produces satisfactory evidence to sustain charges. This may also be an indication of the officers' reluctance to do more paperwork than is necessary to produce an ultimate conviction of some sort.

Another item of anecdotal interest concerned general deterrence and public education as to the risks involved in drunk driving. Media publicity and word-of-mouth in Grand Traverse County have created the impression among the populace that drunk driving will result in arrest and conviction. Hearsay information in the community has also stressed the stiff penalties associated with drunk driving, especially publication of one's name as a convicted drunk driver. Certainly, many people seem to be aware of the local reputation of being "tough" on drunk drivers, just as many people seem to approve of this.

Section Five: Future Research

For this writer, it would be of particular interest to further investigate local control efforts to determine whether these efforts are being sustained. Arrests in 1985

apparently declined to 454 for the year, a 64.8% decrease over 1984, but still a relatively high number of arrests as compared to before the new law. It would also be of interest to examine more closely the issue of general deterrence, to determine whether deterrence has been achieved and maintained. An examination of other case processing details might provide information on processing time or on correlations between demographic particulars and sentences, for example. The success of local alcohol treatment programs should be investigated, as well as recidivism rates. Most of this research would require sophisticated and expensive work, far beyond the resources of this writer at this time. It is the opinion of this writer, that such work would be valuable, however, if only because evidence of success will encourage the continued efforts of the local justice system.

APPENDICES

APPENDIX A

DATA COLLECTION FORM FOR DRUNK DRIVER PROFILE: GRAND TRAVERSE COUNTY

DATE _____

Page _____ of _____

[illegible]

APPENDIX B

INMATE RECORD

Complaint #

GRAND TRAVERSE CO. SHERIFF DEPT. CORRECTIONAL FACILITY										TIME IN		NIL NO IN NIL NO OUT		J.							
LAST NAME				FIRST				MIDDLE				CRIME CLASS		LOCATION OF VEHICLE		WARRANT NO					
NICKNAME OR ALIAS										CHARGE											
ADDRESS										LOCATION OF CRIME											
RESIDENCE PHONE				PREVIOUS ADDRESS						ACCOMPLICE (NAME)											
OPER OR CHAUF LIC NO						SOCIAL SEC NO				WHERE ARRESTED											
COMPLEXION		DOB		RACE		SEX		AGE		CITIZEN SHIP		SIGNATURE OF ARRESTING OR TRANS OFFICER									
HEIGHT		WEIGHT		EYES		HAIR		PLACE OF BIRTH				ARRESTING AUTHORITY									
												SHERIFF		STATE POLICE		TCPO		OTHER			
BUILD		SCARS OR MARKS								PREVIOUSLY ARRESTED											
MILITARY SERVICE						SERVICE NO				SIGNATURE OF BOOKING OFFICER				DATE		TIME					
ARMY		NAVY		USAF		OTHER															
CLASSIFIED										FINGER PRINTS		PHOTO TAKEN									
DATE		TIME				BY				YES		NO		YES		NO					
MARITAL STATUS						NO OF CHILDREN				LOCATION IN JAIL		INMATE CAN									
SINGLE		MARRIED		DIVORCED								READ		WRITE							
OCCUPATION										EMPLOYER'S NAME & ADDRESS											
MAKE OF CAR		YEAR		COLOR		MODEL				LICENSE NO		SHERIFF		COUNTY							
APPEARED BEFORE MAGISTRATE JUDGE										DATE				BOND							
TO APPEAR										DATE				TIME				JUDGE			
COURT		CASE NO		JUDGE		DATE		DISPOSITION				ATTY:									
RELEASE DATE										CREDIT				INITIALS							
										(IF F&C PAID)				GCOD TIME							
REASON FOR RELEASE																					
(TIME SERVED)				(TOT)		(COURT ORDER)				(posted bond)											
TOTAL TIME IN JAIL				FINAL RELEASE FROM JAIL																	
DAYS				DATE						TIME											

ADDITIONAL COURT DATA

COURT	APPEARED BEFORE	DATE	DISPOSITION

RELEASE CHECK-OFF

- | | | |
|--------------------------------|---|-------------------------------|
| ___ 1. LEIN check | ___ 6. Med.record
Visiting list | ___ 11. Sign booking
sheet |
| ___ 2. Mug & Print taken | ___ 7. Foul Wx gear (Fsect) | ___ 12. Meds if paid for |
| ___ 3. Towel, Greens, Mattress | ___ 8. MED. fee's paid | ___ 13. |
| ___ 4. Turn in Keys (F sect) | ___ 9. Refund Balance
of account | ___ 14. |
| ___ 5. Work fee's paid | ___ 10. GED & program
books returned | ___ 15. |

RELEASING PARTICULARS

NAME OF FACILITY	SIGNATURE AND TITLE	DATE	TIME
------------------	---------------------	------	------

INMATE'S PERSONAL PROPERTY

CASH	WATCH	() RING(S)	WALLET	OTHER
------	-------	-------------	--------	-------

CLOTHING

THE ABOVE REPRESENTS ALL THE CASH AND OTHER VALUABLES TURNED OVER TO THE SHERIFF'S DEPARTMENT OF THIS COUNTY AT THE TIME OF MY ADMITTANCE

I FURTHER AUTHORIZE THE SHERIFF OF THIS COUNTY OR HIS REPRESENTATIVE TO OPEN ALL MAIL AND PACKAGES DIRECTED TO ME AS LONG AS I AM AN INMATE IN THIS JAIL

SIGNATURE OF INMATE	DATE	TIME
---------------------	------	------

NAME OF RELATIVE OR PERSON TO BE NOTIFIED IN CASE OF EMERGENCY	ADDRESS OF RELATIVE
--	---------------------

I HAVE HAD THE OPPORTUNITY TO CONTACT MY FAMILY OR COUNSEL

SIGNATURE OF INMATE	DATE	TIME
---------------------	------	------

SIGNATURE OF INMATE AT RELEASE	DATE	TIME
--------------------------------	------	------

I HAVE RECEIVED THE BALANCE OF MONIES AND ALL OTHER PERSONAL PROPERTY LISTED ABOVE	SIGNATURE OF RELEASING OFFICER	DATE	TIME
--	--------------------------------	------	------

SIGNATURE OF PERSON RECEIVING PROPERTY	DATE	TIME
--	------	------

APPENDIX C

District Court for the Eighty-Sixth District of Michigan

Disposition Report — MISDEMEANORS

DATE _____ REPORT NO. _____ DOB _____ CASE NO. _____

DEFENDANT: _____ ATTORNEY: _____

ADDRESS: _____

OFFENSE: _____ DOB _____

AGENCY: CITY _____ SHERIFF _____ STATE _____ DNR _____ OTHER _____

PLEA: NOT GUILTY _____ MUTE _____ JURY TRIAL _____ NON JURY TRIAL _____

GUILTY _____ NO CONTEST _____ REFERRED TO PROBATION OFFICER _____

BOND: CONTINUED _____ REDUCED TO _____ RAISED TO _____

ATTORNEY: Requests Court-appointed Attorney _____ Has Own Attorney _____

/ REPAYMENT ORDERED _____

SENTENCING: NOW, THEREFORE, IT IS ORDERED THAT THE DEFENDANT:

1. Pay \$ _____ Fine, \$ _____ Costs. To be paid by _____ or serve _____ days in jail.
2. Serve _____ days in jail with credit for _____ days. Approved for CJA _____
3. Be on probation for _____ with conditions as required by law, and special conditions to be noted on probation order.
Court allows restricted driving privileges as on probation order.
_____ To attend, cooperate, and pay the fee of the Alcohol Information and Counseling Program.
_____ Not to operate a motor vehicle after having consumed one alcoholic beverage.
_____ Not to operate a motor vehicle for a period of _____
Any probation order signed by the court shall constitute the final judgment.
_____ Not to consume or be in possession of alcoholic beverages while on probation.
_____ Not to enter establishment where alcohol sold by glass during probation.
_____ Defendant failed to appear as ordered for _____ ; Forfeit bond and issue Bench Warrant.

District Judge/Magistrate

APPENDIX D

Age Categories in the U. S. Census

1. under 10 years of age
2. 10-19 years of age
3. 20-29 years of age
4. 30-39 years of age
5. 40-49 years of age
6. 50-59 years of age
7. 60-69 years of age
8. over 69 years of age

Occupation Categories in the U. S. Census

1. professional: includes managers, administrators, lawyers, doctors, engineers, teachers, et alii.
2. semi-professional: includes nurses, secretaries, salesmen, technicians, et alii.
3. service: includes store clerks, food service, janitors, drivers, police, fire fighters, maintenance, et alii.
4. farm: includes farming, forestry, mining, fishermen, et alii.
5. skilled labor: includes precision production and crafts, construction, mechanics, et alii.
6. unskilled labor: includes general factory production and other unskilled labor.

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