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16. Abstract

This, the second such symposium explored ways to make traffic offense adjudication more highway safety effective. State highway safety officials from 10 primarily eastern States, as well as national experts, were in attendance at the symposium conducted November 1973 in New York City, New York. The symposium highlighted the relationship between traffic violations and highway accidents; the advisability of implementing administrative hearings to supplement or replace traffic court adjudication; the need for change in the traffic law system; improved rehabilitation techniques for problem drivers; and innovative approaches in handling problem drinker drivers.

The University of Denver College of Law was assisted in its work by Governors' Highway Safety Representatives from all participating States, Colorado U.S. Federal District Court Judge Sherman G. Finesilver and University of Florida Professor of Law Joseph W. Little.

State discussion groups focused on critical driver control problem areas and developed remedial plans of action. It was recognized that traffic law and adjudication aspects of highway safety require renewed attention. There is a great need for research and innovation. Special legislation should be enacted to allow experimentation in improved traffic case disposition methods and additional symposia conducted for wide dissemination of traffic law/adjudication/highway safety material.

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KEYNOTE ADDRESS

John T. Barnum

It is a pleasure for me to welcome you to the Symposium on Effective Highway Safety Adjudication. I was privileged to serve as Chairman of the National Highway Safety Advisory Committee when the Committee's Task Force on Adjudication submitted its final report in May of this year. The Task Force has blazed a path to meaningful changes in traffic adjudication, and their report is an invaluable document to the States, the Department of Transportation and its National Highway Traffic Safety Administration. Judge Sherman Finesilver, Chairman of the Task Force while the report was in preparation, will present the report to this symposium. The findings, conclusions and recommendations of the Task Force should be a useful guide for your deliberations.

Those of you who are delegates from the District of Columbia and the States of Florida, Maryland, Michigan, Missouri, New Jersey, New York, Ohio, Pennsylvania, and Rhode Island are government leaders and interested citizens. You have both the power and commitment to bring about meaningful change in traffic law adjudication. You are the catalysts in State and local government who can first decide what changes are necessary and then make them happen.

The symposium is designed to assist you in that mission. It will emphasize development and implementation of State goals. Your States have already demonstrated an interest in addressing those problems. A free exchange of ideas here should further help you to find ways to improve traffic offense adjudication.

The Secretary of Transportation pointed out in a recent speech that highway safety is properly a State and local responsibility. The Federal role, he emphasized, is a mixture of "advisory, regulatory, legislative, and fiscal actions." This symposium provides such advice--thanks largely to the Task Force. The highway safety program standards, especially those on Codes and Laws, Police Traffic Services, and Traffic Courts provide regulation. The Highway Safety Act of 1973 legislates demonstration projects for the administrative processing of traffic infractions. The Department's grant and demonstration programs provide fiscal help. The new Special Adjudication for Enforcement (SAFE) program is an example.

But in the area of highway safety the Feds are merely wholesalers of some of the basic ingredients. What we deliver, you in the States must mix and finish and distribute. And sell. Only through these joint efforts will we make driving safer.

Every year more drivers occupy more motor vehicles and travel more miles. The rural death rate is twice as high as the urban death rate, and rural speeds are increasing. More drivers are among the youngest and oldest age brackets. Most serious of all are the statistics which show that per capita consumption of alcohol rose 23 1/2 percent between 1967 and 1972. Alcohol clearly remains the number one highway killer.

And the energy crisis isn't going to solve the problem for us. Speed limits and gas rationing may make the statistics look better for a while, but better statistics create their own problem; they will tend to lull people into thinking that the danger is going away and that nothing more needs to be done. You and I know that's not true, but we will probably have to work harder to sell highway safety.

While the unsafe highway environment and defective vehicles still cause automobile crashes, driver error is by far the largest culprit we have to collar. Improper driving is involved in four-fifths of all crashes. Poorly understood and non-uniform traffic laws, lack of enforcement by police or courts, and failure to retrain problem drivers contribute to the problem.

Human behavior is hard to change. Witness seat belts. Use of three point safety belts would save more lives than any other single measure, including driver control programs. We are attempting to persuade states to legislate the mandatory use of belts. The 1973 Highway Safety Act provides a monetary incentive for adoption of mandatory laws.

And this is a fertile field to plow. I am sure you are all aware of the Australian experience, but perhaps you have not yet heard of the results in France last summer of the introduction of speed limits and seat belt laws. Christian Gerondeau--"Mister Highway Safety" in France--told me last month that highway deaths fell 16 percent in July, August, and September.

But in America the results are not very encouraging. Puerto Rico has a mandatory seat belt law, and the New Jersey legislature is halfway there. And that's just about all the good news.

The major question for this symposium is: Where should the States and communities commit their resources to improve highway safety through driver control programs? Certainly strict enforcement of traffic laws has great accident reduction potential. Selective Traffic Enforcement Programs (STEP) and Fatal Accident Reduction Enforcement (FARE) projects are testing police enforcement countermeasures. The 35 Alcohol Safety Action Projects around the country are aimed at getting the drunk driver off the road. The use of effective blood-alcohol content testing methods, including pre-arrest breath testing in a number of States, has increased drunk driving arrests. For the first time many of the Nation's lower criminal courts have been given the vital investigation tool to assist in identification and sentencing of problem drinker drivers. And this is where our symposium comes in.

Crucial to all of the Department of Transportation's special driver control demonstration efforts is the adjudication and sentencing of traffic violators. Adjudication serves as the balance wheel in the traffic law system. It also provides the constitutional due process necessary for a nation ruled by law. The serious plight of the Nation's lower criminal courts is largely due to their processing extensive petty offense caseloads, dominated by a high percentage of traffic cases. This situation has been eloquently described in a number of commission reports, including the President's Commission on Law Enforcement and the Administration of Justice in 1967 and the Advisory Commission on Intergovernmental Relations on "State-Local Relations in the Criminal Justice System" in 1971.

Only recently, however, have these needs started to be translated into meaningful action. Earlier this year the National Highway Safety Advisory Committee's Ad Hoc Task Force on Adjudication concluded that traffic offense handling, as presently constituted, has made little contribution toward the promotion of traffic safety and the improvement of driver behavior. The Task Force was especially critical of traditional criminal court traffic case processing. It concluded that the reclassification of lower risk traffic offenses from crimes to traffic infractions, and the establishment of court ordered rehabilitation efforts are essential to improving highway safety. The National Advisory Commission on Criminal Justice Standards and Goals has reached the same conclusion.

Especially significant to me, as a lawyer, was the all-lawyer Task Force's belief that the recommended traffic adjudication subsystem could reduce traffic accidents and fatalities far more than the customary court adjudication process. No longer should traffic adjudication be a disinterested bystander involved only in legal niceties. Rather, it must become involved

directly in the struggle for improved highway safety.

Particularly encouraging to me are the tentative draft Standards Relating to Court Organization of the American Bar Association's Commission on Standards of Judicial Administration. These provide for processing of "non-criminal traffic cases" by judicial officers who are not full-fledged judges. The ABA Commission underlined the view that smaller criminal cases "require different legal skills, experience, and authority, particularly the capacity to function fairly and efficiently in handling large volumes of cases."

Traffic case adjudication must be both streamlined and designed to modify negligent driver behavior. It is axiomatic that the more habitual a traffic offender becomes, the more difficult it is to modify his behavior. Some success has occurred in reducing violation recidivism through driver improvement programs.

The States face a tremendous challenge to develop traffic adjudication and driver improvement programs that reduce crashes. However, we much recognize that, in spite of increases in funds and improved methods of treatment, there will remain a small group of extremely reckless drivers. Severe measures must be taken to remove excessively negligent and habitual drinking drivers from the highways. Most State laws provide for mandatory jail sentences for those convicted of driving with a suspended or revoked license or second or third offense drunk driving. Most States also mandate suspension of licenses of persons convicted for drunk driving. Research conducted on the subsequent violation and accident records of drivers mandatorily suspended demonstrate that these suspensions are highway safety effective. Thirteen States, including Florida, Ohio, and Rhode Island, have enacted the ultimate reckless driver law called the habitual offender act. The various State laws are based on the original habitual offender law passed in Virginia in 1968. Under the Virginia law, drivers who have accumulated within any ten-year peiod a record of convictions of three serious violations or twelve lesser violations, or of any combination, are subject to a court order indefinitely revoking their driving privileges. License reinstatement is allowed on petition after ten years. Any driver who is convicted of driving during this period of revocation is a felon and can be sentenced to the penitentiary for a term not to exceed five years. It is extremely important that the courts enforce these laws.

The new National Highway Traffic Safety Administration's Special Adjudication for Enforcement project, with its first site in Seattle, Washington, provides for the testing and evaluation of non-criminal case processing integrated

with driver improvement efforts. It contains elements which can guide us in achieving effective highway safety adjudication. Maximum violation deterrence is practical through speedy and inexpensive trials without jury or counsel. Trials of persons accused of serious offenses, both traffic and criminal, are expedited through reduced caseload. Implementation of driver license sanction and retraining and rehabilitation measures are improved by integration with adjudication. Driver control features of State highway safety programs are strengthened by pooling resources and improving system management.

Scheduled to speak about the challenge of advanced traffic adjudication and driver improvement programs are authorities from around the Nation. Mr. Ron Coppin will discuss California's advanced driver improvement programs and evaluation. Dr. B. J. Campbell of the Highway Safety Research Center in North Carolina will present his research on statistical association between past and future accidents and violations. Dr. Leon Goldstein, former special assistant to the Director of the National Transportation Safety Board, will review his perspectives on problem drivers. Messrs. Blumenthal and Ross of the University of Denver College of Law will introduce their findings on the effect of traffic law sanctions on highway safety. The special leadership given by the State of New York under the able guidance of former Commissioner of Motor Vehicles, and now president of the National Safety Council, Vincent L. Tofany, in the establishment of administrative adjudication of traffic infractions will receive special attention.

Over the next three days, you, ladies and gentlemen, will be participating in work sessions. These will provide you with the latest research information on effective adjudication and driver improvement. I know you will find these sessions highly provocative and productive. When you return to your States and communities to carry out your statements of goals, I trust you will begin to encourage the development of habitually safe drivers on our Nation's highways.

HIGHWAY SAFETY ADJUDICATION: OVERVIEW AND ORIENTATION

Joseph W. Little

While our nation reposes the achievement of a number of goals in its highway transportation system, I will pose two specific goals that will form the cornerstone of our deliberation. My statement of the primary goals of our highway transportation system is:

First, a system of safe highways meaning fewer crashes, fewer deaths, fewer injuries and fewer dollars lost in wasteful mayhem than is now occurring; and,

Second, an optimally effective system in its capacity to meet traffic demands expeditiously and efficiently.

We all realize now that our nation's highway transportation system represents a highly complex operation far exceeding our present ability to understand and manage. Nevertheless, we have successfully broken the system into an operationally meaningful structure that has helped us better understand and begin to manage the entire system. The components of that structure may be defined as:

1. Vehicle capabilities and performance;
2. Roadway capabilities and performance;
3. Traffic control capabilities and performance, including traffic laws and enforcement, and adjudication; and
4. Driver capabilities and performance.

Optimally, each component will be well matched to each of the others to produce a totally tuned system that will be both safe and effective.

The materials distributed in preparation of the symposium suggest that we examine the matching of the traffic offense adjudicatory system to the operation of the remaining components. In examining the status of the match, or of the mismatch if that be found, one can then evaluate to what extent the traffic offense adjudicatory system is pulling its weight, or failing to do so, in attaining the nation's goals as manifested in the highway transportation system.

It is no secret to anyone in attendance that some people believe the various matchups are haywire. Without prejudicing the subject of our symposium one way or the other, one can illustrate this kind of malfunction with the findings of a recently published study on "Highway Safety, Design and Operations." This study was a product of the House Committee on Public Works and was published in July 1973. This study evaluated the matchup between the roadway component and the driver and traffic control components of the total system. Some of the findings are almost incredible in content, and, yet, will not be suprising to highway drivers.

For example, the report very strongly depreciates the present state of highway signing. In numerous instances, including many on our experienced inter-state highways, the roadway design signing system simply places unreachable demands upon much of the driving population. Of course, vehicle performance speed laws also enter this colossal mismatch.

Most people are probably nodding and thinking - so what else is new? The what else that is new to me is the truly unbelieveable part. It is this. The formula presently used to determine the size of highway symbols produces signs that are too small to be read by 20% of the driving population in time to take the action indicated by the sign! In short, our best highways are being deliberately designed and built to standards that produce a positive mismatch between driver capabilities and the capabilities of the roadway, vehicle and traffic law components of the total system.

One other vignette from the Highway Safety, Design and Operations report is worth recounting. A new type sign structure has been designed for the express purpose of saving the lives of people who happen to run into them. These devices are popularly known as "breakaway" signs and they have a good performance record in many installations. Lives have been saved. But the study also found that a very curious thing happens when breakaway signs are broken away too often. Budget conscious maintenance engineers look for ways of protecting them. And this protective urge sometimes leads to the installation of guardrails to fend off vehicles from the breakaway signs. And, finally, believe it or not, there are recorded instances of drivers being killed by impaling their vehicles on guardrails installed to protect breakaway signs. The report does not indicate whether or not the sign came through unscratched.

The last episode indicates a failure of the system through internal corruption because something in the guts of the system went wrong. Someone either is not aware of total goals, or is incapable or unwilling to carry them out.

As one who has studied a little part of the traffic offense adjudicatory system I can say that this component of the total traffic system also suffers internal breakdown. It is the correction of these malfunctions that poses a set of secondary goals that can be outlined briefly as follows:

(1) Cut out the long delays in the adjudicatory process. Delays are caused by too many cases, too few personnel, and the intentional subversion of the system to the benefit of individual offenders. This results in a delay of justice done, and, assuming some theory of deterence actually functions, a dilution of the deterent effect of any penalty that is finally imposed. Hence, all the expected driver control benefits are lost to a corrupted system.

(2) Remove the burden of congestion from our courts. Traffic makes up 80% to 90% of total docketed cases in our courts. Not only do these cases delay the adjudication of all cases in many jurisdictions but they also preempt the employment of legal, judicial and law enforcement talent in endeavors that are relatively low in productivity and challenge; the question can be asked as to whether this is the best employment of vehicle resources.

(3) Remove all non-highway system goals from traffic law enforcement. In times not too distant, past traffic offenses were seen as a revenue generator in many communities. While that practice died a justified death in many localities and was seemingly struck a death knell by the Supreme Court last term, the old fee system is still alive and well in other jurisdictions. What once supported the entire general government may now be keeping a job going for two or three people: a judge, a clerk and a stenographer.

In no way can the philosophy that perpetuates such an operation also produce the primary goals of safe and efficient transportation.

It is our mission during the next 3 days to examine closely the matchup of the present traffic offense adjudicatory system. You are going to be asked to ferret out the assumptions and premises that are inherent to the present system and then you are going to be asked to shake these assump-

tions and premises until their eye teeth rattle to test whether they are embedded in a solid foundation. You are going to be asked to pit new ideas against the old and attempt optional traffic offense adjudicatory system matchup. Finally, you will be asked to conclude this conference with a charge that will lead the way for implementing new and better ideas across the land.

HIGHWAY TRAFFIC SAFETY SYSTEM OVERVIEW

George Hartman

INTRODUCTION

I hardly need to remind you that this nation enjoys more mobility and, with a high degree of regional specialization, needs more mobility than any other nation in the world.

While we speak glowingly of air jet travel, of travel to the moon, and of things to come, the simple fact is that the tremendous mobility we enjoy is by way of land, the highway and, more specifically, the personal automobile. As evidence of this, our statistical friends point out that about 98% of all personal trips today are by highway, 85% of the total by personal automobile alone.

Further, of the nation's total transportation bill, estimated at over $200 billion in 1973, some 80% is highway oriented.

The trend during the first part of this decade continues to accentuate the fact that motor vehicles are our mode of travel. Vehicle registrations this year will exceed 125 million, of which nearly 85% are automobiles. We have reached the point in national affluence now where the number of vehicle registrations exceed the number of licensed drivers. If present trends continue without constraint, we estimate that by 1980 there will be on our highways some 145 million vehicles and 135 million drivers.

The number of miles driven also is a critical factor because vehicular miles of travel is an index of our mobility, the trend in miles travelled has been steadily upward, regardless of changes in the business cycle. In 1972, the mileage reached 1.27 trillion, a 30% increase over that of 1967. A couple of years back we forecast that total highway travel in 1980 would range from 1.5 to 1.7 trillion miles. This projection was based on an annual average increase of a low 2.3% to a high 4.4%. The 1970 to 1971 actual increase was 5.9% and the 1971 to 1972 increase was 6.9%! The demand for more and more resources, gasoline, steel, rubber, glass, plastics, and other

materials, will be greater and greater unless substantial constraints are used to arrest the trend.

We see increasingly a greater mix of vehicle sizes and weights and types on the highway today. Motorcycle registration and bicycle usage have been climbing rapidly. Truck sizes and style varieties are increasing. The growth of different kinds of recreational vehicles has been near phenomenal. The sale of compact/subcompact automobiles has been sharply upward. If past and current trends continue, overall we may expect to find the share of compact and subcompact cars approaching 50% of the total vehicle population by 1980. This will create a greater probability of crash involvement between vehicles of disparate mass and therefore tend to increase the likelihood of serious injury to occupants of the small car.

When we look at the driver we see further evidence of a very motor vehicle oriented society. The great majority of drivers regard driving as a right rather than a privilege. The courts hold otherwise, but other institutions, notably the Public School System, unwittingly encourage this notion with the "driver education for everyone" principle. This "right" is so thoroughly engrained we hesitate or even refuse to withdraw it when the driver indulges in such dangerous excesses as intoxication and high speed, both of which are on the increase and further jeopardize safe travel.

So we see that highway travel is very much a way of life for the Nation; that it renders essential as well as nonessential services for most if not all of us. Yet the system is not without serious fault, the major penalties being death, injuries, and property damage through accidents. The cost of these accidents to society is high, running into the tens of billions of dollars each year.

THE GOALS AND OBJECTIVES OF HIGHWAY SAFETY

Congress through the separate Motor Vehicle and Highway Safety Acts of 1966 decreed there was an unreasonable number of injuries and fatalities on the highway and authorized a national program to reduce these losses. But Congress did not set a specific goal to be achieved, i.e., a definitive reduction or absolute level of fatalities and injuries. The comprehensive national program developed in response to the Congressional mandate has taken as its goal the reduction in risk of highway travel but without undue restraint on mobility and without incurring unreasonable cost. Hence, the highway safety problem can be viewed as a trade off among risk, mobility, and cost. The goal, then, may be restated as being

to achieve the greatest reduction of injury-producing accidents per unit resource expended with the least impact on mobility.

ACCOMPLISHING THE GOAL

In order to accomplish the goal it is necessary to obtain some control over one or more elements of the highway traffic system. The system to be controlled is the roadway environment, vehicle, driver and pedestrian. Accidents represent a breakdown or failure of the system. Any highway-vehicle-human combination is conditionally safe and unsafe. Accidents occur when the control system is faulty at the wrong time and place. The key to the most efficient way of lowering risk-avoiding accidents or reducing severity of accidents is through careful identification and correction of the high-risk interactions among the components and subcomponents of the control system.

In addition to reducing risk per unit exposure, reduction in exposure itself is an effective method of reducing traffic losses. This can be accomplished by either transferring travel to other modes of transportation or by reducing the total amount of travel. Until most recently, reducing the risk per unit exposure has been unquestionably preferred. Now, however, with the environmental and energy crunch, more serious thought is being given to other alternatives, especially those that would curtail the total amount of travel. Carpooling, gas rationing, and selective taxes on fuel, vehicles, and commuters are being promoted, to name a few.

THE HIGHWAY SAFETY PROBLEM

Obviously the time has arrived to consider constraints to our method of travel. Whether we act or not, the highway safety problem will continue, if not become more serious. Certainly automobile sales have increased substantially in the past two or so years, suggesting strongly that the American people have not abandoned their love for the personal automobile. Change will come, but it will take directed, strong effort.

Last year this country experienced some 57,000 fatalities. Fifty-eight thousand are projected for 1973. Highway accidents rank sixth among the leading causes of death in the United States, outranked only by heart disease, cancer, stroke, pneumonia, and non-motor vehicle accidents grouped together. Highway accidents take a disproportionate toll among the younger age elements of our society: they rank first among the causes of death in the 15-24 year old age group. Thus, highway

fatalities take on significance beyond high numbers by virtue of their being more life extinguishing than life ending events.

I have pointed out that fatalities are expected to increase by 1,000 this year over 1972. Based on past and present trends in travel and on evaluation of characteristics of associated risk factors, unless vigorous application is made of counter-measures available to us at present, and if no new measures are taken, fatalities could easily increase to 75,000 or more by 1980. Let us look at trends in some of the risk factors other than miles of travel, vehicles, and drivers that I have already touched on.

ALCOHOL

In the absence of strong deterrents, alcohol-related fatalities may be expected to increase. The per capita consumption of alcohol has been increasing at a rate of 2% annually. If the trend continues to 1980, it may be expected that more drivers will drink or that drinking drivers will drink more, or both. If nothing more is done than is currently being achieved, alcohol involvement in fatal crashes may rise from an estimated 55 percent to 65 percent by 1980. This translated to an estimated 5-10,000 additional fatalities by 1980.

SPEED

Historically, there has been an increase in average speed of vehicles on our highways. Projections indicate an increase of 4 MPH between 1970-1980. Additionally, variant speed tends also to increase with increased average travel speeds. Studies indicate that accidents and injury severity increase under these circumstances.

DRIVING TIME

An increase in fatalities may be expected with an anticipated increase in night driving and weekend driving which offer comparatively more adverse travel conditions than weekday and daylight. A four-day week and increasing recreational travel will increasingly impact such conditions in the future.

CAUSES OF AUTOMOBILE ACCIDENTS

The causes of motor vehicle accidents are many. Few accidents that occur on our highways result from a single cause. To understand accident causation multi-factor analysis must be employed. Driver error, motor vehicle defects, pedestrian inattention, and environmental difficulties or obstacles are all involved. A recently-completed study found that about 80% of all accidents were directly associated with driving faults. The young driver is known to have an over-involvement in injury-producing accidents. It is the alcohol in the driver or the pedestrian, not the alcohol in the radiator, that has a high over-involvement with fatal or severe accidents. It is the driver, not the vehicle, that speeds for the most part. It is the driver who fails to buckle up or who takes inordinate risks. Significant improvements have been and are being made to make the motor vehicle, the roadway and the roadway environment safer. A greatly stepped-up effort must be made to improve driver attitudes and habits. Unless we tackle the highway safety problem in a more effective manner, we are going to make little dent in the level of injuries and fatalities. Unless we clarify the objectives of our efforts to avoid accidents and reduce the severity of accidents that occur; unless we set our actions effectively to reach the objectives of risk reduction in highway travel, we shall reach the non-objective of 75,000 fatalities and a proportionate number of injuries annually by 1980.

TRAFFIC ADJUDICATION AND HIGHWAY SAFETY

A prime purpose of the Symposium on Effective Highway Safety Adjudication is to explore ways of making the adjudication process more highway safety effective. What are the objectives of adjudication? Is an immediate objective to reduce the backlog of cases that are clogging up the court system? Is the goal of effective adjudication of traffic offenses to reduce the risk of highway travel? To help develop better driver attitudes and habits thus resulting in fewer accidents? Will efficient and fair disposition of citations of traffic violations generate respect for traffic laws? Can the adjudication process provide direct influence on the safety problem?

Are we spinning our wheels? Is there any safety relationship between traffic laws, law violations, traffic court adjudication and severe highway accidents? With the objective of reducing injuries and fatalities on the highway, how can the traffic law system be made more effective per unit of expenditure? What proxy measures can be used to measure the effectiveness of various sub-components of the system? What specific

countermeasures in adjudication can most effectively be used to reduce the high risk or exposure of specific groups of drivers?

Such questions themselves of course do not supply the guidance needed to make adjudication a more effective element in the highway safety process. However, as we begin to answer some of these questions, the role and objectives of adjudication in highway safety will become clearer.

THE RELATION OF THE HIGHWAY TO TRAFFIC SAFETY

Arnold G. Fisch

INTRODUCTION

This is a summary of the 46-page report "HIGHWAY SAFETY, DESIGN AND OPERATIONS" prepared by the Subcommittee on Investigations and Review of the Committee on Public Works of the House of Representatives. This report is included in your folder of materials, and I urge you to read it when you get home if you do not have the opportunity to read it during the Symposium. The report is based on testimony at hearings conducted over a period of six years from 1967 through 1972. The transcript of those hearings has been published in four volumes, consisting of 2,616 pages of testimony and exhibits. These four volumes are:

ROADSIDE HAZARDS, 1967	1243 pp.
FREEWAY SIGNING & RELATED GEOMETRICS, 1968	661
WET WEATHER PERFORMANCE, STUDDED TIRES, LACK OF UNIFORM TRAFFIC LAWS, 1971	314
OPERATIONAL DEFICIENCIES, 1972	398

One additional volume has been published since the summary, NARROW BRIDGES & DRIVER DILEMMAS, 1973, consisting of 206 pages. The work of the Subcommittee is not finished, and additional hearings in the field of highway safety are planned.

A careful reading of the summary will lead you to the inevitable conclusion that many of our single-vehicle and a number of our multi-vehicle collisions can be blamed in part on three causes:

> Failure on the part of the highway engineers to keep pace with the problems of freeway driving, and revise their design standards accordingly.
>
> Failure of the Federal Highway Administration and the State Highway Departments to insist on the use of known safety designs.
>
> Apathy on the part of individual motorists, legislators, and the general public to the

highway death toll, the proper maintenance of their vehicles, the failure of government to provide safer highways, and the need for highway safety versus other social needs.

ROADSIDE HAZARDS

The lead-off witness at these hearings was Joseph Linko, a New York City television repairman, who, in the course of his travels throughout the city in connection with this business, observed many collisions with fixed objects, and started taking photographs of those collisions and other unprotected or unnecessary fixed object hazards. These included guardrail ends which speared vehicles that swerved from the roadway, heavy concrete sign stanchions and utility poles located within a few feet of the roadway edge and left exposed, exposed concrete and steel sign supports being erected in core areas of freeway exits, and rigid light poles in extremely vulnerable spots being hit and replaced time and time again in the same fashion. Testimony by other witnesses supported that of the New York repairman. Many hundreds of miles of new Interstate highways, located in all parts of the country, had been and were being decked out with expensive roadside appurtenances that violated basic engineering and physical laws, professional manuals and directives, and contributed to highway disasters. The mistakes of the past have been carried over, repeatedly and consistently, to even our newest roads.

To quote from the report: "Interstate Route 495, the 66-mile Capital Beltway that circles Washington, D.C., in nearby Maryland and Virginia, was shown to be typical of the scores of Interstate highways investigated by the Subcommittee staff. The Beltway's Woodrow Wilson Bridge, spanning the Potomac River south of Washington, was shown to be a classic case of how designers failed to provide for the normal behavior of motorists and their machines. To save money, the mile-long bridge was constructed without shoulders, despite the fact that planners knew from statistical data that three to five vehicles would break down in the heavy traffic on the bridge every day. Additionally, the only separation between opposing lanes of traffic was a median curb, four feet wide and nine inches high. There was no guardrail to prevent out-of-control vehicles from hurtling this low center curb"

I would note here that that bridge was probably designed in accordance with AASHO standards which do not require a shoulder on "long" bridges on the Interstate system. From the standpoint of freeway operations, there is no such thing as a "long" bridge. It is just part of the total

freeway mileage supported on a structure instead of directly on mother earth. In addition to the design failure, there is also the failure on the part of the motorist. Three to five breakdowns per day on a one-mile section of highway is a sad commentary on the manner in which motorists maintain their vehicles. Perhaps such breakdowns, when they are the result of poor vehicle maintenance, should be considered a reckless driving offense.

There has been a long history of neglect with regard to roadside hazards. In 1938, a Bureau of Public Roads official stated: "Practically any road can be driven without mishap, provided everyone who uses it drives properly; but ample evidence demonstrates that everyone does not drive properly and a safe highway must provide a factor of safety for those who are forced off the surface by the faulty action of another driver." Unfortunately, as stated by one witness, it appears that the philosophy of many highway engineers has been: "Leave my paved surface and you have to put up with whatever is there and it is your own fault." The motorist forced off the road by someone else should not have to suffer because of design deficiencies. One witness succeeded in succinctly stating the need to be aware of human behavioral frailties in design and maintenance when he called for engineering "a forgiving quality" into the roadside. This is a sensible suggestion that perhaps has relevance in other parts of our sometimes harsh, adversary society. A "forgiving quality."

The Subcommittee's revelations have been instrumental in thousands of safety-related corrections being made throughout the new Interstate system, at a cost from 1967 through 1971 of $383,178,313.00, truly a sad commentary on wise stewardship of the taxpayers' dollars. Unfortunately, a safer roadside environment probably could have been achieved in past years without much greater initial outlays if Federal and State highway agencies and organizations like AASHO had been able to approach the highway program with more knowledge of and regard for human factors.

Witnesses were in general agreement that doing it right in the first place is frequently no more expensive in terms of initial dollar outlay. Signs frequently have been located within less than a hundred feet of an existing overpass--where the same information could have been hung at much less cost and without creating a dangerous obstacle on each side of the road. To quote from the report: "It is imperative that overall and not just initial costs of sometimes expensive safety-related design be considered. A thousand or a million dollars in construction costs are not 'saved' in any sense if subsequent losses through accidents, lawsuits, and design corrections add up to more than the initial paper 'saving.' One way or another, society pays for doing it wrong--and often

many times over."

In addition to the failure of the highway engineering profession to anticipate the problems of freeway driving, and design freeways accordingly, there has been an attitudinal barrier on the part of the general public. It generally has been apathetic about highway safety and emphasis in the national highway program has been to "extend the pavement and not divert money to other uses." The Members of the Subcommittee believe that observation represents a true reflection of the American value system vis-a-vis the highway program. They state: "Even today, the Subcommittee is well aware of the desire of hundreds of thousands of rural citizens to acquire all-weather, hard surface roads to replace the dirt and gravel by-ways over which they must travel every day. It is all too clear that these needs compete for support with safety needs in the existing, imperfect highway environment."

The Subcommittee noted a strange reluctance on the part of some agencies, and officials, to adopt demonstrated life-saving measures, and criticized the Department of Transportation in these words: "The Department of Transportation and its Federal Highway Administration have had full authority to insist upon compliance with safety-related design features on projects throughout the Federal-aid highway system. They have been reluctant to exercise that authority, choosing instead to rely on persuasive techniques."

FREEWAY SIGNING AND RELATED GEOMETRICS

In opening this phase of the hearings, the Chairman of the Subcommittee stated: "We believe that signing is no less important than roadside hazards. Traffic signs and markings are supposed to regulate, warn, or guide motorists. They are supposed to supply a primary source of information which the driver needs to safely adjust his actions to highway conditions. Hesitation or confusion, particularly on high-speed highways, can create chaos and contribute to accidents."

Indecision and confusion contributed by elements of the environment can lead to serious accidents. However, the motorist has a definite responsibility not to contribute to his own indecision. He must plan his trip in advance, knowing exactly which route numbers or streets he will follow in order to reach his ultimate destination from his particular point of origin. If he is travelling on a freeway for a portion of the trip, he should know before he ever gets on the freeway specifically which exit, by name or number, he must use to get off. Maps are available to all, and the

failure to use them in trip planning should be considered a form of reckless driving, just as much as improper lane changing. In fact, improper trip planning often leads to sudden lane changing, as a motorist tries to make a sudden exit from a freeway that he has not planned for. No system of signing can possibly give information at each decision point for every motorist's separate ultimate destination.

Analyses by the staff of the Subcommittee indicated that inadequate signing and geometric design commonly have contributed to driver confusion and, as a result, to accidents. But from the testimony of witnesses, the Subcommittee could get no quantification of that contributing factor. The reason is that those factors do not show on the average police accident report. The main purpose of accident investigations has been to establish fault for punitive and for liability purposes. This has not been conducive to a scientific in-depth analysis or understanding of factors associated with crashes and the injuries and death that they produce.

Let me use school child protection as an example. A number of traffic engineers believe that the emphasis on school child protection is all wrong. Instead of teaching our children the principles of pedestrian safety which they should practice throughout their entire life, we give them a false sense of security by requiring that all traffic stop for stopped school buses. How many children have been struck alighting from other buses, when they did not have that artificial, but legal right-of-way? Several years ago, the New York State Department of Motor Vehicles, which has a good computer-based system of accident records, was asked how many children were involved in pedestrian accidents alighting from school buses, and how many were involved in such accidents alighting from other buses. The Department could tell us the number of buses involved in collisions, but not the number of bus-related pedestrian accidents. And yet, it is the latter data which is necessary in order to evaluate the contribution of the stopped school bus laws in relation to the safety of the individuals throughout their entire life span.

Our accident records must be improved to give answers to specific questions concerning individual locations and problems, rather than the historic bulk statistical reports.

To quote from the summary again, "Testimony taken during the hearings correctly emphasized the need to communicate with more than just'average' drivers in transmitting messages from the roadside. How many drivers are average? Millions of legally licensed individuals fall in the lowest percentiles in intelligence, vision, and psychomotor capability and yet are

all armed with the same lethal weapon--the automobile--as the most capable drivers." Does this say something to those of you who are responsible for our present driver licensing standards? Should every person be permitted to have a driver's license, regardless of his physical or mental limitations? There are very strict pistol permit laws in many states. The average citizen does not have the "right" to a pistol permit in those states. Yet more people are killed by motor vehicles than by pistols. Is it not time to consider whether every average citizen, and particularly the "below average" citizen has the "right" to a drivers license?

Tests among the driving population show that 20 percent of all motorists do not have vision good enough to read signs that meet present sign design standards. The simple answer would be to increase the size of the sign lettering, and therefore, the overall size of traffic signs. But would that really increase highway safety? Motorists with such poor vision have just as much difficulty in seeing children darting out from between parked cars, deer and other animals darting out from the sides of rural highways, and objects on the pavement within otherwise normal stopping distances. While we can make larger signs, at a price, we can't increase the size of other objects. Perhaps, upon reflection, the answer is to make passengers of that 20 percent of our drivers.

One of the operating problems testified to before the Subcommittee was that of wrong way driving on freeways. A California study showed that wrong-way entries and subsequent accidents could be reduced about 40 percent by signing. One disconcerting corollary to the California experience was testimony that of 80 drivers apprehended for driving on the wrong side of a freeway, 20 percent said that they were doing so deliberately! That is certainly an area that should be considered for severe penalties in our adjudication procedures.

While those lawyers in our audience may not agree with me, I believe that in traffic violations we should consider the spirit of the law or regulation, rather than the letter of the law. In one nearby suburban jurisdiction, a motorist was given a summons for exceeding the speed limit in a linear speed zone. In New York State, the State signing manual requires that a sign be placed at the start of a linear speed zone, and a confirming sign within 1000 feet of the first sign. The attorney for the motorist hired a surveyor to measure the distance between the two signs. It was found to be 1000.1 feet. The case was dismissed, not because the motorist was not speeding, but because the signs were not posted in accordance with the manual. And how much were the signs from complying? One tenth of a foot, approximately an

inch and a quarter. And for an inch and a quarter, the violator went free. What a wonderful way to breed disrespect for all traffic regulations, and eventually for all laws.

One of the witnesses to testify concerning geometric design was Jack E. Leisch, Vice President and Chief Highway Engineer of DeLeuw, Cather and Company, an internationally known firm of consulting engineers. His advice, "If you can't sign it, don't build it," should be etched across the top of every designer's drawing board. He urged that all interchanges have single, right-hand exit ramps. No matter how complicated an interchange may look in plan view on the drawing board, if the driver is faced with only one decision point at a time, and all exits are similar to the driver's view, then we have a simple interchange, as free of confusion as we can make it. Part of the difficulty which caused the dangerous maneuvers shown in the Subcommittee movie film of drivers on I-495 in the Washington area is the inability to properly sign two successive ramps at the same exit. This is not only poor design of a specific interchange, but often poor design in spacing two interchanges so close together. Signing can improve traffic operations in many locations, but we must realize that you cannot correct every design failure with signing.

On the value of built-in safety, an anonymous but very perceptive observer declared back in 1948:

> There is all too little realization of the advantage of built-in highway safety features. Built-in safety features are one-and-one-for-all-time corrections. In contrast, accident reductions produced by police patrolling and other enforcement measures, and those accomplished by education, are temporary and require continuing effort year-after-year and generation-after-generation. On highways with hazards built-in, there are only two alternatives so long as physical corrections are not made: We must (1) suffer year-after-year the high costs of extra policing, arrests, court actions, warning devices, and intensive education to induce persons to use an unsatisfactory highway environment so carefully as to cut the tolls. In either case, the human losses and costs capitalized would generally pay, or more than pay for the needed built-in features.

WET WEATHER PERFORMANCE

The Subcommittee was disturbed to learn of the large number of highway crashes that take place on wet pavements. Testimony showed the phenomenon of skidding to be widespread, occurring on roads from coast to coast. But some highway segments, because of the character of the road surface, poor drainage, sharp curves, or other design features have much higher rates of wet weather performance. The conditions at many of these spot locations can be corrected. When one curve on I-70S was banked properly and given a skid-resistant surface, at a total cost of $30,362.00, wet weather skidding accidents at that location dropped from an average of 18 a year to approximately one a year.

However, the skidding accidents would not have occurred either, if motorists had not been using the highway. It takes the combination of highway, vehicle and driver to produce most accidents. The Subcommittee noted: "While the thrust of six years of investigations and hearing has established the indisputable worth of recognizing the human being for what he is, and making the highway environment as hospitable and 'forgiving' of his mistakes and failures as possible, the individual through reasonable diligence and effort can enhance his own chances for survival in traffic. The problem of skidding on pavement surfaces is always a relative one. Almost any surface is going to be more slippery in wet weather than in dry. Under these circumstances, the driver needs to recognize almost automatically that additional precautions are necessary. Slowing for curves and freeway exits, eliminating abrupt changes in direction or speed, and providing a greater margin for error, his own and that of others--all of these are part of a mandate that falls on each motorist for personal and social benefit."

In the northern states, we have the same situation repeated year after year. On the day of the first snow fall we have a rash of fender-bender accidents, and some more serious ones. Motorists just will not adjust their speeds to winter conditions until they see a number of those accidents, none of which need have occurred if all drivers had slowed for winter.

Testimony indicated the questionable value of studded tires. While they provide additional traction on glare ice, such conditions represent only from two to five percent of all driving in the northern states. On the other hand, studded tires cause ruts in the pavement, resulting in higher maintenance costs, and often contribute to erratic driving and accidents. In dry weather, motorists tend to avoid the ruts, resulting in erratic lane changes or positioning within a

lane. In wet weather, accumulations of standing water in the ruts contribute to hydroplaning.

UNIFORM TRAFFIC LAWS

The series of hearings on the lack of uniformity in our legal system suggested part of the price we may be paying for failing to adopt more consistent and uniform ways of doing things in our motor vehicle transportation system. Nonuniform controls on the dashboard can get the driver in trouble in an unfamiliar car. Testimony showed how nonuniform signs and signals create confusion and uncertainty. So can nonuniform traffic laws. Anything that impedes the driver in his perception and performance potentially can contribute to highway crashes.

Much of the difficulty is due to state-to-state variations in the meaning of and driver obedience to traffic control devices. Included are such items as stop signs, yield signs, yellow signals, red signals, pedestrian right-of-way, and passing stopped school buses.

Evidence presented to the Subcommittee showed no great enthusiasm in the states for the cause of uniformity in motor vehicle laws. There is a general reluctance on the part of state legislators to undertake serious legislative campaigns in behalf of this rather unglamorous, highly technical, and politically unappealing task. Obviously, many legislatures do not understand the need for uniformity, don't have the time to devote to achieving it, or are philosophically opposed to championing something that bears the imprimatur, rightly or wrongly, of Washington 'diktat.'

OPERATIONAL DEFICIENCIES

In the final set of hearings the Subcommittee sought to focus on real-world traffic operations, examining the types of problems and dangers faced by the average driver as he travels throughout the nation's 3.7-million mile system of roads. It is truly a diverse system, ranging from modern, high-speed urban freeways that carry more than 200,000 vehicles a day to some of the rutted lanes of rural America that may carry less than a dozen. For the layman motorist it is one continuous and interconnected system in which boundaries are crossed and recrossed. He moves freely from one classification of highway to another, one political jurisdiction to another, often without any awareness at all or, at best, only a fleeting consciousness. Thus he contributes to his own confusion and

inability to cope with changing situations. There is no denying that this macro-system produces a wide variation in operational environments. Driving on the multi-lane Santa Monica Freeway is far different from driving along the gravel road from Palo to Toddville, Ohio. And yet, fools rush in where angels fear to tread, blissful in their transportation ignorance.

How well does the system serve the individual, the person caught up--wittingly or unwittingly--in the complex intermix of vehicles, roadways, signs and signals, noise and light, the down-to-earth world of traffic operations? Again, the testimony of witnesses dramatized an apparent overriding inability on the part of officials at all levels adequately to project themselves into the role of various types of highway users and to make the system compatible with their needs.

The Subcommittee heard in-depth testimony of conditions in and around Mansfield, Ohio, and a randomly selected county, Tate County, Mississippi. Those two locales are in no way unique. The conditions found in them exist in almost all of the 48 contiguous states.

Testimony offered throughout the hearing brought home to the Subcommittee the very real and fundamental value conflicts that must be faced in achieving safer highway operations. While it is easy for outsiders, bent upon demonstrating the humane need of making highway travel safer for all, to tell the Tate counties and the Mansfields of the nation what they should be doing, that message may fall on deaf ears if there are other substantial needs in the community that have not been met, or if there is the belief that large amounts of new tax money will be required.

In addition to the socio-economic considerations that vary from community to community, a broad range of environmental issues must be resolved in connection with highway construction and maintenance. At the same time highway safety advocates urge the removal of roadside trees to improve sight distance and to eliminate roadside hazards, environmentalists may advocate not only their retention, but the planting of new ones as well. In a nearby suburban county, the highway engineers wanted to remove a dead tree close to a parkway pavement which had been the scene of several accidents. At a public hearing, the environmentalists, or perhaps just bird lovers, insisted that the tree, even though dead, remain in its hazardous location because there was a bird's nest in it. That family of birds was more important than the human family that had run into the tree the night before, injuring three members of the family. Another type of misguided citizens is those who drive our highways with signs on their bumpers, 'I brake for animals.' These bumper stick-

ers are too small to be read at freeway operating speeds, and any sudden action on a high-speed highway is an invitation to trouble. Even in slow-moving city traffic, these well-intentioned but misguided individuals have often swerved into the opposing lane of traffic striking another car while avoiding a cat or dog, and have even lost control of their vehicles and run up on the sidewalk, striking and sometimes killing, innocent pedestrians. These pets should not be on the loose in our cities, but more importantly, an animal does not have an immortal soul, while a human being does.

For the purposes of the hearings, the Subcommittee defined an operational deficiency as any feature, or combination of features, of street or highway design, or of traffic control measures, which causes undue delay, hazard or confusion. Some major design deficiencies can be overcome only by widening pavements, rebuilding intersections, and claiming more land for the highway right-of-way. In the minds of some, this raises the spector of 'paving over the contryside.' On the other hand, many problems are quite resolvable. Some noncontroversial safety work is not getting done, for example, because there is a lack of understanding between local political jurisdictions as to who is responsible for the maintenance and repair of damaged appurtenances. Testimony suggested that the Federal Highway Administration has not done all that it could to insist upon a high level of safety-related maintenance.

Some funds are available for correcting deficiencies. One program is the "spot improvement program" designed to correct hazards on Federal-aid highways that experience large numbers of accidents. The Subcommittee asked the General Accounting Office to look at this eight-year program. To quote from the summary: "Almost predictably, the official GAO report and testimony by the Comptroller General were disturbing. The existing program was characterized as a rather low-level effort, languishing for a lack of aggressive governmental sponsorship in spite of its apparent life-saving, injury-reducing potential. The report also showed that in terms of lives saved, these spot improvements produced benefits five times greater than the same amount of money spent on conventional highway construction projects."

The apathy of the individual motorist, individual citizen, and the public as a whole was noted by the witnesses also in this final series of hearings. Let me cite some apathy statistics for just one highway. On the New York State Thruway in the year 1972 there were 91 deaths in 68 fatal accidents. Forty-one of the 91 were not wearing seat belts. Another 545 who were not wearing belts were injured. Ninety-one accidents were attributed to worn or defective tires, and 264 to blowouts. Nine hundred sixty-seven vehicles, or 2.7% of those inspected

at the toll booths, were denied entry to the Thruway because of obvious mechanical defects. These are items over which the motorist, and he alone, has control.

Individually and collectively we offer a great deal of lip service to the grandiose concept of "safety." But there has been far from universal agreement as to the price we have been willing to pay or the freedom we have been willing to surrender to achieve it. How many people "shop" for safety when buying a car, use available lap and shoulder belts, or forego alcohol when driving? What industry has voluntarily submitted to government regulations in the name of "safety?" How often does highway safety appear on lists of social goals espoused for the nation?

To quote from the summary, "Progress in protecting individuals from the carnage of the motor car must be achieved against this backdrop of ambivalence and apathy. The dedicated public servant must, in a sense, strive to protect the highway user and the pedestrian in the face of their classic indifference and non-cooperation. The challenge, the need, is to do the very best that we can within the parameters of the system as we find it, recognizing that there are no panaceas or explosive breakthroughs in the offing and that the public will more than likely remain passive and unaware of what we are trying to do."

FINDINGS AND CONCLUSIONS

The Subcommittee summarized the six years of hearings and staff investigations as follows:

> "The overriding message of the hearings is a distressing one. We must conclude, with regret, that hundreds of thousands of Americans have died on and along the highways of the nation not because we lacked the technology to save them, but because we lacked the will to apply it."
>
> "The life that ebbs away from heart disease, stroke or cancer often is lost because man has not yet crossed certain thresholds in medical and biological understanding. It is lost because it cannot be saved. But the life that is claimed by an unnecessary roadside hazard, a concealed rural intersection, or a freeway designed in such a way that it overtaxes a responsible driver is a life lost through indifference and ineptness."

"While we have paid collective lip service to the concept of safety, we have been quite willing to compromise it and to trade it away, out of ignorance or for other economic, social or psychic benefits."

"Safety has been so low on the value scale that we have been reluctant to establish appreciable institutional responsibility and accountability for it. Only in 1966 did the Congress enact comprehensive legislation fixing the Federal responsibility in the Department of Transportation and mandating the issuance of vehicle and highway safety standards."

"During the hearings, an appeal was heard for insistence upon professional integrity in the highest sense, closing the gap between what we say and what we so often do. What is required is an insistence on professionalism in the broadest sense, a willingness to go even beyond the expectations of the apathetic and unaware public. In fact, the Subcommittee believes this kind of commitment may be the only way to achieve a rapproachment among alienated elements of our society, within and without the context of the highway program, and to restore trust and confidence in one another and in our agencies of government."

"The policy maker, the highway planner, the design engineer, the traffic engineer, the maintenance supervisor, anyone with a role to play, should avoid compartmentalized thinking. The highway environment should be viewed for what it is--the totality of natural and man-made features."

"'Projection' so often has been the missing element--failure of the designer and others in the highway professions to project themselves into the role of the various users whom they have intended to serve."

"Whose responsibility is it to see that maximum safety is incorporated into our motor vehicle transportation system? On this, the Subcommittee is adamant. It is the responsibility of government, and specifically those agencies that, by law, have been given that mandate. This responsibility begins with the Congress and flows through the Department of Transporta-

tion, its Federal Highway Administration and National Highway Traffic Safety Administration, the state highway departments and safety agencies, and the street and highway units of counties, townships, cities and towns. There is no retreating from this mandate, either in letter or in spirit."

"The Subcommittee believes the Federal-aid highway program must become a shining example of what can be done. At the very outset, the FHWA has the obligation to insist that plans of Federal-aid highways are reviewed and analyzed to detect deficiencies and to weed out potential safety hazards. Guidelines like those aimed at the eradication and avoidance of roadside hazards must be heeded. At the same time, not everything can be anticipated. Deficiencies will appear as a road becomes operational or as traffic conditions change. As deficiencies are discovered they must be corrected. It is the end product that counts, and not only the way the road accomodates normal traffic, but the way it performs under conditions of heavy use, when it rains, or when the individual fails as a driver or a pedestrian."

"The Subcommittee emphasizes those things that can be done without the infusion of large amounts of new spending. In fact, the Subcommittee is perturbed by the excuse, 'we lack the money,' that is so often given. The testimony showed that safety often can cost less. Expensive but unnecessary hardware located along Interstate highways is an example of how taxpayers' money sometimes has been used to buy life-threatening hazards."

"It is important to remember that in one sense we are confronted with a fait accompli. There is no way we can quickly redo our network of streets and highways. We must work with what we have, applying our resources as best we can. The amount of rebuilding and upgrading that will be required is almost inestimable, given current traffic projections. It is on these kinds of projects that we must concentrate."

"Testimony presented during the hearings established the need for the Federal High-

way Traffic Safety Administration to move outside the realm of their traditional narrow involvement. It is intolerable, for example, for the traditional types of studded tires to be offered to the public as safety devices, for them to be purchased in good faith by millions of motorists, and for their use to be treated with passive detachment by these Federal agencies in the face of the contradictory evidence heard."

"It appears that there are two missing ingredients in the quest of greater uniformity. One is the absence of understandable, analytical underpinning that demonstrates beyond all doubt the truth of our intuitive belief that traffic laws and ordinances should be essentially the same and that the benefits to be derived outweigh the expense, the inconvenience, and effort that must go into such an attainment. The other missing ingredient is leadership, and this is in no way intended to denigrate the efforts of those who have worked seriously in this difficult field. The truth is that traffic law, by nature, is mundane, complicated, time consuming and lacking in political pizazz. It takes a special kind of selfless dedication to become a leader in this movement, and where these individuals are found they are worthy of special appreciation. They are perhaps our greatest hope."

"The Subcommittee is compelled to offer, nay, shout out, another important conclusion. We must find better ways to manage and control the daily flow of traffic. New and better ways must be found to warn, guide and control the motorist and the pedestrian. The current system simply is not adequate."

"We have stressed the need for greater accountability of performance. There is an accountability factor for the American public as well. What kind of paradoxical morality exists for us to be anguished over the deaths of 56,000 Americans in a decade of involvement in Vietnam, as tragic as those deaths are, while complacently accepting that number of deaths <u>every year</u> on the highways of the Nation?"

"The message of six years of hearings on the highway environment and highway operations is a simple one: Those with legal or

delegated responsibilities must think more deeply about the individuals whom they seek to serve."

TASK FORCE REPORT

Sherman G. Finesilver

In December of 1973, the Advisory Committee of the NHTSA, consisting of thirty-five persons from throughout the country, adopted a Resolution providing for the formation of a Task Force Committee to study the adjudication process and its effectiveness in traffic safety. A sub-committee of nine members was assigned this function - all are attorneys.

The attorneys represented a variety of backgrounds, and were from eight jurisdictions. Represented were former judges, legislators, prosecuting and defense attorneys and private practitioners.

The Sub-committee was given general direction in the authorizing resolution but, at the same time, it retained complete objectivity and freedom of action. The Task Force began with a consideration of whether the traditional traffic courts were doing their job in the area of effective adjudication of guilt or innocence, and whether there was any by-product of traffic safety or accident prevention.

The Committee met for a period of five months, studying in detail the adjudication programs in New York, California and Virginia as well as selected traffic offense adjudication research material made available to us.

The National Highway Traffic Safety Administration provided extensive staff support and counsel in preparation of the report.

The Task Force conducted hearings and considered studies and documentation of all aspects of effective adjudication of traffic offenses. Our report was unanimously approved by the full Advisory Committee.

The report* of the Task Force has proven to be a blueprint for study and action. It is a widely noted reference document and has received serious study and analysis.

The findings of the Task Force were basically that new techniques must be found to improve the level of responsibility in the judicial sector that will enhance highway safety programs and effectively rehabilitate chronic offenders. The Task Force discovered a lack of coordinated planning and action among judicial bodies and local and state agencies in traffic safety and accident prevention. Members strongly recommended that most major traffic offenses be reclassified as "traffic infractions," and that there be improved identification of problem drivers with an assignment to appropriate driver improvement screening programs.

The Task Force concluded that traffic offense handling in widespread usage in most states has made little contribution toward the promotion of traffic safety and modification of errant driver behavior. The Task Force was critical of traditional court traffic case processing. The report stated that "there is no evidence that the traditional criminal court processing of traffic cases is highway safety cost effective."

The Task Force specifically recommended the following innovations:

1. Develop a system for adjudication of traffic offenses that gives equal weight to promotion of highway safety and fair, efficient adjudication of offenses.

2. The reclassification of lesser traffic offenses into a new category, "traffic infractions," should be handled by (a) a more simplified and informal type of administrative procedure machinery, or (b) judicial or quasi-judicial procedures in place of presently overloaded courts; thus, this system would be an integral part of an administrative agency separate from the judiciary or a part of the judiciary - all within the discretion of each state.

*Full Title

Final Report of Ad Hoc Task Force on Adjudication of the National Highway Safety Advisory Committee; U.S. Department of Transportation. 40 pp. (1973). Printed copies available from NHTSA - General Services Division, 400 Seventh Street, S.W., Washington, D.C. 20590.

3. Eliminate jail as a sanction in non-serious offenses - also by reclassifying offenses as "infractions" there would be no necessity for jury trials or appointment to attorneys in case of indigency.

4. Continue to process high-risk and serious offenses criminally.

5. Combine "traffic infraction" and high-risk criminal traffic offense sentencing with driver modification and driver improvement and rehabilitation programs.

6. Eliminate incarceration as a "traffic infraction" sanction.

7. Give priority to identifying problem drivers, assigning them to treatment and retraining facilities and monitoring the results.

8. Create an adequate electronic data processing system to serve police, law enforcement, driver licensing and traffic adjudication officials, especially for the purpose of identifying the problem driver.

Adoption by the states of the report recommendations and elements would result in a more ideal traffic law system which will advance highway safety through traffic offense adjudication. Implementation of the recommended traffic adjudication subsystem would offer a higher probability of contributing to the reduction of traffic accidents and fatalities than the traditional court adjudication process presently in operation. However, to achieve this ambitious highway safety goal through a more cost effective adjudication subsystem may require a higher level of public funding.

The traffic offense adjudication subsystem as recommended by the Task Force is conceived to protect the constitutional rights of the driving public, improve driver behavior and enhance society's interest in highway safety. Concurrent by-products would be to unclog lower court dockets, enable judges to devote their valuable time to serious traffic and criminal cases and to enhance the promotion of traffic adjudication justice.

RESEARCH REPORT

B. J. Campbell

Suppose we state explicitly some of the assumptions we implicitly make when in our various roles we participate in the adjudication of traffic offenses.

First we assume that the offensive act is at least unsafe, and perhaps also immoral, and perhaps sinful.

Second we assume that the act indicates a heightened potential for future, similarly illegal acts.

Third we assume that if society provides aversive or corrective consequences for the act we can deter the person from future unsafe acts.

Let's examine these assumptions to see the extent that scientific data wholly or partly support or refute these assumptions. Let's do this in order to ask ourselves what,if any,reappraisal of our programs might be advisable.

What is the future accident experience of driver groups with varying numbers of past violations. Do drivers with more violations have more future accidents than persons with fewer past violations? If so how strong is the tendency?

In answer, it is well established that past traffic violations do indeed show some degree of correlation with future accidents. Automobile accidents are not independent random events that are as likely to strike one driver as another. Table 1 shows the relationship between past violations and future accidents among 2.5 million North Carolina drivers, each examined over a four-year record. As can be seen, average subsequent accidents increase with higher violations frequency. Persons with no prior violations in two years average .11 accidents in the next two years (one accident per ten drivers). Persons with one violation averaged twice that many accidents in the future, etc. These figures generally agree with data reported in various studies by the California DMV group ably represented at this meeting by Mr. Coppin, and agree with Forbes data reported in 1939. So this is nothing new.

TABLE 1

Number of Previous Violations (2 years)	Average Number of Accidents
0	.11
1	.20
2	.29
3	.36
4	.40
5 or more	.39

This data gives support to the notion that some people have a disproportionate share of accidents. Indeed if you will look in this table you will note that persons with four violations in the previous time period have four times their share of accidents in the future. It is this kind of data plus a few inferential leaps that lead some people to assert that accident repeaters account for a large portion of all accidents. Indeed the idea that a relatively small number of accident repeaters account for a large part of the problem is entrenched in the highway safety lore. It is entrenched partly because of its philosophical and political appeal. It is attractive to assert that a large part of the accident problem is attributable to a small proportion of drivers, especially if they can be labeled as undisciplined, aggressive or deviant. Society can harshly restrict such a group of drivers, but not in the larger "normal" group. After all, the normal group is "us" whereas the small deviant group is "them." Thus, there is a degree of appeal in the idea that the accident repeater causes a large part of the problem because it seems more feasible to regulate such a relatively small group of drivers. Indeed, sometimes support for this notion of the accident repeater takes the form of statements such as:

> 2% of drivers account for 50% of fatal accidents, or
> 10% of drivers account for 40% of all accidents, or
> 7% of drivers account for 100% of all accidents.

This sounds promising because the first number is so small relative to the second. The implication is that we can identify the two percent, and then potentially prevent 50 percent of future accidents. Unfortunately, there are two things

wrong.

First the numbers are based on past events. For example, last year in North Carolina about seven percent of drivers had reported accidents. Thus, it could be said that this seven percent acounted for 100 percent of last year's accidents. Predicting the past is no great accomplishment! With any low probability event a small percent of people account for a large percent of the phenomenon. That is the definition of a low probability event! One cannot jump from such a statement to the tantalizing belief that next year the same seven percent will strongly tend to repeat.

Second is the appeal that comes from expressing the statement in percentage form:

"2% of drivers cause 50% of fatal crashes."

This appeal is diminished when the percentages are converted to frequencies. Now the statement reads, "2,000,000 drivers cause 29,000 fatal crashes." Thus, two percent of 100 million U.S. drivers is two million, and 50 percent of 57,000 fatalities is about 29,000. This statement shows that from a large number of drivers (2,000,000) comes a much smaller number of crashes (29,000). This is exactly the opposite of what the percentage figures are intended to convey. While it may seem promising to deal with two percent of drivers to get at 50 percent of fatal accidents, it is more formidable to have to regulate 2,000,000 drivers to get at 29,000 fatal accidents.

When anyone says "X percent of drivers cause Y percent of accidents" it is a good idea to convert the percentages into frequencies. The frequencies tend to convey the opposite from the percentages.

Though some use numbers as if trying to predict the past, others properly address the fact that certain drivers identified in an earlier time period later have a disproportionate share of accidents. For example, in a North Carolina study of 2,502,240 drivers, the 4464 drivers with the largest number of accidents in a two-year period had four times "their share" of accidents in a subsequent two-year period. Thus:

> "two tenths of one percent of drivers later caused eight tenths of one percent of the accidents."

These tiny fractions are not very promising in terms of identifying and removing large numbers of accident-involved drivers. I suppose the hope is that one could also use the fourfold discrepancy to say that 10 percent of the drivers

later have 40 percent of the accidents. That would be nice, but it isn't true.

In the same study the worst 11 percent of drivers (anyone with a reported accident) account for only 19 percent of crashes in a subsequent two-year period. Even with the extreme act of removing these 11 percent of drivers from the road (11% reduction in travel, 11% reduction in gas tax revenues, 11% unemployment rate?), still 81 percent of the accidents are not accounted for by these drivers. Also, converting the percentages to numbers shows that 267,663 drivers account for 63,080 accidents. Thus, many in the group labeled as higher risk and predicted to have future accidents in fact are accident free in the subsequent two-year period. The predictive strength is not great enough to prevent a large portion of misclassifications.

Thus, we can see that it is quite true that some groups of drivers have several times their share of future accidents based on detectable deviancy in the past. But a very significant question is what is the degree of error of prediction? How accurately can we identify and predict these drivers? Obviously the accuracy of identifying and predicting future behavior has strong implications for what society should do or dares to do with or for or to these drivers. In order to put this question of prediction errors in proper frequency let's use terms from another field. In predicting we use an indicator such as violations and label drivers into certain categories. If a driver has X violations (or demerit points) he is called a negligent driver, habitual violator or some other term which indicates that he is an apt candidate for driver control action. But consider the extent to which we assign drivers to that group (based on prior record) but who wouldn't have accidents later anyway. This is the question of prediction errors.

To consider this issue, let us define classification errors:

True positives are those predicted (on the basis of prior information) to have an accident, and who have one.

True negatives are those predicted not to have an accident and who do not have an accident.

IT IS DESIRABLE TO HAVE AS MANY CASES AS POSSIBLE IN THE ABOVE TWO CATEGORIES.

False positives are those predicted to have an accident, but who do not.

False negatives are those not predicted to have an

accident, but who do have one.

IT IS DESIRABLE TO HAVE AS FEW CASES AS POSSIBLE IN THE PRECEDING TWO CATEGORIES.

When a driver remedial program is given to all who are predicted to have an accident, it is correctly applied to the true positives, but the false positives are subjected to the program even though they do not have a later accident. Similarly, false negatives have "unpredicted" accidents; they should have received the program but could not be identified.

Now let us consider the degree of these prediction errors for actual accidents in North Carolina using the same two and one half million that we talked about.

Selected for illustration are the "worst" 1.3 percent of North Carolina drivers, based on prior accident record. Of the 32,583 "high risk" drivers 71.8 percent of them did not later have an accident (not very good prediction because of too many false positives!). Further, false negatives accounted for 96.8 percent of all drivers that did have accidents in the next time period. Too many false negatives!

This massive preponderance of misclassification happened even though the drivers identified on the basis of the first time period had about three times their share of accidents in the second time period!

We should examine our programs in terms of these assumptions. If it is true that a significant portion of accidents is caused by a few drivers, what are the implications in terms of locating these drivers, identifying them, apprehending them and bringing societal pressures to bear in changing them. If we can identify these persons with considerable accuracy what steps would we be willing to take in order to reduce the risk they pose? If it were actually true that 30 percent of all of our accidents were caused by an identifiable 10 percent of drivers, what would we be willing to do to these people? Would we be willing to remove them from the road with a stringent and effective program? Are we really willing to reduce our gas tax revenues by 10 percent, produce an unemployment rate of 10 percent, reduce mobility of the American public by 10 percent (perhaps the fuel situation may bring this about anyway)? If such persons can be identified with precision and can be changed or controlled effectively what kinds of programs would we be willing to tolerate?

In contrast, let us also consider the opposite notion. What if we are confronted with the situation that most of the accidents are caused by most of the people? Although there are some small groups of drivers who account for a higher

proportion of accidents than their share, what if we are confronted with the situation in which 80 percent of the accidents in a given period are sustained by persons who in an earlier period gave no hint of being deviant or accident susceptible? What changes in our philosophy might this force if we are confronted with the fact that in adjudicating traffic offenses we are maintaining a general surveillance of a whole driver population - an attempt to discipline a whole population by a more or less nonrandom enforcement of the traffic laws on some sort of nonrepresentative sample of drivers. Would this cause us to look into a different set of approaches?

As I have presented we have some evidence both ways. It is true that there is a very small fraction of people who account for a somewhat less small fraction of accidents. In some cases their driving is indicative of general life style. In contrast there is a large group of other drivers who rarely come into contact with the adjudication system but who nevertheless constitute the large bulk of crashes.

This brings about the other question of what is the effect of our actions toward these drivers in terms of reducing their probability of future accident involvement. What happens to people if we introduce punitive intervention, or if we do something for them rather than to them (treatment or rehabilitation)? What happens if some drivers would rather take a considerable punishment than subject themselves to what we professionals consider a positive program? (In other words, we professionals think we are doing something for the driver; he considers that we are doing something to him.)

Normally it is good speech style to define a problem and then come up with a proposed solution. But I cannot do that. All I can do is raise these questions for your consideration.

In fact I am afraid I must end up on a trite note. It is a familiar joke that at the end of any research presentation the researcher always call for more research. Yet in effect I must do this. I only make the point that I am calling for a different kind of research. I am not talking about laboratory research or ivory tower research. I am talking about objective, hard-nosed evaluation of the actual operational programs you are carrying on in society. The actions you take toward hundreds of thousands of drivers year after year constitute a grand experiment (some would say a gross experiment) of society on its constitutent members.

The only problem with the experiment is that it is carried out without the characteristics of a scientific ex-

periment. The outcome is that we don't know what the results are when we are through with the experiment.

Yet time after time in the U.S. new program ideas are introduced, programs are changed; treatment is substituted for punishment, punishment for treatment; jail terms are stepped up, they are deleted; penalties are upped, penalties are waived; and yet in almost all cases we forfeit the ability to know whether we improved the situation or not.

But by following a few relatively simple procedures one can audit the actual effectiveness of these programs. Thus the plea I can make is that those of you who manage the system of traffic offenses adjudication consider, the next time that someone suggests a new idea, inclusion of an effectiveness audit.

The results in the long run can only be beneficial. It is highly probable that we have inadvertently embarked on some highly creative and highly effective programs, but we still don't realize how good they are. It is also highly likely that we are persisting even now in some expensive programs of negligible or zero effectiveness, but we don't know they don't work. It's time we were finding out.

RESEARCH REPORT

Ronald S. Coppin

I would like to amplify some of the points raised by Dr. Campbell, and follow up with a few points relating to program direction which I believe research to this point in time has directed us.

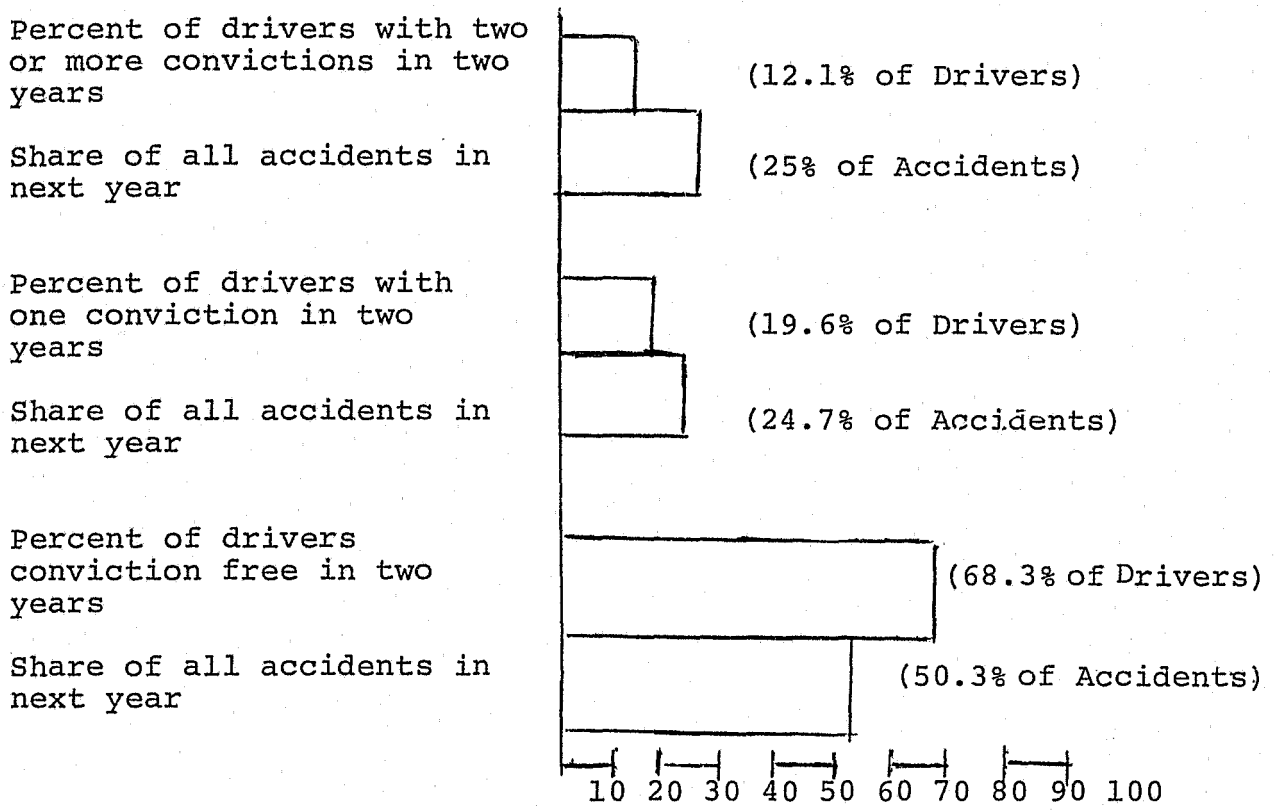
First, let me present some California data which is almost the mirror image of his North Carolina data, and then let's examine its import to program development. This data, I hope, will completely uproot that folklore which we agree has continued to persist in highway safety for many years -- that a very considerable portion of accidents that occur involve persons who in previous time periods have a history of accidents or violations. A popular belief because it is simply easier to pass laws, enforce laws and administer rehabilitative efforts aimed at some population of drivers with "deviant" behavior. As he says, that's "they" and not "us."

If we classify "bad drivers" as those with accumulated convictions for traffic law violations over a two-year period, we find the following contribution to highway crashes in the following year.

Figure 1 shows that 12.1 percent of all drivers received two or more convictions in a two-year period. If these drivers were removed from the highway, one-quarter of all accidents in a subsequent year would be prevented. In California, this would involve removing about 1,500,000 drivers to prevent 175,000 accidents. Notice here that, even though their contribution to the total problem is small,the fact still remains that they have about twice their share of accidents. Persons with one conviction in two years form 19.6 percent of the drivers and in a subsequent year will be involved in another quarter of the accidents. This leaves then about one-half of the accidents in a given year coming form those drivers who are free of convictions in the two prior years.

FIGURE 1

PROPOSITION OF TOTAL ACCIDENTS BY PRIOR CONVICTION* EXPERIENCE



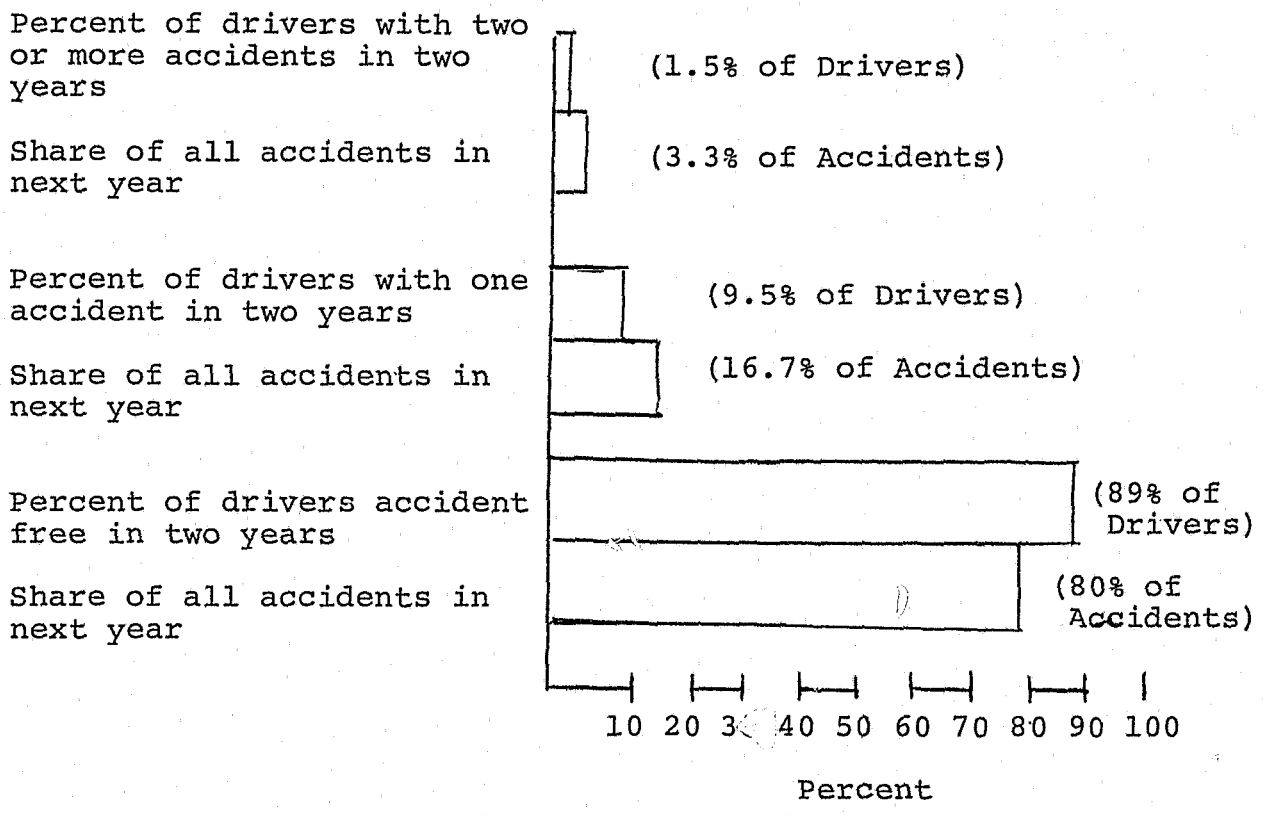
Similarly, if one classifies "bad drivers" according to their prior accident history, the results are even more futile. Figure 2 demonstrates this point.

About 1.5 percent of the drivers are involved in two or more accidents in a two-year period. If these drivers were removed from the road, 3.3 percent of all accidents in a subsequent year would be prevented. Again, notice the two-fold risk of this group. Similarly, 9.5 percent of the drivers had one accident in a two-year period and their contribution to the next year's accidents will be 16.7 percent. It follows, then, that once having removed all persons with some form of prior accident record (even one accident), there remains 80 percent of all of next year's accidents coming from the 89 percent of all drivers who for the past two years have been accident free.

* Prior accident-paired (spurious) convictions removed.

FIGURE 2

PROPORTION OF TOTAL ACCIDENTS BY PRIOR ACCIDENT EXPERIENCE



The foregoing data, while demonstrating the inability to solve the whole problem by focusing upon "bad drivers," do demonstrate some finite risk values exhibited by this poor driver group. Further risk values, using concurrent three-year data, are as follows:

Notice in Figure 3 that as the number of convictions for traffic law violations goes up, the crash involvement likelihood of each driver group also goes up. When the group of drivers with six convictions on record is compared to the conviction-free group, we find that the six-conviction group has almost five times as many crashes on record. However, notice also that even though this is true, 55 percent of the members in the six-conviction category are crash free. These data are somewhat analogous to the lung cancer-smoking relationship, in that there is a definite group trend, but the overall probability on any individual involvement is low. In fact, the correlation between smoking and lung cancer is substantially lower than found in the foregoing data. These conclusions must be tempered by the fact that repetition of deviant driving may be suppressed by the existence of current sanctions

and countermeasures.

FIGURE 3

ACCIDENT RATES BY NUMBER OF CONVICTIONS
(THREE YEAR PERIOD)

"ALL TYPES"

NUMBER OF CONVICTIONS	"ACCIDENTS" TIMES AS MANY FACTOR*	PERCENT OF DRIVERS "ACCIDENT FREE"
0	1.00	87.85
1	1.81	79.02
2	2.56	71.79
3	3.21	66.38
4	4.14	59.39
5	4.55	54.68
6	4.70	55.24
7	5.77	47.32
8	5.04	55.13
9+	6.52	44.20

These figures demonstrate the limitations inherent in controlling highway crashes by removing large numbers of drivers with poor driving records. As Dr. Campbell points out, this fact was evident as early as 1939, when Forbes pointed to earlier figures from Connecticut. Traffic convictions are by far the best single predictor of crashes. It simply is the best of a bad lot and the reason lies in the very nature of rare event phenomena like reported crashes.

We have also examined the records of our worst group of drivers, which our law defines as "negligent operators," and find that this 1.6 percent of all drivers contribute to 5.2 percent of a given year's accidents. Thus, almost 95 percent of our total accidents in a given year involve non-negligent drivers. This high risk group, and I say high risk group because of their three-fold disproportionate share of accidents, is certainly worthy of our driver improvement and driver control efforts, but, again, we must be aware that its potential savings of accidents is about 5 percent of the total.

* This number represents the relative increase in accident rate over "0 countable citations" group.

It seems then quite unfortunate that this conceptual awareness and empirical data did not surface as the foundation for the formulation of driver's license and driver improvement policy and as the formulation of all accident countermeasure development.

What implications do these facts have upon accident countermeasure development? In other words, since accident and violation repeaters only contribute a relatively small proportion of any given year's accidents, should we abandon efforts to effectively improve the future driving habits of these negligent driver populations? My answer to this question would be "no" for two reasons:

(1) The fact that they only represent a small amount of the total problem does not negate the fact that as a group they have a three-fold disproportionate share of accidents, and

(2) I do not believe that society, as represented by non-negligent drivers, will tolerate persons with high violation and accident records indiscriminately using the highways in a flagrant disobedience of rules-of-the-road traffic laws and regulations which have been instigated for the protection of all.

I contend that society in other fields has continued to demand this type of justice and protection and will continue to do so in the highway safety field for some years to come at least. Some forms of post-licensing driver control date back more than forty years and, until recently, have remained unchanged as far as the actual operational procedures in either the traditional departments of motor vehicles or in the judicial branch of government.

Recent research has shown that some of the more traditional programs dealing with the so-called "bad driver" do not effectively make him a future "good driver" in the expected sense of the term. I do not want to delve too deeply on this point since I understand that it is one of the topics for tomorrow's program. However, I do want to state that after fourteen years of concentrated scientific research in driver improvement evaluation, we are now on the threshold of embarking on new refinements which I believe will be far more productive than those in the past. As an integral party to the direction of this research program, I have at times experienced extreme frustration and a feeling of hopelessness as to our ability to generate new innovations that would be successful. Our first several years were directed at the evaluation of the existing departmental efforts at changing the future driving behavior of the so-called "negligent operator" or "pre-negligent operator." The traditional informal hearing, which in most cases involves some license probation, has not shown to be an effec-

tive first contact with the negligent driver. While it was effective in reducing further violations, it did not have a significant impact on accidents. From these facts we formulated a one-session group meeting using filmstrips and films and, upon evaluation against a control group, found that it reduced future one-year accidents about 12 percent. Out of eight forms of group and individual treatments, the group educational meeting turned out to be the only effective countermeasure for accident reduction. In fact, we can demonstrate about a 1.2 to 1 benefit to cost ratio -- for a one-dollar expenditure we prevent 12 dollars in future accidents. The development of a new type of warning letter program turned out to show a 40 to 1 benefit to cost ratio.

In the conduct of our research on the effectiveness of driver improvement efforts, we uncovered another important fact which must be considered in the development of accident countermeasures -- namely that programs can be developed that can result in increased accidents. Heretofore it has been thought that any safety lecture or group meeting must certainly be better than nothing, and, further, that results could only be positive. Not so. We developed a very authoritarian group meeting where drivers were sternly warned of the consequences of continued traffic law violation. They were also warned that continued driving violations would result in a hearing where they would be either suspended or revoked. The vehicle code was dropped on the desk as the basis for the authority, and drivers were not allowed to discuss the matter with the driver improvement analyst. Not only did the drivers who were sent to this group meeting not improve their future accident record, but they had, as a group, significantly more accidents than a control group who were not called to a group meeting. Think of it -- a program was generated where, upon evaluation, the drivers had more accidents. Men in particular reacted badly to the program, while the women reacted positively. I could go on with other things we now know about driver improvement techniques, but suffice it to say that we, as Dr. Campbell urged, need to launch effectiveness audits wherever and whenever we are planning for driver improvement programs.

Before true program evaluation can take place, the basic program goals must be defined. In the case of driver improvement programs, one may ask what is the primary program goal? Is it to reduce crash involvement, traffic law violation involvement, or is it both? Most driver control program managers view these two improvement criteria as one and the same. That is, they believe that if "ticket getting behavior" is improved, it can only follow that crash avoidance will take place. Most scientists and statisticians know that this assumption is false, but many program managers have difficulty understanding why until confronted with repeated empirical demonstrations. We have recently completed a study in California which has

convincingly demonstrated that a driver improvement program can, in fact, reduce collisions without effecting convictions and that other programs can reduce convictions without affecting collisions. While reduction in traffic violations is a laudible program goal, we believe that the ultimate program goal (as conceived by the legislature) is crash reduction. Thus, the criterion for measurement and use in the cost/benefit model is crashes saved.

Ideally, program development and evaluation should begin with a "systems analysis" of the total problem and available resources.

Driver oriented programs can be conveniently divided into three interrelated areas, forming a historical progression - 1) pre-licensing training- 2) driver screening and licensing- 3) post-licensing control. Unfortunately, when one reviews the research evidence and the history of program development within each of these areas, it is obvious that programs have not evolved from formally conducted task analyses and behavioral objectives. In addition, sound empirical evaluations of program effectiveness are rare.

Some persons question the wisdom of working with official driver records as criterion measures of program effectiveness in terms of driving performance. Developing measures of driving performance is undoubtedly the most difficult methodological problem confronting driver research and crash countermeasure development. Unless valid performance measures are available, one has no basis for gauging the effects of a treatment program or selection device. In terms of pyschometric theory, the only legitimate ultimate criterion for driving is the "safeness" of the person's real world driving behavior under normative, non-test conditions. This leaves us with two alternatives: use of reported crash and conviction records or surreptitious observation and rating of a driver's on-the-road performance. The latter is usually not feasible and also presents legal problems.

The use of reported crashes is admittedly a dismal prospect because of their low reliabilities and insensitivity, which place severe limitations on the extent to which they can correlate with other variables. However, our research has shown that crash records do reflect non-random treatment effects and relationships if sufficiently large sample sizes are used. We therefore feel that, in states with superior reporting systems, crash records can possess validity in the sense that drivers committing the largest number of unsafe acts per unit of exposure will eventually tend to have the highest crash rates. Rather than dismissing crash records as criteria, more effort should be devoted to increasing the level and quality of reporting. Often decision makers do not fully appreciate this need for quality reporting systems and their critical

relationship to program evaluation.

Much work is currently going on in search of a so-called "intermediate criterion." There is nothing wrong with such measures per se as long as they are shown to have some degree of ultimate predictive validity. However, those committed to intermediate criterion development often mistrust crash records and are therefore reluctant to correlate them with driver crash frequencies. While this reluctance is understandable, the use of unvalidated intermediate criteria cannot be scientifically justified. Such problems as, "does the intermediate measure actually correlate with safe driving (crashes)?" and "will a treatment that improves an intermediate criterion performance also result in safer driving?" must eventually be faced. Those who feel that reliability, sensitivity and face validity are substitutes for predictive validity are only deceiving themselves.

One of the most difficult questions that highway safety groups have faced is one which attempts to develop a so-called profile of the crash-involved driver. We know that the 1) repeat violator, the 2) young inexperienced driver, the 3) drinking driver, the 4) driver with poor attitudes, etc. all are involved in a disproportionate share of accidents. We recently completed a large-scale study the aim of which was to attempt to develop a profile of the accident-involved driver. In that study, drivers selected were under 65 years of age and resided in Sacramento County. Two major groups totalling about 500 drivers were formed. The first group consisted of an accident group of drivers with a minimum of three accidents within a recent three-year time period, while the second group was accident free with no reported accidents during the same three-year period. The accident group was identified and selected through DMV computerized files, while the accident-free group was randomly selected among recent license renewal applicants.

Each driver was first interviewed, given a comprehensive battery of psychometric tests and attitude scales, and then drove about 13 minutes on a specially constructed driving simulator. Test and interview time averaged about two hours per subject. The conceptual areas tapped in the test battery included:

(1) Biographical and driving related information

(2) Attitude and personality - social conformity, risk taking, responsibility, cautiousness, emotional stability, etc.

(3) Parental relationships

(4) Perceptual style

(5) Physical condition

(6) Perceptual-motor skills and reaction time

(7) Criminal record

(8) Driving simulator

The driving simulator was specially built so that the drivers were able to control the speed of the filmed drive by depressing or releasing the accelerator. Electronic tape recorders measured braking, accelerating, steering and reaction times. In addition, the driver was required to perform a subsidiary task in reaction to lights which came on during critical drive maneuvers.

Out of over 300 measures collected and analyzed, 146 were found to be related to driver accident frequency. However, only a few measures had unique importance in predicting accident involvement when the interrelationships among the many variables were taken into account. The following interpretations were made between accident-involved drivers in comparison to accident-free drivers:

Accident-involved drivers,

(1) Were not as likely to be married

(2) Had more traffic convictions

(3) Had a lower socioeconomic status

(4) Drove more miles

(5) Had more undesirable personality traits and attitudes, and

(6) Considered their driving inferior to elderly drivers.

When we plugged these into a unique prediction equation to determine whether the equation could accurately predict the accident involved in another sample, we found:

(1) 69% of the accident-free drivers were correctly predicted and

(2) 71% of the accident-involved drivers were correctly predicted.

The net accuracy of these predictions (70%) is about 20% better than could be obtained on a purely blind or chance basis.

The findings of this comprehensive study of the human factors related to accident risk clearly support the notion that drivers possess traits which differentially predispose them to accidents. The study findings also support the general driver improvement policy of taking remedial and restrictive license action against drivers on the basis of their accrued numbers of moving violation convictions since traffic convictions proved again to be an important discriminator of accidents. However, we concluded that the validity coefficients attained by the equation were not of sufficient magnitude to justify use as a screening examination for the licensing or relicensing of drivers. We believe its use would be more appropriate in selecting problem drivers for driver improvement programs and as a possible underwriting tool for insurance companies or screening drivers for large commercial fleets.

In summary then, where do we go from here? I believe as does my associate here on this panel, that we must move more toward a system which deals adequately with all the drivers since most of the accidents in a given year involve most of the drivers. The so-called deviant population of drivers, while they do have a three-fold share of the accidents, are a difficult group to predict, and are in fact shifting in and out of the accident group. Certainly more needs to be done to affect their high risk potential, but more also needs to be done likewise on those drivers who have not quite reached this high risk level. This means, therefore, the creation of a uniform and concentrated "system" of continuing education and rehabilitation of the entire driving population, even those whose records have not yet reached the level of definition for "deviant" or "problem" driver.

In my state we are now experimenting with several new approaches that will deal differentially with the entire spectrum of drivers, from the so-called "good" driver on one end to the "problem" driver or habitual violator on the other end. How successful we will be in developing effective programs will be reported on at another time.

PERSPECTIVES ON "PROBLEM" DRIVERS AND PROGRAMS TO IMPROVE THEM*

Leon G. Goldstein

This paper is adapted from a fairly detailed and extensive report prepared by the author for the California Traffic Safety Education Task Force, "Driver Improvement: A Review of Research Literature."

BASIC STATISTICAL CHARACTERISTICS OF ACCIDENTS AND VIOLATIONS

Rarity of Accidents

In one year of driving in California, from 7.7% to 8.6% of males are involved in reported accidents; from 4.0% to 4.3% of females are involved. Over 93% of all drivers are accident-free in one year. (The 1964 California Driver Record Study, Part II, 1965). The same study showed 13.9% to 17.2% of all drivers involved in reported accidents in three years' exposure; 82.8% to 86.1% are accident-free.

Young drivers have a higher involvement rate. Harrington's California data (1971) showed 14.5% of males and 9% of females involved in accidents in their first year of driving; in the first four years, 45.2% of males and 28% of females are involved. Lauer's (1952) Iowa data and Burg's (1967) California data show elevated rates per 100,000 miles for drivers aged 16-24 compared with drivers in the middle-age range. Palz and Schuman (1971) in Michigan found annual rates for males 16-24 considerably higher than for those 35-44.

*Presentation at the Symposium on Effective Highway Safety Adjudication, Sponsored by the Law School, University of Denver, New York City, 14 Nov. 1973.

Stability of Accident Records Over Time

Correlations of number of accidents in one year with number of accidents in another year ranged from .04 to .05 for males and .03 to .04 for females in a California study on very large numbers of drivers (Coppin, McBride and Peck, 1965). Correlations of accidents in two three-year periods were .07 for females and .13 for males in California (Burg, 1968), and .11 for combined sexes in a Connecticut study (House Document No. 462,1938).

However, increasing numbers of accidents sustained by drivers in one period are predictive of increasing mean accidents in a subsequent period (Coppin, McBride and Peck, 1965):

Accident Frequency 1961	N	Mean Accidents in Subsequent Period 1962	1963
0	138,343	.068	.060
1	9,072	.123	.102
2	547	.161	.146
3+	44	.386	.273

From the Connecticut Study:

Accidents in 1931-33	N	Mean Accidents in 1934-36
0	26,259	.101
1	2,874	.199
2+	398	.324

Rarity and Stability of Violations

Part II of the California Driver Record Study (1965) showed from 9.4% to 10.5% of female drivers involved in violations in each of three years; for males the percentages ranged from 21.3% to 24.0%. For three three-year periods the percentages of those who were violation-involved ranged from 33% to 41.3% for the sexes combined. California data (Coppin, McBride and Peck, 1965) showed correlations of violations in two one-year periods ranging from .14 to .15 for females, and .22 to .25 for males. California data (Burg,1968) for two

three-year periods showed correlations of .34 for females and .48 for males.

Progressive numbers of violations in one period are predictive of increasing mean violations in another period (Coppin, McBride and Peck, 1965):

Violation Frequency in 1961	N Male Drivers	Mean Violations in 1962
0	65,777	.235
1	15,406	.480
2	3,926	.743
3	1,112	1.034
4	340	1.174
5	95	1.179
6	41	1.780
7+	29	1.621

Correlation Between Accidents and Violations

California data on approximately 95,000 drivers (Williams, 1958) showed the correlation between convictions and accidents in a three-year period was .26. A later study (Part IV of the 1964 California Driver Record Study, 1965) showed an r of .27 for a three-year period, with nearly 150,000 cases; excluding violations that resulted from accidents, the r's were .23 for the total group, .22 for males and .16 for females. Other California data for six years of driving (Burg, 1968) showed correlations ranging from .22 to .26 for females and .25 to .29 for males in concurrent three-year periods; for six years, r's were .33 for females and .32 for males. For non-concurrent three-year periods in this study the r's for females ranged from .13 to .17 and .12 to .18 for males. For one-year periods California data (Coppin, McBride and Peck, 1965) showed r's ranging from .08 to .12 for 86,000+ males, and from .05 to .07 for 61,000+ females; the higher figures are for concurrent periods.

For young drivers, the correlations between violations and accidents are somewhat higher. Harrington (1971) found r's of .21 for over 8,000 males and .20 for nearly 5,800 females in their first year of driving; for the full four years, the r's were .29 for males and .26 for females. This would seem to be

an important consideration in identifying young problem drivers as compared with older problem drivers.

Another way of looking at the correlation between accidents and violations is to examine the mean accidents for groups with successive numbers of violations. Data from California (Williams, 1958) show the following for 94,935 drivers in a 3-year period:

Violations	N	Mean Accidents	Percent Accident-Free
0	55,757	.09	92.1%
1	20,613	.19	82.9
2	8,753	.27	76.9
3	4,320	.35	71.7
4	2,297	.43	67.4
5	1,242	.56	58.6
6	725	.51	61.5
7	450	.50	61.6
8	266	.55	60.2
9+	512	.66	55.1

As violations increase, mean accidents per driver increase and the percent of the group who are accident-free decreases very regularly with a reversal in the 6-and7-violation groups. But even among the very extreme who have 9+ violations in 3 years and whose mean accident rate is 7.3 times that for the zero-violation group, over 55% are accident-free!

More important for the driver improvement mission is the way mean accidents in one period are related to violations in a prior period. From North Carolina we have data on 2.5 million drivers in two 2-year periods showing the following (Stewart and Campbell, 1972):

Violations in 2-year Period	N	Subsequent 2-year Period	
		Mean Accidents	% Accident-Free
0	2,096,935	.110	90.2%
1	298,645	.204	82.8
2	73,216	.286	77.1

3	21,907	.359	72.4
4	7,224	.400	70.2
5	2,579	.372	71.7
6	1,042	.430	70.0
7+	674	.383	70.3

As violations in the first period increase, mean accidents in the second period increase and the percent accident-free decreases very regularly, with some reversals or levelling off after 4 violations. But, again, even among the extreme violators, with 4 to 7+ violations in 2 years, at least 70% of them are accident-free in the subsequent 2 years. The possible effects of enforcement and/or rehabilitative efforts on these subsequent accident rates cannot be determined from these data alone.

Implications

From the basic statistics on rarity and instability of accidents and violations (on record, of course) and the low correlations between them, several important facts are immediately deducible:

1. Any group of drivers who are identified as having an above-average record of accidents or violations in one period will have a closer-to-average record in a consecutive period - simply as a function of the (far) less-than-perfect correlation of driving records in consecutive periods. Similarly, those with below-average records in one period will also have closer-to-average records in a subsequent period, for precisely the same reason. Any of the tables presented above can be used to illustrate this:

   a) In the first table, the group of California drivers who each had two accidents in 1961 had an average of .161 in 1962 - a reduction of 92%!

   b) In the second table, the group of Connecticut drivers who each had two or more accidents in 1931-33 had an average of .324 in 1934-36 - a reduction of at least 84%!

   c) In the third table the group of California drivers who each had four violations in 1961 had an average of

1.174 in 1962 - reduction of 71%! Those who had 7+ in 1961 had a mean of 1.621 in 1962 - 77% reduction!

d) All of the groups in the three tables who had zero accidents each in the first period had means greater than zero in the zero period: .068, .101 and .235.

This is what is meant by "regression toward the mean" or "centripetal drift." And these changes take place without the intervention of of driver improvement programs. In order to assess the possible effect of such a program on "worse than average" drivers, we must assess the effect of regression under the same driving conditions and exposure; and the only way to do that adequately is with the use of a properly designated control group. Highway safety people who announce effectiveness of their treatments of problem drivers because 70% (or 80% or 90%) of those treated do not return in the next year are simply oblivious of these basic facts.

2. Programs which show an effect on violations, while encouraging, do not necessarily affect accidents, and vice versa. If our real goal is reduction of accidents, that is the criterion we must ultimately apply to test a given program.

3. The rarity of the event affects the size of samples and length of exposure one needs to test the effectiveness of a given program. Since violations are about three times as frequent as accidents, it is much easier to detect changes in violation rate than in accident rate with the same size of sample and exposure. Since only a small percentage reduction in accident rate can be reasonably anticipated from new programs - of the order of 10% to 25% - very large samples of both experimental and control groups, and considerable periods of exposure, are required.

4. The rarity of accidents and violations means that only a small percentage of drivers are identified by their records for driver improvement actions. And since such records "improve"

by regression, typically by as much as 70% to 85%, drivers so identified account for only a small percentage of accidents or violations in a subsequent period. The total possible impact of even highly successful driver improvement programs must, then, leave the largest portion of the highway accident problem virtually untouched. For instance, in the North Carolina study cited (Stewart and Campbell, 1972) on 2.5 million drivers, those who had one or more violations in the first 2 years - all of the violators, that is - were involved in 29% of the accidents in the second 2 years; 71% happened to other drivers. The drivers who had 2 or more violations were involved in only 10% of the accidents of the second 2 years; 90% occurred to others.

Similarly, from the Connecticut study cited, the total of drivers who had accidents in the first 3 years were involved in 21% of the accidents in the second 3 years; 79% occurred to others. Accident repeaters of the first period were involved in less than 4% of the accidents of the second 3 years; 96% occurred to others. Figures from the North Carolina study are very close to these.

Clearly, even the best possible driver improvement programs (as currently defined in connection with point systems) must leave most of the safety problem untouched. Other programs are also vitally necessary - initial preparation of drivers, licensing, surveillance, law enforcement, traffic control, traffic engineering, highway engineering, automotive design for safety, and public information; and the various efforts need to be integrated.

It warrants emphasizing that all of this pertains to accidents in general that are on record. We know next to nothing about accidents that are not recorded. Also, fatal accidents are a very special matter: a) they are extremely rare - one fatality in something like 1800-2000 man-years of average driving, b) alcohol is implicated in perhaps half the highway fatalities (this varies with drivers, passengers and pedestrians), and c) it appears that there are important personal differences that characterize the people involved. Reduction of fatal accidents, or of fatalities, is a very special and extremely important part of more general accident or injury prevention.

CHARACTERISTICS OF PROBLEM DRIVERS

Coppin and Samuels (1961) described some of the characteristics of a sample of 4,081 California "Negligent Operators" (4 points in 1 year or 6 in 2 years or 8 in 3 years) in comparison with a sample of over 117,000 general drivers in California and a sample of 7,646 applicants for license renewal.

"The most outstanding and distinguishing characteristic of negligent drivers...is their youth." The cumulative percentage distributions of "Neg Ops" and the California driving population were as follows:

	Cumulative Percentage	
Age	Neg. Ops. N=4081	California Drivers N=117,201
20	20.5%	6.6%
25	48.0	16.8
30	65.1	28.5
35	76.9	41.7
40	85.2	54.7
45	90.7	66.2
50	94.6	75.9
55	96.9	83.5
60	98.4	89.5
65	99.5	94.1
70	99.8	97.2
75	100.0	99.0

Nearly half (48%) of the "Neg Ops" are 25 or younger, compared with 16.8% of the California driving population; 20.5% are 20 or younger, compared with 6.6%; 90.7% of Neg Ops are 45 or younger, while age 60 would have to be included to reach the 90th percentile of general drivers.

Only 3.5% of Neg Ops were women, compared with 38.6% of the driving population; 96.5% of Neg Ops were males. Many more Neg Ops hold chauffer's licenses: 15.6% compared with 5.6%; another 3.1% have both a chauffer's license and an operator's license, compared with less than .5% for the

for the driving population.

The occupational distribution of Neg Ops differed importantly from renewal applicants:

Occupation	Neg Ops N=3,762	Renewal Applicants N=7,646
Laborer/semi-skilled worker	27.2%	7.6%
Professional driver	12.3	2.0
Tradesman/skilled worker	17.6	18.4
Executive/professional/ semi-professional and work-connected driver	17.8	23.3
Clerk/small business owner/ office worker	11.2	17.3
Military	2.6	.5
All Other	11.3	30.9
	100.0	100.0

Neg Ops are much more concentrated in the "Laborer/Semi-skilled" category, 27.2% vs. 7.6%; and in the "Professional Driver" class, 12.3% vs. 2.0%. There are relatively fewer Neg Ops in the "Executive/professional/semi-professional/work-connected" class, 17.8% vs. 23.3%, and in the Clerk/small business/office worker category, 11.2% vs. 17.3%. The higher percentage of military among Neg Ops, 2.6% vs. .5%, is attributable to the fact that California did not require license renewal of a serviceman.

The occupational groupings are of course related to age: 64% of the Neg Ops in the Laborer/semi-skilled group are 25 or younger, as are 48% of those in the Tradesman/skilled class; only 30.2% of Neg Ops professional drivers are this young, and 15.2% of the Executive, etc., class.

According to self reports, the Neg Ops drive considerably more miles per year than the renewal applicants (are they motivated to exaggerate?):

Annual Mileage Self Report	Neg Ops N=3,093 Males Age 20+ Only	Renewal Applicants N=4,319 Males
Under 10,001	25.0%	51.8%
10,001 - 20,000	32.9	37.6
Over 20,000	42.1	10.6
	100.0	100.0
Median mileage	17,591	9,649

Median self-reported mileage is nearly twice as high for the Neg Ops. These figures are for males; there were only 126 Neg Ops females for comparison; median miles were 9,403 vs. 5,519.

Chalfant (1960) did an analysis of problem driver characteristics in Michigan. There were two groups, 1,236 from Detroit and 2,980 from outside Detroit, labelled in the report "Outstate." The percentages of the two groups with given characteristics were as follows:

	Detroit	Outstate
Single	46.6%	48.8%
Male	97.5	94.8
No dependents	39.1	46.4
Under 25 years old	34.0	43.0

Mean age was 27.6 for the Detroiters and 33.5 for the Outstaters; mean years of driving, 10.2 and 13.1 respectively. The youthfulness of both groups is emphasized by the fact that for the general driving population the percent below age 25 is less than half as high, namely 15.8%. The largest single occupational classification of the problem drivers was laborer: 38% of the Detroiters and 37.2% of the Outstaters.

It is to be noted that these analyses are on problem drivers defined as those who have gotten into the particular state point system by accumulating specific numbers of points, violations or accidents in given periods of time. While this is generally what is meant by the term "problem drivers," it is not necessarily a correct definition nor the best definition. One of the deficiencies of this definition is that is does not take into account mileage exposure. It is based on annual exposure. There are also other classes of high risk drivers who are not ordinarily included in this definition. For instance, young

drivers, particularly males below age 25, have disproportionately high accident and violation rates (see Goldstein 1972), and of course they are disproportionately represented among problem drivers analyzed above in the California and Michigan studies. But drivers above age 65 are also disproportionately involved in accidents on a per-mile basis. Their per-mile rate is about as high as that for drivers under age 25; but the fact that they drive about half as much annually makes their annual rate appear no worse than that of drivers in the middle age range. While the reasons for elevated accident rates among the senior citizens must be very different from that for drivers under age 25, it is clear that these people also need help, which for the most part is currently not often available (see Goldstein 1973b).

Another aspect of the problem driver issue is that analyses on those with extreme records, such as suspendees and revokees, begin to show surprising proportions who have criminal records apart from their driving violations. And, incidentally, not all drivers whose licenses are suspended or revoked discontinue driving during that period. Surprisingly high percentages of them continue to drive. In a study by Coppin and Van Oldenbeek (1965) 46.6% of 1,308 drivers whose licenses had been suspended or revoked had one or more recorded convictions or accidents during the period of suspension or revocation. About 33% of suspended drivers and 68% of revoked drivers drove during suspension or revocation in the six years following the original action.

The drinking driver problem is not specifically handled in this paper, certainly not because of a lack of importance in highway safety; quite the contrary. The problem is very ably handled in a presentation to this conference by Dr. Robert Voas of the National Highway Traffic Safety Administration.

DIFFICULTIES IN CONDUCTING EVALUATION STUDIES

Driver improvement programs are traditionally oriented to those drivers who appear to evidence unusual difficulty or recalcitrance on the highway by their unusually high rate of violations, accidents, or demerit points in a specified time period (mileage exposure is characteristically ignored). It is "persistent violators," "chronic violators," "negligent operators," or "problem drivers" to which driver improvement programs are oriented. Since in any given period of time, such as one, two or three years, only a small percentage of the total of drivers meets such a definition, and since drivers so defined account for only a small proportion of the accidents in a subsequent period of, say, one to three years, the total effect of even the most effective programs imaginable must leave well over 90% of the accident problem in a given period untouched. That is not to say the effort is not worth-

while; it is just to provide perspective.

From the present review of research on effectiveness of driver improvement programs, one finding stands out prominently: the extreme difficulty of carrying through fully rigorous scientific experiments to evaluate driver improvement programs. While it is relatively easy to design such studies, the realities of law, administration and transportation are so pressing and pervasive that not a single one of the studies reviewed can be regarded as adequately rigorous.

A basic requirement for an adequate experiment in this field is random assignment beforehand. This assures equivalence (within random sampling fluctuations, which are assessable) on all relevant variables, including the quality and quantity of post-treatment exposure. But randomization is rarely undisturbed, for a variety of reasons, salient of which is the fact that administrative or operating people rarely understand the absolute necessity of the randomization to the rigor of the study. As a consequence, they tend to assign the greater risks, as they perceive them, to those treatments, which in their view, again, promise to do most for the subjects. There are other forces which interfere with randomization of the inputs into the different treatment groups, but this is a leading one.

Subsequent efforts to make adjustments for the disturbed randomness always leave some doubt as to the adequacy of the adjustments and, therefore, the conclusions to be drawn from the study. For instance, often times the groups are adjusted to make the mean violations, accidents and/or points equivalent across the groups; but characteristically the pretreatment exposures for these adjusted groups are ignored, thus providing the appearance of equivalence of groups, but perhaps opening a fatal flaw in the rigor of the analyses, and there is no way of knowing the direction of the bias thus introduced.

An additional major problem in the treatment phase of a study is the issue of "no-shows." In some studies as many as 50% of the subjects who were invited or instructed to attend treatment sessions did not show up. So far, no satisfactory method for handling the no-shows has appeared. Either to include them or to exclude them from subsequent analyses carries with it certain biases which need to be investigated. About the best that can be done at present is to do the analyses both ways and presume that the truth lies somewhere between the two outcomes.

In the post-treatment phase of such studies there are formidable difficulties. What criterion most cleanly and adequately reflects the success or failure of the treatment under study - with respect to the objective of promoting safe

highway transportation? Accidents are the obvious answer; but the rarity of the event, even for groups which have been selected because of their unusually bad records, make necessary the use of very large numbers of cases and fairly extensive periods of exposure in order to detect possible effects of the treatments at reasonable levels of significance. The use of violations or points makes detection of effect easier because violations are very rare; but since the correlation between violations and accidents is not high (of the order of .2 to .3 in a two- or three-year period) evidence of reduction of violations (or points) is not the same as evidence of reduction of accidents. Also, the use of "percent of drivers involved" ignores all events after the first one.

An extremely difficult problem to handle is the fact that the police, courts and departments of motor vehicles continue to take actions when the subjects of a given study experience violations and/or accidents in the post-treatment period. It is virtually impossible to arrange a hands-off policy. This fact would not be so disturbing if the experimentals and controls were equally affected. However, if the experimental treatment has an effect in reducing subsequent involvements, then the control group will be getting more punitive or corrective actions, and if such actions do have a deterrent effect, this will tend to reduce the difference between the experimental and control groups, thereby obscuring the effect of the experimental treatment; and there is no easy way around this. A practice commonly resorted to is to measure the "mean time to next involvement." This of itself is a clean, uncontaminated measure, but it is only a very partial measure; it leaves out much that should be included (but is contaminated).

Time to next incident ignores repetitions and also generally ignores drivers who are incident-free; that is, the mean time is computed for only those who had incidents during the period of observation. The use of chi-square to test the homogeneity of distributions of times obviates part of this difficulty in that the incident-free drivers are included, but the coarseness of time groupings, in order to provide sufficient numbers of cases per cell, may obscure real differences. And again, repetitions are ignored. It is only the first incident that is counted. Time to first incident also gives equal weight to accidents and violations, which has some logical objectionability. But since for the most part, the number of accidents compared with the number of violations is small, the distortion may be relatively slight.

Another problem in the post-treatment phase of a study arises from the fact that the experimental and control subjects often do not drive during the same calendar time or season of the year. This is cause for real concern because

the bias is not necessarily in one direction. The geographical and administrative locations in which the groups drive are also a matter of concern that cannot be dismissed lightly. Further, the fact that some drivers move out of the State, some discontinue driving, and so on, further complicates matters. Most of these difficulties, apart from the no-shows, are obviated if a randomization is rigorously carried through, but as indicated, this is very rarely the case.

CONCLUSIONS AND RECOMMENDATIONS

1. While uncertain and hedged with qualifications as the outcomes from the studies reviewed must be, due to many reasons indicated, including different types of subjects used, different treatments, different controls, exposure times, methods of analysis, etc., the weight of evidence appears to point to some conclusions. The effectiveness of particular kinds of treatment appears to depend upon, first and foremost, the kinds of drivers treated. Age and sex are surely two paramount variables. And the particular point in the individual driver's experience at which he is treated is very important; but there are other important characteristics too. By most of the usual definitions by which drivers are requested or ordered into driver improvement programs, young males predominate - well over 90%. The particular level or degree of the record of one's offenses is highly important. While this is coupled with age and experience, it is an important variable in itself.

It seems from the research review that less stringent measures can be effective with drivers who have less severe records. It seems that the earlier in their experience drivers are exposed, or subjected, to the improvement program, the greater the probability of success of the treatment. To carry this to its logical conclusion would mean that efforts devoted to initial preparation of drivers, or to supervision of newly licensed drivers - before they have yet accumulated a record of involvement which indicates they are having trouble - would have a higher probability of success with respect to the critical variable of accidents, than efforts applied after the driver has had an opportunity to develop faulty habits of perception, attitudes, and modes of reaction.

2. Not enough information is available on the nature and specific needs of so-called problem drivers, or negligent operators, or deviant drivers. The need for development of diagnostic testing methods and multiple treatment modalities for specific needs seems paramount. (See Goldstein 1972, Summary and Suggestions section). It seems from the research reviewed that treatments can be effective with specific kinds of drivers, that individualized treatments have greater probability of success than do group methods. It seems as though

some form of initial contact from a department of motor vehicles does have a salutary effect, particularly a properly designed letter; but what may be proper for one group may not be for another. No particular treatment appears to be successful with all types of drivers.

3. By the nature of the definition by which drivers are currently selected for treatment, only a small percentage of the total population of drivers is reached, and because the largest portion of the total of violations and accidents occurs to the largest proportion of the drivers, current driver improvement systems leave perhaps 90% of the safety picture untouched. It seems that driver improvement programs could be more effective if they were appropriately coupled with mass communications efforts, and at the same time drivers might be reached by such means before they become eligible for driver improvement programs. Hopefully their eligibility would be indefinitely delayed.

4. Currently the definition of errant drivers depends on the accumulation of a specific driving record or offense record in a period of time. This is irrespective of the extent of exposure to violations and/or accidents. This works an injustice to those whose higher rates of exposure inevitably increase their probability of being defined as problem drivers. Also, such drivers are often aware of this greater exposure, and the fact that the system does not make allowance for this can be expected to engender recalcitrance in them. Unless the individual perceives the effort as having relevance for him, it would seem that such efforts would have low probability of succeeding. Accordingly, improved methods of identifying drivers who need help early in their careers, and the earlier the better, are a need with high priority. It would seem that it may take different variables to identify those that need help among different age groups, sex groups, occupation groups, etc. The driving record alone simply is not enough, and using it alone can easily be self-defeating.

5. It is clear from the research reviewed that it is easier to detect an effect on violations than an effect on accidents, due in part at least to the much higher incidence of violations. With the greater frequency of the event, there is more room for improvement, so to speak. Also, because of the low correlation between violations and accidents in a concurrent period, and an even lower correlation between violations in one period and accidents in a subsequent period, a treatment which reduces violations may not necessarily reduce accidents, and vice versa. If we wish to reduce accidents, we have to design programs specifically oriented to that purpose, and we have to design research programs specifically oriented to detecting the effect on accidents; there must be sufficient numbers of cases and sufficient exposure to permit such.

6. The so-called lasting effect of improvement programs compared with control groups is a very muddy issue. Effects are properly measured by comparison with proper control groups. Even if the control group is a no-contact group, and even if there are no further contacts or actions by the police, the department of motor vehicles, the courts, etc., drivers do improve with age and experience, particularly younger drivers, who constitute perhaps half of the clientele of driver improvement programs. This of itself tends to close the gap between experimental groups and control groups. Such closing of the gap does not necessarily mean the lessening of the effect of the treatment; the treatment may accelerate the improvement that would normally take place, and the two groups approach each other in time, both moving toward a kind of asymptote. The nature of the control group is basic to intepreting the results of evaluation studies.

7. As well as development and specification of treatments for particular characteristics of drivers, and drivers' needs, individual driver improvement examiners, analysts, discussion group leaders, and lecturers, also need specific skills and orientations for which selection and training, supervision and follow-up may be very necessary.

8. Since driver improvement programs can be expected to affect only a portion of the total highway accident problem, it is clear that other programs also need to play their part, such as initial preparation, traffic engineering, highway engineering, police supervision, court programs, and mass communication. And to be maximally effective, these various programs should be integrated in their efforts in order that each program should achieve its maximum effect. This is easier said than done. Currently there is often a lack of communication among programs and even competition, particularly for budget. In this connection, several mass communication studies in the highway safety field which were not reviewed specifically for the present effort do show promise for improving the behavior of drivers in general rather than problem drivers. The development of integrated methods of such mass communication efforts with driver improvement efforts, efforts at initial preparation of drivers, and enforcement efforts seems to make eminently good sense.

9. The need for individualized approaches to driver improvement suggests the possible use of recorded programs, using cassettes and cassette players which the individual driver could use at his own convenience at home on his own time. The recordings could involve any number of different kinds of material - lectures, questions about driving, or about his own personal dynamics, tests, recorded group discussions, interviews and so on. While the initial cost of developing such programs would be very considerable, administration could be comparable to the costs of current programs.

It is envisaged that several kinds of programs can be developed and several cassettes can be used by any one driver. These would be oriented to particular needs of particular kinds of drivers whose needs would have been diagnosed as part of the driver improvement program. The driver would be required to come in, be examined, and would be lent cassettes (with a player if he needed it, and he would be required to leave a deposit to cover its value). He would be required to come back at a specified time to withstand examinations, to be interviewed, counseled, and perhaps provided with further cassettes for other programs.

The way in which a particular driver responds to particular cassette programs may indicate the next steps in his educational rehabilitation. Perhaps a dozen different modules might be developed to meet specific needs - information, education, attitudinal involvement oriented to particular groups, ages, sex, occupation, educational level, etc. A host of specific behavioral suggestions to the driver on ways to cope with driving problems can be provided. Some of the subject matter that suggests itself includes the Smith, Cummings, Sherman System for developing good seeing habits, the National Safety Council's defensive driving course, Shillman's concepts of personal vulnerabilities, and others not yet formulated.

10. This review did not include cost-benefit analyses that have been published in connection with some of the research. The reason is that the evidence of effectiveness seems to be insufficiently clear and sound and quantified to provide a sound basis for cost-benefit analysis. Clearly, the warning letter is the least expensive of the countermeasures. Also, one would expect that group meetings would be less expensive than individual hearings, but the effectiveness data seem to this reviewer a long way from satisfactory for good cost-benefit estimates.

11. Two issues with respect to research methodology are worth emphasis. The no-shows problem already discussed above is troublesome. While there appears to be no ideal way to handle this, it seems that analyses should be carried through with and without the no-shows to provide a fairer basis on which to judge the effectiveness of the treatment, even if a comparison of the no-shows and shows within the experimental group indicates no significant difference between the two.

On the operational side, it seems that this issue needs to be faced more pointedly. Should the drivers be requested to appear, or invited to appear, or should they be ordered to appear under threat of other actions? It would seem the decision ought to depend on the particular kinds of drivers we are dealing with. In any case, it does not seem

reasonable to evaluate a treatment on the basis of only two-thirds or one-half of the designated experimental group getting the treatment.

12. In many of the studies reviewed, multiple tests of significance are conducted against the same control group. While administrative and cost considerations make it very difficult to have more than one control group in a study, it should be clear from a research point of view that such t-tests are not independent. That is, in the degree to which the particular control group is peculiar, all of the results are affected by that peculiar control group.

Further, there have been some instances in the literature where it appears that the research hypothesis was derived from the data and then tested on the data; that is, the groups to be compared were selected after the data were examined. While this is useful for generation of hypotheses for further independent testing, this does not constitute a proper test of the hypothesis. Where there are several groups to be compared, it is questionable whether any t-tests are legitimate before a single test of the homogeneity of the several groups shows them to be non-homogeneous. In an applied area where it is extremely difficult to conduct research at all, these considerations may seem like nit-picking, but they refer to basic issues of logic which underlie the drawing of conclusions and generalizations to the universes of drivers to which we wish to apply these research outcomes.

13. The difficulty of carrying through rigorous research in highway safety has been referred to and discussed above. It is worth emphasizing that there still seems to be a widespread orientation which requires the search for quick, easy, inexpensive cures for highway safety problems, and the kind of research supported seems to reflect exactly this attitude. The public needs to understand that good research in this area and the development of effective programs and their evaluation require very considerable resources in terms of research skills, large numbers of subjects, very considerable periods of exposure, careful and extensive record keeping, extensive data collection, and large-scale programs of research and development. Searches for quick and easy methods are simply not promising, nor are quick and easy countermeasures, even when such countermeasures are entirely engineering solutions. The public is much attracted to quick, easy, inexpensive hardware solutions which require them to do nothing themselves, beyond paying for the devices. While it is much easier to evaluate engineering solutions than to evaluate behavioral solutions, because of the much greater ease of control and manipulation in the hardware realm, the costs are often de-emphasized. They do not come repeatedly to the attention of the individual driver. Once the highway is built

or the car designed and built, it is there, and generally the devices work as intended. But so far no single device or program has made a great dent in the problem. We need engineering solutions indeed. We also need other efforts, and the public needs to be educated to the need for large scale support for the development and the implementation of safety programs, and, of course, evaluation. It is much easier to obtain appropriation of billions of dollars for exploration of new energy sources, while highway safety goes begging.

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A SYSTEMATIC APPROACH TO THE CONTROL OF THE DRINKING DRIVER

Robert B. Voas

TRAFFIC SAFETY AS A PUBLIC HEALTH PROBLEM

Traffic crashes are the largest single source of death for individuals under 45. As shown in Figure 1, the number of deaths from traffic crashes peaks at approximately age 25 and falls off above this age. The Nation's Number 1 killer, heart disease, does not overtake traffic crashes until age 35. Because the traffic safety problem primarily involves the young, the total number of useful man-years of labor lost to the society is greater on a per case basis. Therefore, the total man-years lost due to traffic crashes has been growing and is now approaching the loss from heart disease and cancer (Figure 2).

Despite this tragic record, the United States in relationship to the total vehicle kilometers traveled has the best safety record in the World (Figure 3). This low mileage death rate results from considerable progress in roadway and vehicle engineering. Reduction in the roadway and vehicle causes of crashes has left "driver error" the major cause of crashes in the United States. While specific studies differ on the extent of the driver role, they all agree that roadway and vehicle factors contribute a much smaller share to the causality of traffic crashes. A typical example of such studies is given in Figure 4.

ALCOHOL IS THE LARGEST DRIVER FACTOR IN FATAL AND SERIOUS CRASHES

Several driver factors have been found to be strongly correlated with the occurrence of fatal and serious crashes--age, sex of driver, speed. However, the single most pervasive factor through all studies of fatal and serious crashes is the presence of alcohol in the "at fault" driver. Figure 5 gives the results from a set of studies of the blood-alcohol-concentrations (BACs) of drivers killed in single vehicle crashes. As can be seen, about half of these drivers had BACs in the very high range of 0.10 percent or greater. BACs for drivers fatally injured in multivehicle crashes are somewhat lower as shown in Figure 6. However, this results in part because in

multivehicle crashes there is usually both an "at fault" and an "innocent" driver involved. The "innocent" drivers are much less likely to have high BACs. If the study is confined to drivers judged to be responsible for the crash, the average BACs approach those of drivers in single vehicle crashes. About half of adult pedestrians who are killed in crashes also have high BACs as shown in Figure 7.

The frequency with which high BACs are found in fatally injured drivers and pedestrians can be contrasted with the relatively low frequency with which such high BACs are found in drivers using the road at the same times and places but not involved in crashes. Careful research studies have indicated that the proportion of drivers not involved in accidents with BACs at these levels is between one and two percent in contrast to approximately 50 percent among fatally injured drivers. When the results of roadside surveys which measure the BAC of drivers not involved in crashes are compared with the blood alcohol levels found in drivers in fatal crashes, a risk curve can be drawn which relates the probability of crash involvement to the BAC as shown in Figure 8. In this figure curves for several studies are shown. The three risk curves which rise rapidly as BAC increases are for "at fault" drivers. The fourth curve is for "innocent" drivers who are judged not to have been responsible for the crash. This curve does not rise with increasing BAC. These data provide evidence for the causal relationship between the amount of alcohol in the blood of a driver and responsibility for a crash.

From careful research studies of this type, we have come to the conclusion that approximately 50 percent of all fatalities on the highway are alcohol related. The role of alcohol in less serious crashes is smaller; approximately 30 percent for injury crashes and around 15 percent for all crashes investigated by police. This relationship is not unique for the highway. Alcohol is causally related to traumatic injury of many types. Research has indicated that alcohol plays a role in approximately 50 percent of homicides. Either the victim makes himself vulnerable by drinking too much or the attacker uses alcohol to bolster his courage. Alcohol plays a role in hunting accidents, in home and industrial accidents and in accidents in private boating and flying. From the public health standpoint, alcohol is our most dangerous drug. Quite aside from the tremendous human losses which result from the disease of alcoholism, alcohol greatly increases the losses due to accidental death and injury. Its danger flows from a twofold effect; on the one hand it impairs the ability of the individual to do complex tasks, while on the other, it gives a false feeling of security, thereby tending to increase risk taking.

CONTROLLING THE DRINKING DRIVER

The nature of the drinking problem is summarized in Figure 9 which gives the results of a national poll covering the drinking habits of the American public. This study included 2,746 persons, and is believed to provide a good estimate of the drinking habits of Americans. Presented in this figure are the results for men only, since the roadside surveys indicate that from 80 to 90 percent of the drinking drivers are men.

The responses on the frequency and amount of drinking were divided into five categories given in Figure 9. The last four categories indicate a drinking level which is not likely to bring a male to a blood alcohol concentration (BAC) which is at or above the common legal limit in the United States of .10 percent. Most of those subject to arrest under current laws will fall within the "heavy drinker" category. No action needs to be taken to control this group's drinking-driver behavior *per se*. However, it is necessary to get their general support as citizens for any program of highway safety.

The "heavy" drinker group can be divided roughly into two sub-groups: the *heavy social drinker* and the *problem drinker*. Actually this division should be viewed as lying on a continuum rather than as falling into two clearly distinguishable classes. However, in terms of developing countermeasures it is useful to recognize the difference between these two rough categories of drinkers. The heavy social drinker can be viewed as an individual who has his drinking under control and can be expected to modify that drinking behavior if he can be motivated to do so. The problem drinker on the other hand (a class which includes, but is not limited to, the clinically defined alcoholic), can be viewed as an individual whose drinking is at least partially out of control and who requires treatment if it is to be brought under control. The social drinker can be motivated to change his drinking-driving habits if persuaded that the penalties for failure to do so are sure and severe. Thus, the social drinker can be "deterred." The problem drinker, on the other hand, cannot be deterred because his drinking is not fully under his own control. He must be brought under control and motivated into treatment.

The enforcement-judicial system must be designed to accomplish both of these requirements. On the one hand, the system must ensure a high probability of apprehension of the drinking-driver and ensure that apprehended offenders are penalized in order to maintain a sufficient level of deterrence to deter the heavy social drinker. On the other hand, the system must ensure that when the problem drinker is apprehended, the power of the court is used to motivate this individual into a treatment program, and hold him in that program until he is able to gain control over his drinking. In theory the perfect

legal-judicial system would create sufficient deterrence to ensure that the approximately 15 percent of the driving public who are heavy social drinkers would never be apprehended because they would control their behavior and not be on the road with high BACs, while at the same time ensuring that the approximately 10 percent who have a drinking problem are apprehended early in their drinking-driving careers and brought under treatment. Such treatment would tend over a period of time to reduce the proportion of problem drinkers in the driving population, with the ultimate goal of eliminating them entirely.

ALCOHOL SAFETY ACTION PROJECTS

The Alcohol Safety Action Projects (ASAPs) build upon this general concept of the drinking-driving problem by providing additional funding and support to the major elements of the community traffic safety system. The ASAPs attempt to ensure that problem drinkers are apprehended and brought into a control system that ensures their rehabilitation, while the social drinkers are deterred by a combination of increased enforcement augmented by an intensive public information program. This system is illustrated in Figure 10. Problem drinkers are apprehended by increased enforcement effort and brought into the courts where provision is made for their identification. Provision for flexibility of sentencing allows the court to use the penalties for a drunk-driving conviction as a motivator to place the problem drinker in a treatment program and hold him in that program through a probationary period until he has had time to be rehabilitated. At the same time an attempt is made to deter the social drinker by increasing the probability of apprehension and publicizing this fact through a program of public information. Current indications are that approximately one-third of those being arrested in the ASAPs are classified as social drinkers, while one-third are classified as problem drinkers and the remaining third are classified somewhere in between.

In these programs a considerable increase in the number of individuals apprehended on the road has been achieved in most projects, as can be seen in Figures 11 and 12. In some projects, the driving under the influence (DUI) arrests as a function of the number of licensed drivers are very high in relationship to the national average, which is about one-half of one percent per year. For example, in our Richland County, South Carolina, program an arrest rate of 3.8 percent of the total number of licensed drivers per year has been achieved and in several other projects arrest rates above 2 percent of the licensed drivers per year have been obtained. Despite this, there is evidence that we have failed to achieve the high perception of risk of apprehension that must be our goal

if social drinkers are to be deterred. This has been indicated by our polling efforts at the project sites, which generally show little increase in the public's assessment of the risk of being arrested for DUI.

RESULTS OF ASAP PROGRAMS

The relatively short time these projects have been in operation limits the impact on crashes which can be demonstrated for the ASAPs at this time. It takes considerable time to apprehend, convict, and rehabilitate the problem drinker, so the impact from this aspect of the ASAP project cannot be evaluated for two to three years after the initiation of the project. There are, however, two pieces of data which provide evidence for at least a modest impact on these projects on the drinking-driving problem. One of the major pieces of evidence for this impact is illustrated in Figure 13. As part of the evaluation process of the ASAP projects, those projects which could do so were urged to conduct random roadside surveys at the beginning and after each operational year of their project. Data are available from nineteen of the first twenty-nine projects which were able to conduct surveys at the initiation of their projects and after approximately a year of program operation. When the results from all nineteen sites were pooled in one giant survey, a statistically significant reduction in the number of high BAC drivers using the road was found. This reduction amounted to over 20 percent of those at extremely high BACs above .15 percent, and smaller reductions of 5 to 6 percent for those at lower BACs. This BAC survey technique is a new one and we must interpret these results with caution. We will obtain a good deal more confidence in this result if the third set of surveys, which will be conducted after the second year of operation, continues to show a reduction. However, this preliminary result is encouraging and does indicate that these project sites experienced a reduction in the number of drinking drivers. While the possibility of a general national reduction in drinking and driving cannot be eliminated, the growing liquor sales and the increasing vehicle miles suggest that such a national trend is unlikely.

Another piece of evidence indicating a small but statistically significant impact from the ASAP projects is provided by the eight projects which have had two full years of operation. The total fatal crashes occurring over five years at these eight sites goes up and down in an annual cycle, but there is a general lower shift following the initiation of these eight projects. This shift has been statistically evaluated through a method widely used in the social

sciences called "interrupted time series analysis," and found to be statistically significant.

Even more convincing is the nature of the reduction which occurred. In the United States most drinking occurs at night and therefore drinking-driving crashes occur most frequently at night. Research studies indicate that alcohol related fatal crashes are eight to ten times more frequent at night than during the day. If our projects are effective in reducing alcohol related crashes, we should expect a much larger reduction in the fatal crashes occurring at night than in the day. And for these eight ASAPs there was little or no change in total daytime fatal crashes. On the other hand, the reduction in nighttime fatal crashes was relatively large after the initiation of the projects. When these data are treated statistically, we find that the change in daytime crashes is not statistically significant, but that the change in nighttime crashes is highly significant.

Thus, for these eight projects, we have not only seen that a change occurred, but that it was exactly the type of change we would have expected if the ASAPs are effective in reducing drinking and driving. As before, we must be cautious in our interpretation of these data since we still have a third year of operational data to analyze for these eight projects. Moreover, the twenty other projects which have been in operation for only one year do not demonstrate a similar change. Nevertheless, the two pieces of evidence summarized in this section, the reduction in numbers of drivers on the road who are at high BACs and the reduction in the nighttime fatal crashes for those projects in operation for two years, provide encouragement for the ASAP concept. They suggest that we are on the right track, but that our efforts must be greatly intensified if we expect to show really important reductions in fatal and serious injury crashes.

ASAP EXPERIENCE IN RELATION TO EFFECTIVE HIGHWAY SAFETY ADJUDICATION

This symposium centers on a number of issues critical to the role and effectiveness of adjudication systems. The Alcohol Safety Action Projects can provide a limited amount of experience which is relevant to these issues. Considerable information has been obtained on the question "who gets involved in crashes and who receives traffic citations?" Our roadside surveys indicate that the drivers who are using the road during the nighttime drinking hours are young, the largest proportion being in the 20-25 age group. While the middle-aged driver, 35-40, may have the highest average BAC, the proportion of drivers with a BAC above .05 percent is greatest in the 20-25 age group. This age group also demon-

strates the highest proportion of drivers involved in single vehicle fatal crashes. All three of these age curves are shown in Figure 14. In contrast, the individuals being apprehended by the police are somewhat older, as shown in Figure 15 (DUI sample). This figure from a study conducted by our Washtenaw County ASAP shows that alcoholics under treatment in the hospital and drivers arrested for DUI offenses have a similar age distribution. To complete this picture, we need one more piece of evidence and that is a survey of problem drinking in America conducted by Cahallan and published in his book the "Problem Drinker." His survey showed the maximum prevalence of drinking problems in the 20-25 age group and his problem drinking age distribution closely matches that of the curve for fatal crashes shown in Figures 14 and 15. Taken together, these three pieces of data suggest that exposure to drinking-driving problems and drinking problems in general are greatest for the young male. Alcohol problems including drinking and driving problems decline after age 25. However, some individuals, rather than experiencing a reduction, get progressively worse and are ultimately hospitalized for alcoholism, generally between the ages of 35 and 45.

Law enforcement personnel apparently find it easier to apprehend the older drinking-driver whose BACs are higher, but whose proportional involvement in crashes is lower than the young driver. It appears that the enforcement, judicial, and treatment systems need to shift to focus more upon these younger drivers. This will mean a change in the rehabilitation programs to suit the needs of these younger individuals, who will differ significantly from the older alcoholic populations.

A second question raised in this symposium is "how well can crash involved drivers and traffic violators be predicted?" The indication from our ASAP experience is that problem drinkers can be readily identified by para-professional personnel within the court setting. Several brief questionnaires and structured interview forms have been developed which appear to be very useful in identifying problem drinkers. On the basis of these measures reasonably accurate assignments to treatment programs can be made, and valid estimates of future drinking-driving problems obtained.

A third question asked by this symposium is "how effectively can we deter or modify unsafe driving behavior?" This question remains largely unanswered at this time. Several research studies have suggested that traditional court sanctions such as jail or fine do not rehabilitate the problem drinkers who receive these penalties. The Alcohol Safety Action Projects have utilized special alcohol safety school, group therapy programs, and traditional treatment programs,

in treating individuals identified as problem drinkers. It is generally too early in most programs to evaluate the impact of these activities on crash involvement and drinking-driving arrests following completion of the program. Initial attempts to measure this impact have yielded mixed results. Evaluation of a group therapy program in the Nassau County ASAP indicates no improvement in the driving record of those who attended this program over a group convicted of DUI who did not attend the course. On the other hand, there is evidence that the DUI Phoenix program, which is part of the ASAP in that city, is having a statistically significant effect in changing both information and attitudes about drinking and driving. Preliminary data suggest that it is also reducing the probability of reoffense for DUI. There is also some indication that the Antabuse® program implemented in the Washtenaw County ASAP has been effective in reducing recidivism, at least during the one year period of time in which individuals are on this program.

For the other projects, there has either been too short a period of time to properly evaluate the retraining programs and/or there has been a lack of adequate control groups so that a statistical evaluation of the effectiveness of these procedures is not possible at this time. There is a critical need for better evaluation of court implemented educational and therapy programs. One of the major impediments to this evaluation is the unwillingness of both court personnel and treatment personnel to permit the establishment of untreated control groups and to provide for random assignment to the various treatment alternatives. Without this type of experimental control, it is impossible to rigorously evaluate the effectiveness of these programs.

SUMMARY

In relation to the issues raised at this seminar, it appears from a summary of our ASAP experience, we could make the following tentative statements:

1. High blood alcohol concentrations are strongly related to crash involvement, occurring in approximately half the individuals responsible for fatal crashes, while only present in one to two percent of drivers using the road but not involved in crashes.

2. Few drivers reach the high BACs associated with fatal crashes with any frequency. Therefore, it is possible to focus the safety countermeasure system on a relatively small portion of the total driving population.

3. Individuals who are at high BACs can be apprehended on the highway. However, only a small proportion of drinking-driving events are currently resulting in apprehension. Moreover, the focus of enforcement activity appears to be on the middle-aged driver, rather than on the young drinking-driver, who is most involved in alcohol related crashes.

4. The drinking behavior of individuals apprehended on the road can be evaluated and those who have a drinking problem identified.

5. It remains to be demonstrated that educational and rehabilitation programs will be effective in getting problem drinking-drivers to bring their use of alcohol under control and to avoid repetition of the drinking-driving offense.

6. There is some evidence from the eight ASAPs which have been underway for a full two years and more dramatic evidence from the British experience with the Road Safety Act of 1967 to indicate that social drinking drivers can be deterred. To date, such deterrence has appeared to be transitory. Moreover, the level of enforcement and public information required to maintain a high deterrence level is unknown.

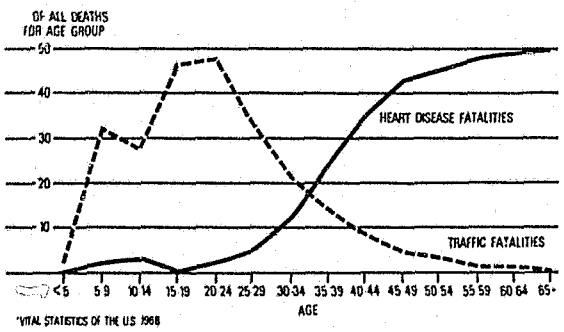


Figure 1. Age and major causes of death.

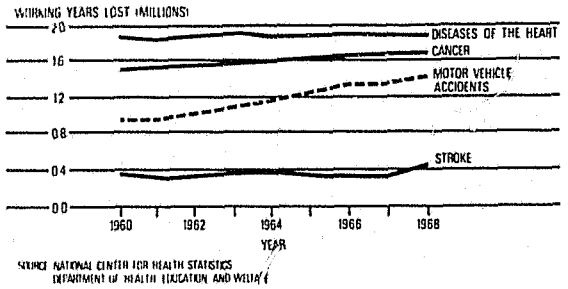


Figure 2. Expected working years lost to leading causes of death, 1960-1968.

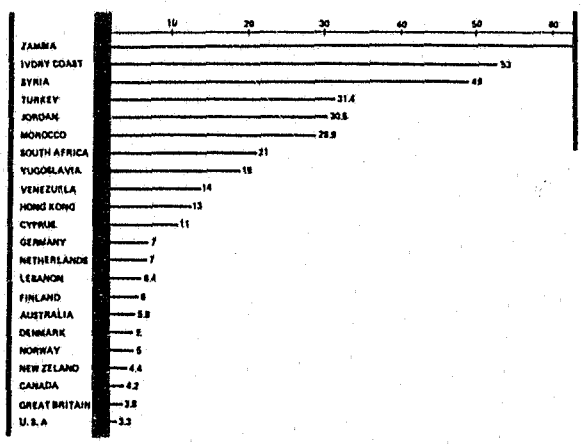


Figure 3. Road accident deaths per 100 million vehicle–kilometers in 1969.

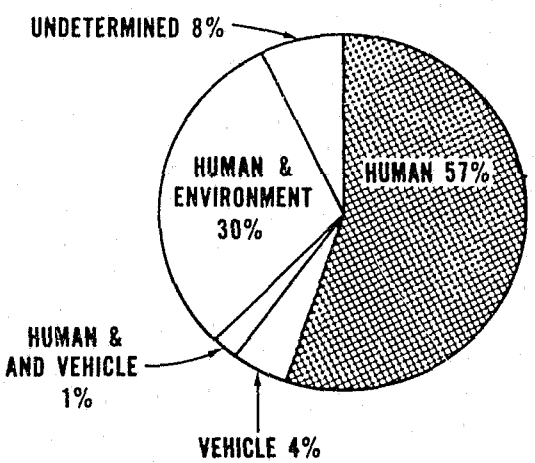


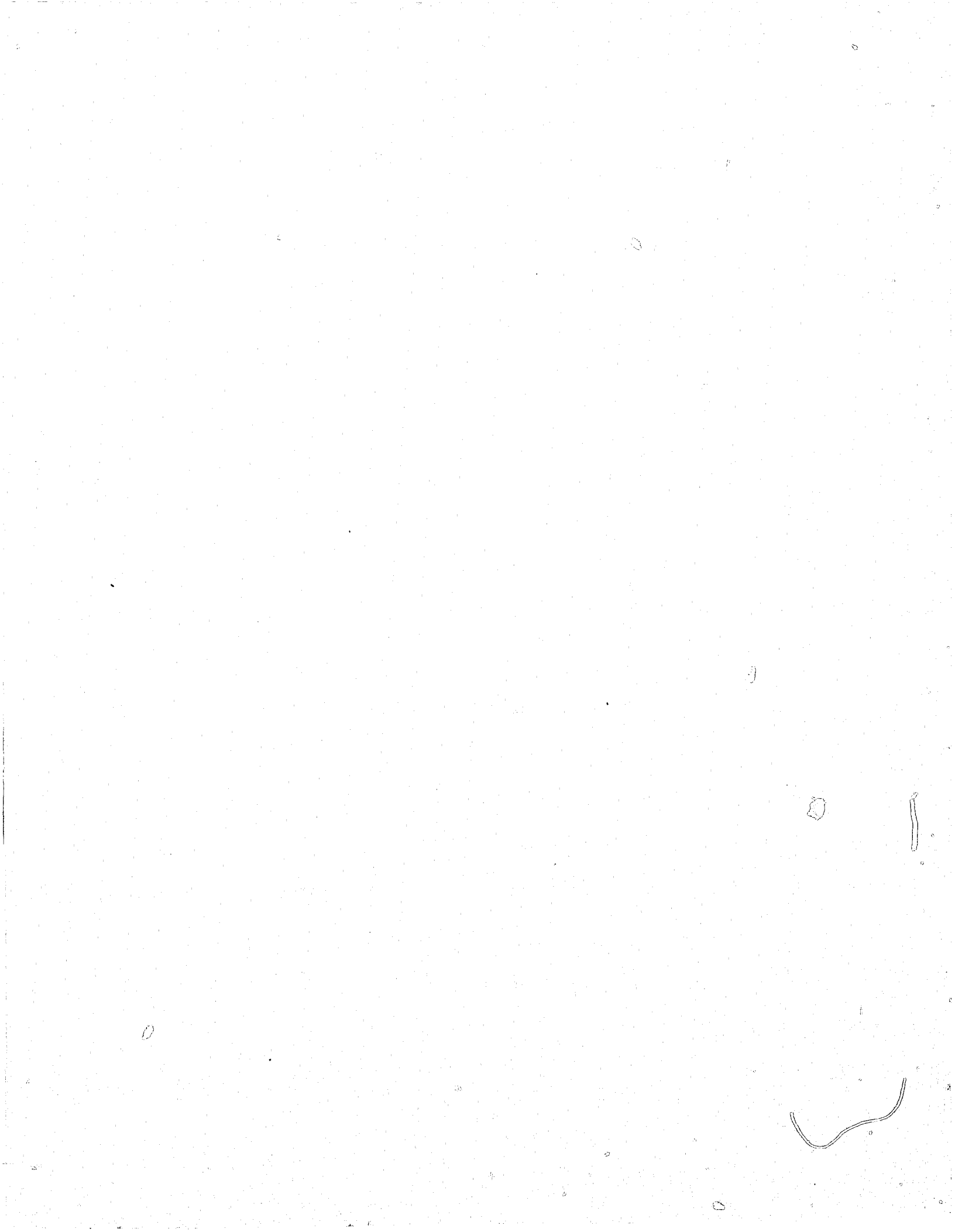
Figure 4. Accident cause analysis

DATE	STATES	NUMBER	% DRUNK (> 0.10)
1950-57	NEW YORK	83	57%
1956-65	FLORIDA	221	56%
1965-66	CALIFORNIA	1,403	48%
1961-63	NEW JERSEY	469	55%
1967-71	NORTH DAKOTA	150	71%
1971	VERMONT	63	54%
1955-65	TEXAS	280	70%
1970	ARKANSAS	73	61%
1970	MARYLAND	118	59%
1970-71	NORTH CAROLINA	522	63%
1969	MICHIGAN	108	65%

Figure 5. Fatally injured drivers in single vehicle crashes.

DATE	STATES	NUMBER	% DRUNK (> 0.10) AT FAULT	ALL
1941-1960	OHIO	570	67	
1965-1966	CALIFORNIA	847	44	
1967-1968	VERMONT	29	31	
1970	NORTH CAROLINA	147		34
1967-1971	NORTH DAKOTA	130		43
1955-1965	TEXAS	318		43
1967-1969	MICHIGAN	173		52

Figure 6. Fatally injured drivers in multivehicle crashes.



CONTINUED

1 OF 3

YEAR	STATE	NUMBER	AGE	PERCENT DRUNK
70-71	VERMONT	99	ALL	28%
51-60	MARYLAND	207	10	36%
59	NEW YORK	19	18	42%
61-63	NEW JERSEY	409	16	31%
65-66	CALIFORNIA	879	15	40%
55-65	TEXAS	38	16	58%
71	MASSACHUSETTS	72	16	44%
67-69	VIRGINIA	308	ALL	50%
69	MICHIGAN	167	16	43%
70-71	NORTH CAROLINA	259	15	61%

Figure 7. Fatally injured pedestrians.

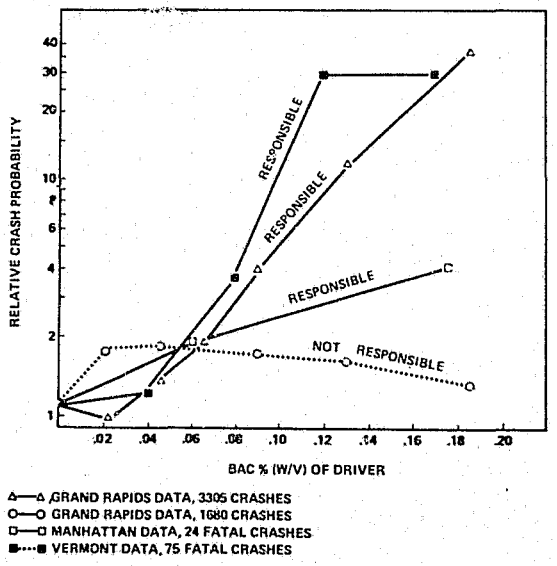
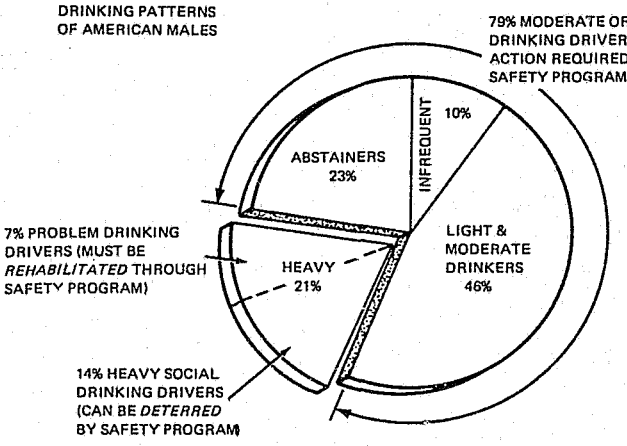


Figure 8. Driver responsibility and crash probability in relation to BAC.



*Degree of drinking was classified according to a rather complex combination of the quantity of alcohol consumed per occasion and the frequency of drinking.

- Heavy drinking. Drink nearly every day with five or more per occasion at least once in a while, or about once weekly with usually five or more per occasion.
- Moderate drinking. Drink at least once a month, typically several times, but usually with no more than three or four drinks per occasion.
- Light Drinking. Drink at least once a month, but typically only one or two drinks on a single occasion.
- Infrequent Drinking. Drink at least once a year, but less than once a month.
- Abstainers. Drink less than once a year or not at all.

*Alcohol & Health, Sec., HEW, Dec. 1971

Figure 9. Analysis of drinking driving problem.

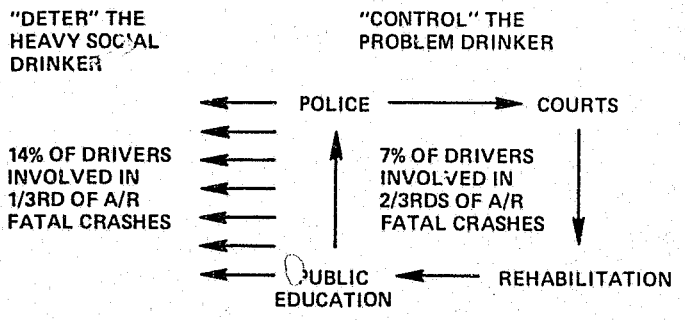


Figure 10. Alcohol safety action program concept.

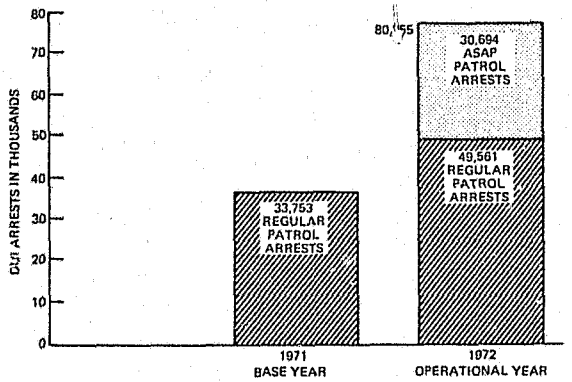


Figure 11. Growth in total alcohol related arrests in second 20 ASAPs.

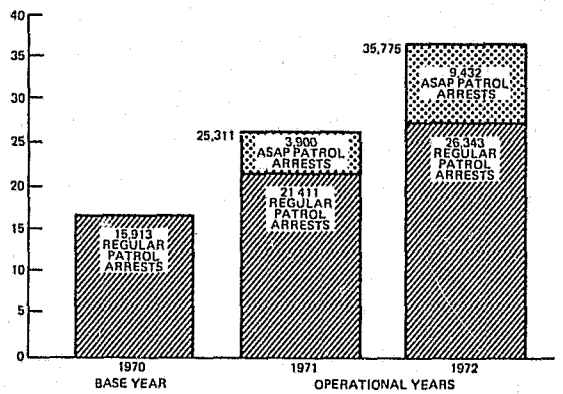
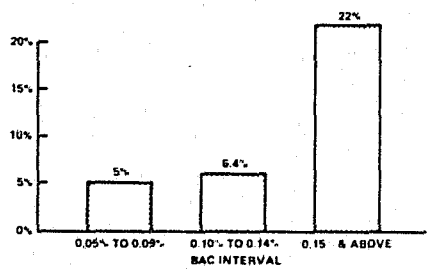


Figure 12. Growth in total alcohol related arrests in first 9 ASAPs.



OF ALL DRIVERS TESTED IN INTERVAL			
BAC INTERVAL	FIRST SURVEYS	SECOND SURVEYS	ABSOLUTE REDUCTION FROM BASELINE TO OPERATIONAL
0.05 TO 0.09 INTERVAL	0.080	0.076	0.004
0.10 TO 0.14 INTERVAL	0.031	0.029	0.002
ABOVE 0.15 INTERVAL	0.018	0.014	0.004

Figure 13. Reductions in drinking drivers on the road from first to second survey.

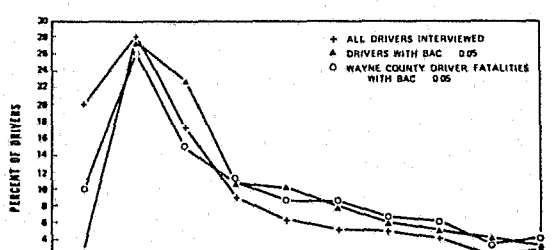


Figure 14. Comparison of age distribution of drivers in Michigan roadside survey and fatally injured drinking drivers.

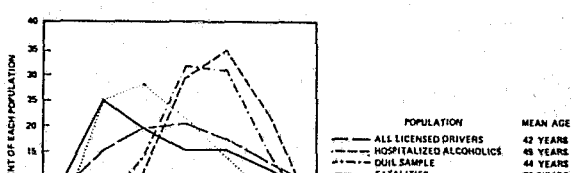


Figure 15. Age distribtuion for five populations in the state of Michigan.

RESEARCH REPORT

Murray Blumenthal

In late 1968 Judge Bill Burnett, at that time presiding Judge of the Denver County Court, contacted me in Connecticut and asked me if I was interested in doing research on his Court. I arranged to meet with him in Denver to learn more about his specific interests. He told me that he wanted to find out what effect he and his fellow judges were having on the minor violators and on those charged with driving under the influence. Did it matter at all, he said, if the minor violator came to court? Did it make any difference if the DUI violator was fined, placed on probation, or sent to violator school? He said that he liked to believe that the Denver Court was effective, but in all honesty he couldn't convince himself one way or another--whether he was effectively encouraging lawful and safe driving, or if the court was merely a revolving door in a revenue collection agency. I contacted Professor Ross at the University of Denver College of Law, and with support from the Department of Transportation, which was elated to find a cooperative court, we set out to answer the judge's questions.

We began by forming a national advisory panel, which included, among others, Jim Economos, Jim Slaven and Glenn Winters, to help us plan the study. We also formed a local panel, including court, police and Department of Revenue officials upon whom we depended for the special citations, data collection, and so forth. Great care was taken to keep all of these officials informed, particularly the county court judges, who could make or break the study, and this applies most of all to the drinking driver part of the study.

We decided that to answer Judge Burnett's question it would be necessary to run two separate studies. The first would attempt to answer the question, "Is there any special safety benefit in having minor traffic violators appear before a judge of the traffic court?" as the American Bar Association had recommended for years and which in fact had become a Department of Transportation standard. The second study would respond to the question, "Which sanction being used by the Denver Court--a fine, regular probation or rehabilitative probation--was most effective in improving the

driving records of drivers found guilty of driving under the influence of alcohol for the first time?" Before running the two principal studies we ran pilot studies in order to become familiar with the state and county data systems and to get preliminary estimates of the outcomes, which, incidentally were in accord with our later findings.

Translating Judge Burnett's first question into research hypotheses and procedures we decided to compare the effect on subsequent driving records of a required court appearance with three alternatives: first, with the standard, conventional citation used in Denver which gives the alleged violator the choice of a court appearance or the payment of a fine to the Clerk of the Violations Bureau; second, the citation that permits the mailing of a standard $20.00 fine (this was specially set up for this study) or direct payment to the Violation Bureau; and third, a warning ticket (also not used in Denver regularly), requiring no appearance or fine. We agreed that the warning ticket would not be used for crash-involved violations. Although we would have preferred that these citations be given out at random by the police, it was administratively more feasible to set up a schedule so that each of the citations, except for the warning, would be given out to all six-point minor violators cited by the police traffic bureau patrolmen during two selected two-week periods, for each of the conditions. The police agreed to only one week for the warning citation because of the loss of revenue that would entail.

Three weeks after the study began, our schedule was somewhat disrupted--first, by floods which took the police traffic bureau patrolmen off to more urgent duties for a while, and then by the extraordinary overload on existing court facilities caused by the appearance of the drivers who received the special citations requiring them to appear in court. The second flood of drivers descending upon the court gave some indication of the expansion of court facilities that would be necessary if required court appearances for minor violators ever became court policy. Because of the crush of violators, we could not see everybody who was supposed to come to court, and some of the people who were required to appear were allowed to pay a fine in the Violations Bureau and were dropped from the study. In order to make up for the lost data, we used a procedure that gave us another way to test the effect of a court appearance. This time we set up what we believed would be a random procedure based on the last digit of the citation number. For two weeks half of the drivers who appeared at the Violations Bureau prepared to pay a fine were sent to court. They came to the Bureau, and they were told to kindly step through a door and appear before the court. Then we later compared the half who paid the fine as they expected to with the half

who were somewhat surprised by their being sent before the judge.

The traffic records of all drivers in both studies were recorded for two years prior to their appearance in the study and for one year following the disposition of their charges. In the case of the warning citation, records were recorded for one year following the receipt of the warning citation since there was no disposition. The driving record measures we used were: number of violations not associated with crashes; number of points based on both crash and non-crash associated violations; number of crashes for the criterion citation, the citation that brought the individual into the study; number of points, whether or not his crash was associated with the citation date; and time to the first moving incident, either a crash or a citation, following the disposition of charges or receipt of the warning citation. We also recorded a variety of characteristics of each driver in the study, as well as the details of the court processing.

The results. We compared the 1,126 required court appearance defendants who came off the street, rather than those who showed up at the Violations Bureau, to 670 violators who had the discretionary ticket where they could go to court or not. The only difference we found was that 14 percent of those required to appear in court had moving incidents within three months as compared with 9 percent of those who paid a fine to a clerk. When we compared the 870 subjects who were randomly sent to court when they appeared at the Violations Bureau with those who were simply allowed to pay in the routine way, we found no difference at all the year following disposition of their case. When we compared the over 1,000 violators who appeared before the court with 1,080 drivers who mailed in their citations with their $20 check, the only post disposition difference favored the mailing group, 21 percent of whom had a recorded moving incident within 6 months as compared with approximately 24 percent of the court appearance group. A small difference, but larger than you would expect by chance alone. Now, we also went through further manipulations of the data to correct for initial differences. I am not going to go into those results where other assorted differences sometimes favoring the court group showed up, but there was no regular pattern from which you could arrive at any coherent generalization. Then we compared 851 drivers who went to court with 816 who received a warning citation. The warning group was an extreme treatment group in the sense that they had the least amount of contact with the legal system--simply a warning and they were allowed to proceed. The court sample nevertheless had a poorer record, in time until first subsequent moving incident; 15 percent during the first three months compared with 10 percent of the warning group. Again, when we further manipulated matching

of the data we found some minor differences occasionally in favor of the court group, but without a coherent pattern.

I would hesitate to say that court appearance has a negative effect, and I am a little worried about where the difference comes from at this point. Therefore, the only conclusion I would be willing to suggest at this point is that our control study indicates that the earlier federal standard requiring court appearance for basically all moving violations was based on an unsupported assumption. We could find no clear advantage in subsequent safety records of drivers required to appear in court as required by the standard, compared with those processed by the typical violation bureau system prevailing in Denver or with simpler alternatives--the mail fine and the warning, introduced temporarily into Denver by this study.

Our second study dealt with Judge Burnett's other question concerning the most effective way to handle drivers charged with driving under the influence for the first time--through the imposition of a standard fine, through conventional probation requiring the usual checking back and reporting to the probation officer, or a rehabilitative type of probation which in Denver could involve outpatient treatment for alcoholism at the Denver General Hospital, attendance at a course in alcohol problems, inpatient treatment, rarely used, or an alcohol release program at the Denver County Jail? Once again we would have preferred random assignment of violators to treatment. However, we decided together with the judges that a fixed schedule by months was desirable and probably the only real possibility. In effect, each month the court changed its policy as to the sanction that would be used. Thus, all drivers charged with DUI during January, April, July, October and January starting in 1969 were to be fined. All those appearing in February, May, August and so forth were to receive conventional probation, with a similar schedule in the remaining months for the rehabilitative sanction. We agreed that in flagrant instances where the judges would ordinarily use a jail sentence, they were free to do so, of course; and we expected that in those few special cases the individuals would be dropped from the study.

Shortly after the research began, a municipal election changed the party in power and Judge Burnett was replaced as Presiding Judge of the County Court. We also noticed quite early that the judges were not conforming to the agreed sanctioning schedule. They were not limiting themselves to fines during the fine months, nor the appropriate sanctions during the other months. We met with the judges, we wined and dined the judges, and I must report that the Denver judges were incorruptable. They continued

to violate our agreement regardless of anything we did.

When we discovered they were not living up to their agreement, we had a choice at that point--to cancel the study, as has been done in other instances when promised cooperation was not forthcoming, or to shift the focus of our study somewhat and study those judges. Obviously, we decided on the latter course. We decided to answer the original question about sanction effects as best we could in a way that worries us, and to ask many questions about the judges. And, based on a suggestion of our Law School Dean, we soon found out that we couldn't understand what was going on unless we also studied the lawyers.

Here are some of the answers we came up with. In brief, we could find no differences in the effects of fines, conventional probation or rehabilitative probation on subsequent crashes, moving violation points, DUI convictions, violations, or time to first subsequent moving incident in the year following disposition of charges. Note that we did not say that there is no difference in effect. Rather, all we are justified in saying is that we could find no difference under the conditions of our study.

Then we asked the question, "Under what circumstances did the Judges use discretion and depart from their agreement with us?" When do you think it was? First, when there was a very poor record and they imposed a jail sentence. This was rational and agreed upon. There was also a tendency to depart from the schedule when a defendant was represented by a lawyer. What was the effect of the judge's use of discretion when he had promised to give up discretion during the course of our study? We found no difference in subsequent records between approximately 50 violators who were sent to jail and the 431 receiving non-jail sanctions in the year that followed. We found no difference in subsequent violators treated according to the fixed schedule, compared with those whom the judge used discretion and assigned a non-scheduled penalty.

What about the lawyer's role in the process? Represented defendants were more likely to be female, to have poor previous records, to have had a crash associated with their first DUI citation, to have their charges disposed of during the month when fines were the scheduled penalty, and to experience a longer delay between charge and disposition than non-represented clients (99 percent of those not represented had their charges disposed of within 5 months versus 69 percent of the represented defendants within the same period delay in our courts). Also, those represented by lawyers were less likely to be found guilty and were more likely to have the charges against them dismissed or re-

duced. And, when we compared the subsequent record of those found guilty with those not guilty or dismissed and with those having their charge reduced, we found that defendants with reduced charges had the poorest subsequent records.

When I first told Judge Burnett about these findings--I can see him that day in his chambers--he sat back and sighed and said, "You know, we probably would find the same thing if we studied our handling of criminal cases." Now when I told some of my lawyer friends about the results of the DUI study, the effects of representation on case disposition, the reduced charges, and the poorer records of these drivers, some said that they could have told us that we would find that kind of thing without having to spend $100,000 of the taxpayer's money--they knew it all the time, which made us wonder if one of the major effects of what appeared to be an irrelevant, ineffective and unjust traffic sanction system was the corrosion of the confidence and belief of judges, district attorneys and lawyers in the system.

RESEARCH REPORT

H. Laurence Ross

This conference testifies to the possibility that we are entering an age of experimentation in which we are willing to ask questions about what we do, to get answers from experts, and to modify our procedures so that our legal system is more effective. You are going to like what I have to say better than what Murray said, because I am going to report here a positive study of what law can do in the particularly crucial area of drinking and driving offenses. I am pleased with this study because so much of evaluation research up to now has unfortunately come up with negative findings. That is, if we look at what we have learned about driver education, courtroom appearance, license suspension for speeding, and publicity and propaganda, almost uniformly we find little or no evidence of any effectiveness of what we do on the problems of traffic accidents, injuries and deaths. Let me tell you about this happy exception, the study of 1967 legislation in Great Britain concerning drinking and driving.

Driving after drinking has long been the subject of specific prohibitory legislation; it was specifically prohibited in Great Britain for many decades, but the British laws prior to 1967 were widely believed to be ineffective due to three sets of problems which I am sure you will recognize. We will call them problems of identification, problems of judgment, and problems of sympathy. Problems of identification are derived from the fact that objective evidence that the driver has drunk alcohol to a dangerous degree is not readily available to an outside observer, particularly to police patrol. Unlike speeding, unlike violating a stop sign, the dangerous behavior is not easily visible, and police who want to enforce typical drinking and driving legislation have problems and must rely on a variety of unreliable cues, e.g., driving too slowly and driving unevenly--most of these cues being insufficient in common law countries to warrant an arrest. Problems of judgment arise from the fact that when we have laws incorporating terms such as "drunk" or "being under the influence of drink" or "being impaired in the ability to drive," these terms prove to be inherently vague and they require difficult and controversial inferences

from observed behavior. Problems of sympathy occur when the decision-maker, be it judge or jury, finds itself biased in favor of finding the accused not guilty because of sympathy with the accused and antipathy to the law. These three groups of problems strongly affect police efficiency.

In 1962 the British government tried to deal with these problems by introducing mandatory blood tests in prosecution procedures. However, that legislation, the Road Safety Act of 1962, failed to give a firm standard of judgement to courts concerning how much blood alcohol constituted illegal intoxication, and it was widely regarded to be ineffective. Continuing concern over drinking and driving in Great Britain during the 1960's, especially on the part of the British Medical Association, led to enactment of a reform law in 1967. That is the law I want to discuss, the Road Safety Act of 1967. We tend to think of it as revolutionary; actually it was not. It is different from the prelaw not, as is often thought, in terms of the penalty, which was a mandatory, one-year suspension of the driver's license. That penalty was introduced in 1962. Its novelty lay, rather, in the specification of a particular blood alcohol concentration which in itself defined a crime, and in a scientific procedure culminating in a precise laboratory test of blood alcohol by which the commission of the crime could be determined.

When the Act was proposed in 1966, it became a major national issue, the most controversial point being the permission for the police to administer preliminary breath screening tests at random. The random tests were strongly resisted by the automobile associations and the beverage industry along with much of the press, and the point was eventually conceded by the government and random testing was not a part of the 1967 Act. However, the publicity surrounding this controversy may have added considerably to the knowledge of the average British driver concerning the eventual provisions of the legislation, and furthermore, and most important, to the impression that the government meant this Act to be enforced. An additional broad publicity campaign in 1967 was sponsored just before the inception of the Act. Within a few weeks following October 9th of that year, when the Act came into effect, the press was filled with governmental and private claims of considerable effectiveness for this new legislation. Indeed, in the last three months of 1967 British casualties declined by 16 percent as compared with the same period in 1966. However, the careful observer realizes that to attribute that kind of change to a causal effect of a single factor, such as this Act, is unjustified unless other possible causes potentially present in the situation are ruled out of consideration. In particular, it is necessary to rule out such possible causes in the decline in

casualties as random fluctuations of the casualty rate, changes in the amount of driving unrelated to this legislation, and the effects of other safety-related measures being applied simultaneously in the jurisdiction--such matters as higher safety standards for tires, construction of new and better roads, and so on.

These claims were analyzed by a method called interrupted time series analysis. Briefly, the logic of that analysis is that if a proposed cause, such as the Act of 1967, did produce a specific effect, such as a decline in traffic casualties, then a series of measures of the effect, casualty rate over time, should show a significant change precisely at the point of the change in the causal variable. Furthermore, in those situations where the cause is expected to operate more efficiently in time and space, the change in the effect should be more pronounced; and, conversely, where the cause is expected to operate less efficiently, there should be evidence of a diminished effect.

I have a slide for you which shows the interrupted time series analysis of the British casualty data. This figure, Figure 1, presents the total casualty rate per 100 million vehicle miles after correcting that rate for months of different numbers of days and removing seasonal variations by statistical correction process. The change is not nearly as impressive as one might have been led to believe by the claims originally made for the legislation, but it is in line with reasonable expectations concerning what might be accomplished in total casualty savings, given what we know concerning the role of alcohol in all kinds of accidents. You may recall from Borkenstein's Grand Rapids study the estimate that if you could eliminate alcohol as a factor in accidents you would get about a 6 percent decline in the total number of casualties. That is about what we find here. The drop in the casualty rate does occur exactly in October of 1967 as predicted, and the change is found to be statistically significant by special tests developed for this method. The fact of statistical significance means the change was not merely a chance variation of the curve, but, absent any other convincing explanation, the drop in casualties can be attributed directly to the effects of the Road Safety Act.

Now, a more impressive change in casualties was predicted for the hours when drivers are more likely to drink, and for more serious casualties when alcohol is known to be more often involved. Relevant data are presented in the next figure, Figure 2. This figure graphs the numbers of fatalities and serious injuries on British highways during the weekend night hours. Here the predicted reduction is seen very clearly; the September to October decline is 66 percent and it is highly significant. Now, keep that figure in mind and

let us look at the next one, Figure 3, which depicts the same casualties (fatal and serious injuries) during weekday commuting hours. It shows virtually no decline, and again is predicted on the assumption that it was the Road Safety Act and not some other safety measure which produced the overall decrease in casualties.

This analysis is not capable of distinguishing the effect of the Act from that of the accompanying publicity which occurred virtually simultaneously and which was directed toward the same behavior. The survey of the literature on highway safety publicity enables us to conclude that changes of this magnitude are unlikely to be accomplished by publicity alone, but I believe the publicity campaign probably made the Act much more effective than it would have been otherwise. One would not expect changes of the magnitude of Figure 2 to occur in the absence of extensive public knowledge of the law.

How did this Act work? There are four possibilities that come to mind. First, it might have reduced travel so that a constant accident rate would yield fewer actual casualties. Second, it might have reduced the consumption of alcohol, though not the proportion of consumption attributable to drinking drivers. Third, it might have produced more careful driving on the part of drinkers, non-drinkers or both, without affecting the number of drinking drivers. Fourth, it might have caused people to separate the occasions of drinking and driving, while continuing both activities in the same amounts. Now, the first possibility was actually eliminated by the fact that I used mileage-based figures in the first slide. But I can give you the next slide, Figure 4, presenting direct time series evidence that miles traveled on British highways were unaffected by the Act. What you see in this slide representing miles traveled, is a sharp seasonal variation, an annual cycle, and a slight upward trend over the years. Those are the only features of note in this graph and there is no discernable change apparent in late 1967. So explanation number 1 is ruled out.

The second possibility, i.e, that people drank less, is quite reasonable. It was strongly feared by the beverage industry in Great Britain. Again, we have some time series data to rule out this second explanation. Figure 5 shows that sales of alcoholic beverages did not respond to the Act. However, if you will note in the bottom curve, there is an effect of a tax increase in early 1968 which shows very clearly. Tax increases will cause people to drink less or at least buy their liquor earlier, and road safety acts apparently do not have any effect.

It is more difficult to choose between the third and

fourth possibilities, but several considerations support reliance on the latter, i.e., the separation of drinking and driving. There is some independent survey evidence that shows few drivers admitted to combining drinking and driving after the Act. And more drinkers admitted walking to the places of consumption in a survey subsequent to the Act than in a prior survey. Another line of evidence is the blood alcohol concentrations in victims of fatal accidents. The percentage of drivers with alcohol in excess of the legal maximum,(.08 percent),was 25 percent in late 1966 to early 1967, compared with 15 percent in comparable periods in late 1967 and early 1968. More speculatively it can be argued that drivers drinking in levels specified in the Road Safety Act are unlikely to be able to control their behavior so as to avoid accidents.

In the light of the advantages promised in prosecuting drinking drivers, one might expect wholehearted endorsement of the Act by the police. Actually, the British police seem to have been relatively reluctant to apply the Act, despite the advantages we could see for police efficiency in this. As evidence of that, note that in 1970 there were about 70,000 breath tests administered in all of Great Britain with a population of 58 million people. In contrast there were 48,000 such tests administered in Sweden with a population of less than 1/6 as large. The police did charge more people with drinking and driving offenses after the passage of the Act. That is diagrammed in the next slide, Figure 6. You can see that after the Act there was a great increase in the number of drinking and driving charges. However, there was a simultaneous decline in the numbers of vague catch-all categories of traffic violations, like dangerous and careless driving suggesting that much of the increase in the drinking and driving category represents drivers who would have paid some legal penalties under the old law. It is likely that the number of drinking drivers stopped by the police and charged with some offense changed very little because of the Road Safety Act. I think the reason here is that the police were afraid of the public relations difficulties that they would experience with this Act, which involved inconveniencing large numbers of drivers, messy procedures, blood tests, and of course, the dreaded penalty of losing one's license for a year.

The response of the courts was also more complex than might have been expected. The proportion of convictions in drinking and driving cases which are shown in the next slide, Figure 7, did increase markedly both in the magistrate's courts and in the higher courts, despite greater numbers of charges being brought, and the mandatory sentence of license removal was in fact applied nearly universally. However, numerous members of the jury expressed resentment against the

law, and the higher courts, especially the divisional courts, were so receptive to technical arguments that the Act nearly fell victim to a "loophole crisis." Let me cite a few of the kinds of things that were being used to throw out convictions under the Road Safety Act. One of the provisions of the Act was that the policeman had to be in uniform when he made an arrest, and a conviction was thrown out on the grounds that an officer was not wearing a hat at the time he made the arrest. The law provided that the testing must be made at the scene of the accident or nearby, and when a policeman requested that a driver walk one hundred yards to the nearest police station, that conviction was thrown out. A driver who while pursued by the police was able to reach his own driveway and was exonerated--police had not caught him driving or attempting to drive. And there is one such defense which is still valid; a driver who had an accident and who then went into a bar and took a few drinks to steady his nerves was able to excuse an illegal blood alcohol level.

The following letter from Dr. Havard of the British Medical Association may give you an idea of the state of the authority by 1970 with regard to the courts handling of the Act. This is a letter to the London Times:

> The results so far have focused the attention of many countries on the working of the Act, and some of them have already introduced the 80 mg./100ml. level or are in the process of doing so. What do we have to tell them of the difficulties we have encountered? We have to tell them it was necessary to go to appeal to prove that a driver cannot insist on blood being taken from his penis, and as far as the House of Lords to decide he cannot elect for his big toe.
>
> We also have to tell them that a conviction was recently quashed on the fiction that there are only four gas chromatographs (necessary for analyzing a small volume of blood) in what they previously assumed to be a technically developed country, and that almost any defect in a procedure for preliminary screening can prevent a driver from being convicted when he is shown to have driven with a very high blood level concentration.

Why did the courts react this way to the Act? A few speculations: First of all, the dislike of the severe penalty. Second, the judges' resentment of limitation on their discretion by the mandatory provisions of the Act. Third, a distaste for the invasion of the accused's body by blood

tests. Then, three apparent innovations in the British criminal law: first, the possibility of arrest in the absence of reason to suspect the law violation; second, requiring the accused to cooperate actively in the proceedings against him; and third, condemning as criminal a condition that could not be precisely known by the violator. The loophole crisis was eventually overcome by overruling the decisions of the Divisional Court by the Court of Appeals and the House of Lords. And how did this happen? I suggest to you, first, great moderation by the police in applying this Act. Second, the discovery by the judges of some benefits in being able to tell the defendant, "I'm sorry to do this to you, but I have to." And third, probably most important, the accumulating evidence of the effectiveness of this legislation in reducing traffic casualties.

By 1971 when my study was done, there was available significant disturbing evidence that the effect of the Road Safety Act was diminishing. One source of evidence is these graphs that I just showed you. They show the initial effect of that legislation, but they also show that following that initial drop the curve started to climb back up. In the case of fatalities, an initially diminishing trend line actually reversed direction and the rate began to climb. Independent evidence is found in the routine blood test made of traffic fatalities. The proportion having illegal alcohol levels which fell in 1968 from 25 percent to 15 percent had increased by 1971 to 25 percent--equal to the pre-reform figure. And then again there is some survey evidence showing diminishing numbers of drivers reporting drinking less when driving.

Now, why is this? It is likely that the diminishing effectiveness of the Act is attributable to the fact that there was little real increase in the probability of being punished, and only secondarily on the severity of the punishment. The great publicity that this law had may well have given many drivers the impression that the chances of apprehension when driving after drinking were to be increased by an important factor, and in reality, as has been shown in the study, these chances were affected only modestly. The number of apprehensions under the Road Safety Act are indeed very small when compared with the number of licensed drivers or the number of miles driven in Great Britain. A rough estimate is that there is one charge of violating the Road Safety Act for every two million miles driven in 1970. In brief, it seems a learning process developed to counteract the law and its accompanying publicity. The average driver learned that drinking and driving in Great Britain is still a pretty good gamble and he adjusted his behavior in consequence. You cannot lie to the public about the chances of being caught. And that is what seems to have taken place in

Great Britain.

In the effort to regain the initial savings in casualties produced by the Road Safety Act, British sources have suggested lowering the legal level of blood alcohol and instituting the random program originally proposed for the Act. I have reservations about these suggestions. The relative risk of an accident occasioned by driving with blood alcohol concentrations of less than .08 percent is pretty small. The enforcement of a law with such limits is unlikely to be cost-effective. If you raise the spectre of random testing, this would reactivate political hostility experienced before the enactment of the present legislation, and it could lose the hard-won friendship of the courts and the police. A more promising approach would be to make the present legislation live up to its promise by increasing the police and judicial resources devoted to enforcement. There was no decline in the proportion of breath tests failed by drivers in 1967-71, even though the number of tests requested increased importantly. And this fact suggests that still more tests could be required, yielding still more valid charges without changing the present legislation. Most importantly, the perception of risk in drinking and driving would be raised, rendering realistic the expectations held by the British public in 1967; and we believe those expectations led to significant savings in lives and injuries.

Going beyond the British case to our own country, the study seems to suggest that it is possible to deter the dangerous behavior of drinking and driving by causing people to expect that police are alert for such behavior and that the consequences of arrest are almost certainly conviction and penalization. This fact promises tangible benefits for law enforcement. Here in the United States we already have laws that formally resemble the successful British Act in its essential provisions. What we lack is convincing proof of our intention to enforce them. And the British experience should tell us that we err in not doing more with what we have.

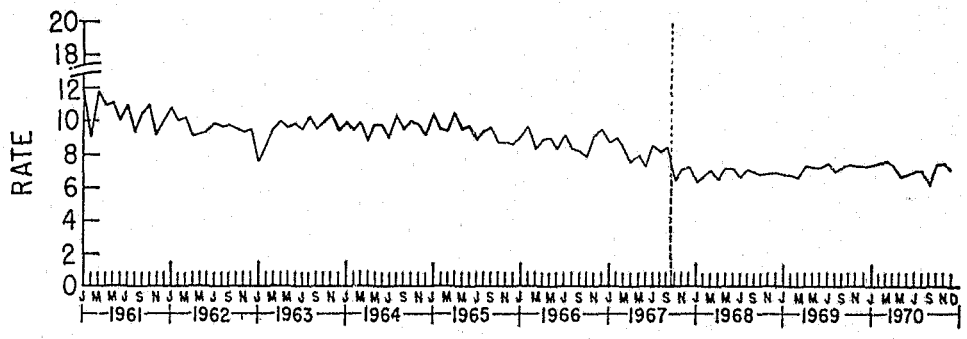


Figure 1. British fatality rate, corrected, seasonal variations removed.

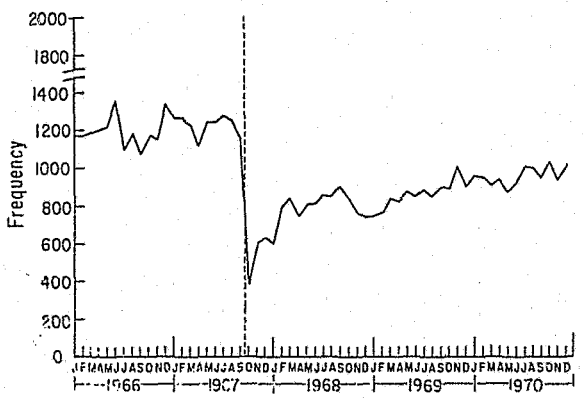


Figure 2. Fatalities and serious injuries combined for Friday nights, 10 p.m. to midnight; Saturday mornings, midnight to 4 a.m.; Saturday nights, 10 p.m. to midnight; and Sunday mornings midnight to 4 a.m.; corrected for weekend days per month, seasonal variations removed.

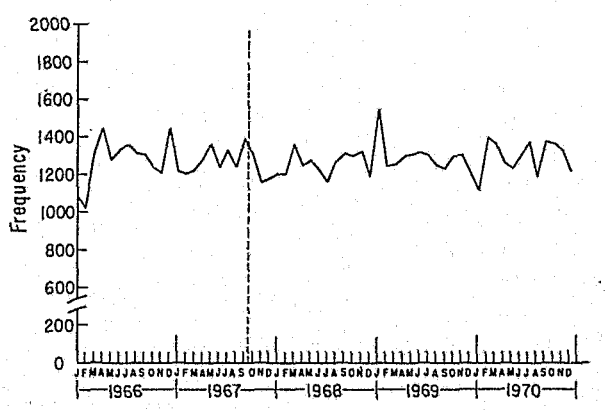


Figure 3. Fatalities and serious injuries combined for Mondays through Fridays, 7 a.m. to 10 a.m. and 4 p.m. to 5 p.m., corrected for weekdays per month, seasonal variations removed.

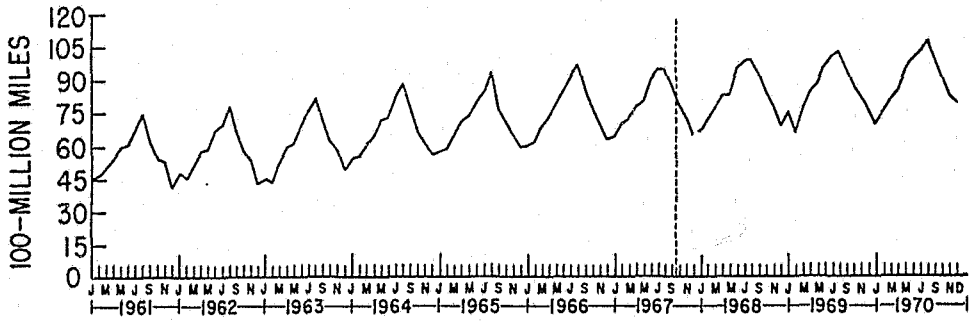


Figure 4. Vehicle miles traveled in Great Britain, as estimated by the Road Research Laboratory.

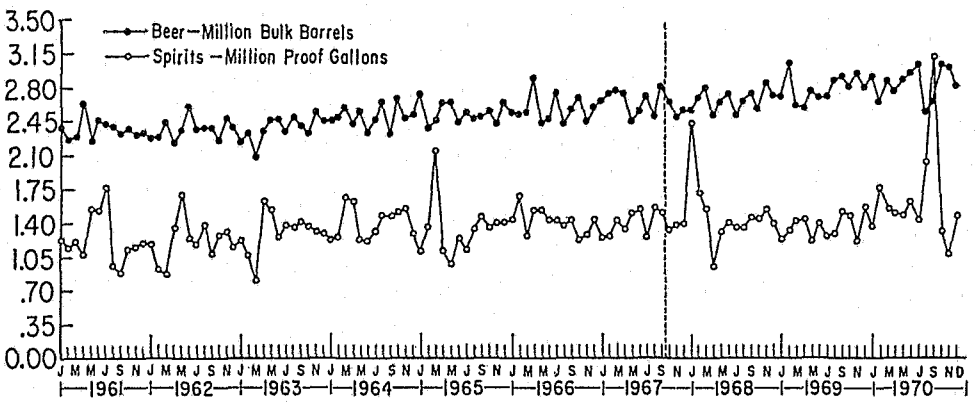


Figure 5. Releases from bond of beer and spirits, seasonal variations removed.

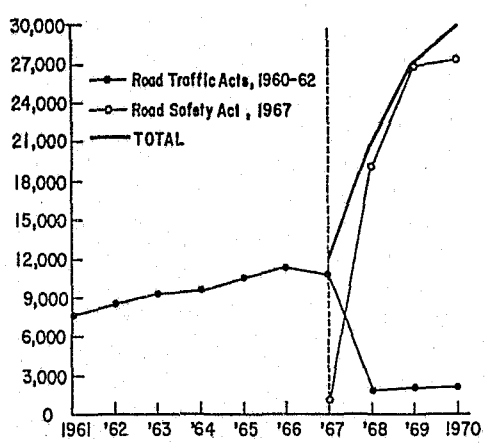


Figure 6. Charges of drinking and driving offenses—driving or attempting to drive or being in charge of a motor vehicle—under legislation of 1967 and 1960-62 added together.

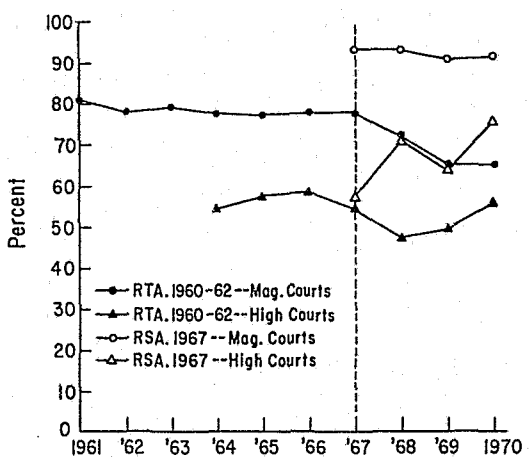


Figure 7. Percentage of convictions in Magistrates' Courts and higher courts on charges of driving or attempting to drive under legislation of 1967 and 1960-62.

POLITICAL AND ECONOMIC BARRIERS TO CHANGE IN HIGHWAY SAFETY AND ACCIDENT PREVENTION

Vincent Tofany

In few fields of human endeavor can political factors be segregated from economic ones, and traffic safety administration is not one of those fields. A national highway safety policy was enunciated by Congress in the Highway Safety Acts of 1966. The difference between the enunciation of that policy and its actual implementation is primarily the result of a series of budgetary decisions made by succeeding Congresses and administrations since 1966. The budgetary decisions are political decisions, but the dollars not budgeted represent an economic starving of the Highway Safety program.

The interactions between the political and economic factors also have subtler forms. The states expected substantial federal funding of a broad range of state administered programs. This expectation of economic aid caused many states not to plunge ahead in vitally needed traffic programs. To the states, it seemed neither economically wise nor politically expedient to spend state dollars today for programs that Uncle Sam would pay for tomorrow.

This is a subtler form of political and economic interaction which serves as a barrier to change for the better. The states were told to expect federal funding under a matching grant. To say that federal funding has been less than adequate would be more than generous. The federal talk accompanying the passage of the Highway Safety Acts was big, but the funding has been small.

The cities and the states are also due for some criticism--criticism for sitting back and waiting for the federal government to fill their highway safety coffers. This is no time to sit back and argue about who is going to pay the bill, because the public ends up paying the bill, both through taxes and through lives lost, while waiting for a comprehensive highway safety effort to materialize.

Again, we come to the word "waiting." The federal government waits to fully fund and implement the Highway Safety Acts of 1966. The states wait for the federal government's

matching highway funds. The public waits for the states to act. My question today is: What is everyone waiting for?

In 1972, in that one year alone, some 56,000 Americans lost their lives on the highways of this nation. We have heard often that this represents more Americans than died in the entire Viet Nam conflict. In fact, it is more than died in the Korean War from 1950-1953. In just one month, September of this year, 4,890 Americans died in traffic. Now that is more than died in the entire American Revolutionary War.

Where is the public hue and cry? Where is that public demand, that impetus that oftentimes moves public officials to place a crisis situation on the top of the priority list and swiftly move to resolve the crisis? They are doing it now with energy. They do it all the time with matters assuming public attention. We are in a crisis; indeed 1972 was the deadliest year on our highways. Furthermore, we are faced with an annual increase of approximately 4% in vehicles and 2½% in drivers who are driving 5% more miles. So with all that expansion, the outlook obviously is not very promising. And I ask again: What are we waiting for?

The individuals in this important meeting this afternoon, and their counterparts throughout the nation, possess a vital and influential moving force--and a force that very well could move the mountain of inactivity in our highway safety programs. Right here we have representatives of state governors, legislators, supreme court and other judges, bar association leaders, state attorneys general, safety professionals, driver licensing officials, enforcement personnel, and even citizen group representation. We can almost institute an effective highway safety program right here among ourselves.

There is a saying that if you are not part of the solution, you are part of the problem. The problem is being added to each year, and so we must become a part of the solution. I think the incentive is there. It is obvious it is the saving of the lives of our families, our friends, our neighbors, our fellow citizens.

There are other barriers we must overcome in addition to the economic and political ones: inertia, apathy, resistance, and ignorance. Whether we are legislating or enforcing existing legislation, budgeting dollars or deploying manpower, designing administrative procedures or performing administrative functions, what is new is generally problem ridden. It is always easier to make decisions on the basis of precedent and habit than on the basis of analysis and reason.

Inertia is a significant obstacle at all levels of administration. People are quick to complain about getting into ruts, but any attempt to get them to leave their established ruts and find new ways of doing things will encounter massive resistance. Perhaps the energy crisis will succeed in combatting this inertia and reducing speed limits, just as in World War II when we accepted a 35 mile per hour speed limit. But you can imagine the outcry that would arise if there were an attempt to impose such a speed limit simply because it would save lives. It would be politically impossible.

Apathy, on the other hand, makes people accept accident slaughter, just as long as it is at an accustomed level, and even though they could be roused to near panic by some smaller new danger. I recall, for example, not long after World War II a few cases of small pox were detected in New York after many years in which the disease was totally absent. By the thousands, people formed lines blocks long, and they waited hours for vaccination. If anyone had asked them to take the time to have their cars or their eyesight checked, they would have been up in arms, even though traffic accidents were killing many thousands more people than was small pox. Apathy, as you well know, can be dangerous but when it is applied to highway safety, it becomes tragic.

Resistance to life-saving procedures and programs is a barrier that must be penetrated by research, effective educational programs, and, if necessary, by the enactment of laws. The case that is strongest in point is safety belts. Although safety belts have been standard equipment on U.S. built cars since 1964, only about one-third of American motorists use them. Motorists consistently find ways to bypass buzzer warning lights and interlock systems that are designed to bring about their use. Massive public information campaigns clearly showing the life saving value of belts have been largely ignored. Safety belts are in place, systems now requiring their use are there, but approved passive restraints must also be fully implemented. The public must be protected by requiring all car occupants to wear their safety belts, and this can only be done through mandatory safety belt usage laws. Of 41,890 lives lost in traffic accidents in the first nine months of 1973, about 31,000 were vehicle occupants and approximately 10,000 lives could have been saved if all states had adopted and enforced safety belt usage laws. Thousands of the more than 1,400,000 disabling injuries during that same period could have been prevented, and a measurable reduction of the $13.8 billion dollar drain on the Nation's economy caused by these accidents could have resulted, if only people had fastened their seat belts.

Ignorance is another major obstacle to change. I am not talking only of the ignorance of the uneducated, the in-

different, or the unopinionated. We are, all of us, hindered by a serious shortage of hard, reliable data on which to base detailed administrative decisions. The National Safety Council is the foremost agency for collecting, analyzing, and reporting accident statistics. The National Safety Council's research department has made a small but significant beginning, both through in-house projects and by encouraging dissemination of the work of others and analyzing various parts of the traffic safety problem not covered by statistical compilations. Proud as I am of these accomplishments and as much as I admire the work of many other researchers in traffic safety, I can assure you that what we know is the very small tip of a very large iceberg. The impact of ignorance on both political and economic decision making is obvious. I do not suggest that if we knew all the answers we could win instant support for our proposals, but every limitation on knowledge is an obstacle to progress.

Another major obstacle to change is the thought in the minds of some that a part is more important than the whole. In the field of safety this fallacy is expressed by the insistence of individuals and groups that some limited specialized program is more important than a broad-range approach to safety. I do not want to suggest for a moment that concentration by some upon special targets for limited periods of time lacks value. On the contrary, great advances, great changes for good sometimes come because enthusiasts take the ball and run with it. Yet, the fact remains that in safety, notably in traffic safety and notably in recent years, there has been a tendency to fragment the safety effort. Different economic and political grouping have tended to emphasize different problems. Even within a single industry or jurisdiction, organizations have sometimes taken quite different attacks, and so far as this broadened the national safety effort, it was a good thing. But insofar as the different parts of the program are seen as competitive, and mutually exclusive, it is destructive. One thing statistics make obvious is that no narrowly targeted effort will solve, or even make a major contribution toward solving, the traffic accident problem before us. With the exception of the drunk driver, no single factor is present in anything approaching half of the fatal traffic deaths; and since it is obvious that measures to deal with the drunk driver must be of many different kinds. We must continue to combat traffic accidents by the use of a host of different methods, administered by many different agencies, and aimed at a very wide range of factors.

This list of obstacles can be extended, but I think the obstacles I have named are numerous enough and important enough to occupy whatever time you can allow them for some time to come.

I believe that those of you in policy making positions in state government must base your plans upon the assumption that your own state will have to fund its own programs. Strip yourself and your constituents of any illusions that manna will rain down from Washington and free your taxpayers from the necessity of paying for safety in their own state. Those of you who are representatives of the public interest must join your influential voices to those of the state policy makers to achieve public support for the state funding of life saving efforts. And having based your plans upon what realism demands, then by all means let all of us combine in a massive effort to make Congress and the administration aware of the responsibility of the Federal Government to live up to its promises and meet the responsibilities that it has accepted. Now if I seem to be suggesting that safety programs ought to be funded twice, let me assure you that I am only trying to be realistic. If we do a maximumly effective job on both the federal and state fronts, it is just possible that the combined funding might approach adequacy. To slack off efforts at either level means, to put it very bluntly, to condemn thousands to death in what I term avoidable traffic accidents. Our responsibility is simply to keep up the pressure for judicious change, and then we can transform the present lack of action into a drive for safety progress.

The battle against the barrier of ignorance will be a long one, but it is one of the most important fronts in this whole battle against accidents. We need more and better research into accident causation and accident counter measures. I think the National Safety Council has developed much useful methodology, particularly in the areas of computer analysis of accident causes, but much more remains to be done, both in the refinement of methodologies and in the utilization of the methodologies already available. This means money, tax money and contributor money, for the funding of projects and the distributing of work effort and I hope we don't limit the creativity of the searchers for knowledge by poverty or subject limitations. As to the fallacy that the part is greater than the whole, I am sure we can, with patience, encourage the free interchange of ideas and a respectful tolerance of other ideas and rebuild the structure of unity within the voluntary safety movement, which has admittedly been neglected, if not in fact damaged, within recent years.

And so there is a great need for all of us to see the various parts of a great safety program united to form a protective arch above the American people. As I am here today in my newly identified role with the expanded responsibility that goes with it, I can sincerely pledge to you the National Safety's Council full and enthusiastic cooperation to the invigoration of this spirit of unity and inclusiveness in all safety matters, and particularly my favorite field, traffic safety.

LEGAL ISSUES IN TRAFFIC OFFENSE ADJUDICATION

John H. Reese

HISTORY AND CONTEXT OF ADJUDICATION

When the operation of motor vehicles became a highway safety problem, state governments began regulating their use. It was assumed that driver failure was responsible for highway crashes and that all would be well if drivers could be made to perform properly. This regulatory premise developed into the "nut behind the wheel" syndrome which continues to influence our thinking. In order to insure safe operation the states decided that driving misbehavior should be considered to be criminal conduct. Thus, we assumed that the threat of criminal sanctions would minimize highway crashes.

The early statistics, e.g. 15.60 deaths per 100,000,000 miles in 1933, as compared with 4.27 deaths per 100,000,000 miles in 1973, supported the idea that drastic action was justified.

For many years the driver-focused criminal adjudication approach was accepted because of the widely held belief that improper driving was conscious anti-social conduct. Persons committing traffic offenses were justifiably considered to be criminals. This early moralistic attitude was not seriously questioned, in part, because the motor vehicle was not an important mode of transportation. However, as the motor vehicle became predominant and as researchers began to question the utility of the moralistic approach to safety programs, society became less inclined to view driver failure as conscious criminal conduct. Today almost everyone operates a motor vehicle and many drivers have at one time or another been cited for a moving traffic violation. Consequently it has become socially acceptable to be this type of "criminal." When this occurs the utility of criminal sanctions as a deterrent is greatly diminished. It has been said that:

> Once it becomes respectable to be convicted, the vitality of the criminal law has been sapped.

Professor Laurence Ross supports this thesis and denominates traffic violations as "folk crimes."

Continued imposition of criminal sanctions to deter unsafe driving behavior, coupled with rapid growth of the use of the motor vehicle, has led to congestion in most urban traffic courts. Increased enforcement efforts compound the problem.

Congestion creates pressures which evoke demands for relief. The responses have been varied, but the suggestion most often heard today questions the premise of our criminal traffic court tradition. Are all moving traffic violations sufficiently dangerous to justify treating offenders as criminals? It is said that some violations should be decriminalized and subjected to different procedures and penalties. That offenses vary as to their safety consequences is the foundation of the driver's license point systems which are in effect in most states. Nonetheless, there is general agreement that some offenses are sufficiently serious to warrant criminal treatment. Examples include driving while intoxicated, reckless driving, eluding the police, driving while under suspension, and homicide by vehicle.

Another response emphasizes court improvement rather than de-criminalizing. It is suggested that traffic courts should be more efficient. The import is more and better judges, larger staffs, better record keeping and management, etc.

A third response emphasizes systems research and studies which question the efficacy of individual offender adjudication. Does adjudication modify driver behavior? Is it possible to modify driver behavior? Is it worth the cost to attempt to modify driver behavior? Perhaps the dollars should be spent on other components of the system.

The Blumenthal-Ross study in Denver and the systems approach of NHTSA are examples of this line of thought. Thus, we are not lacking in suggestions for improvement or change in the traditional court adjudicative process.

Defenders of the tradition have been quick to respond to the suggestions. Traffic judges, the American Bar Association Traffic Court Program, and others argue against major changes and suggest instead improvements in traffic courts. They argue that courts should be staffed with quality personnel, and drivers should be made to realize the seriousness of traffic violations. Attendance in court should be required for all moving violations and there should be a tightening of administrative controls to minimize graft and bribes.

At one time the principal disagreement between the

defenders of tradition and the advocates of change was on the issue of whether traffic offenses - aside from those admittedly serious - should be made non-criminal. A criminal charge has obvious procedural implications such as arraignment, bail, trial-by-jury, right to counsel, etc. Critics suggest that because most traffic violations are strict liability offenses which contain no mens rea requirement they should not be treated as crimes. Traffic offenses are said to be too commonplace for the imposition of criminal sanctions. Some ardent defenders of the status quo continue to resist the proposition that the less serious violations should be reclassified as non-criminal. Virtually everyone agrees that driving while intoxicated, reckless driving, homicide by vehicle, eluding the police, and driving while under suspension are serious offenses which warrant criminal sanctions. It is not yet fashionable or acceptable to commit these violations. Most critics seem to be saying that the "underbrush" should be cleared away to allow the traffic courts to expend their resources more efficiently in the adjudication of the serious offenses such DWI and reckless driving. There is, therefore, no serious move to abolish traffic courts.

Given this state of affairs, have any states acted to change their adjudication systems? A sampling of state legislation indicates that some modifications have been made. The purpose of the brief review which follows is to identify for analysis the principal legal issues raised by the changes.

LEGISLATIVE ACTION BY SELECTED STATES

New York

Perhaps the earliest break with traffic court tradition occurred in the 1930's when the New York legislature decided that the "stigma of criminality" should be eliminated from traffic offenses except upon conviction of the most serious moving violations. Accordingly, the New York legislature enacted a statute which reclassified certain traffic offenses as civil "traffic infractions."

Offenses not specifically identified as misdemeanors or felonies were thus decriminalized and were made the subject of civil penalties. However, "infractions" were processed in the criminal courts by the usual criminal procedures.

California

In 1968 the California Legislature established "violations" as a third category of public offenses. They are not punishable by incarceration and there is no right to jury trial or to appointed counsel. The change was not as

extensive as in New York,for only parking violations, equipment violations, and other minor violations are classified as infractions. Most moving violations continue to be classed as misdemeanors or felonies.

Those traffic offenses reclassified as "violations" are now processed by a traffic commissioner who operates under the authority of the traffic court system. However, the authority of the traffic commissioner is limited to imposing sanctions on violators who plead guilty and to setting dates for a court hearing for those who plead innocent. In a contested hearing, the person charged with a "violation" cannot demand a jury trial or appointed counsel.

New York - Administrative Adjudication

The New York legislature removed traffic infractions cases from the criminal courts in New York City in 1970. In 1972 the removal was extended to all cities in New York having a population in excess of 275,000.

This law provides for adjudication of traffic infractions by legally trained representatives of the Department of Motor Vehicles who sit as administrative hearing officers. More serious offenses such as driving while intoxicated, reckless driving, and driving without a license continue to be heard by criminal court judges.

The less formal procedures of the administrative hearing process are substituted for the formal procedures of the criminal courts. Hearing officers are authorized to impose civil penalties such as fines and suspension or revocation of a driver's license or vehicle registration. The statute provides for administrative review of hearing officer decisions by an Appeals Board within the Department of Motor Vehicles. In the event of an unfavorable decision by the Appeals Board the motorist is entitled to judicial review of the administrative decision pursuant to the civil practice law and rules.

North Dakota

Except for serious offenses which are specified in the statute, a 1973 North Dakota Law makes most moving violations non-criminal. The existing court structure is used to adjudicate the offenses. A judge or magistrate sits as a "designated official" who conducts an administrative-type hearing in which the burden of proof is reduced to a "fair preponderance" of the evidence.

Upon being charged with a non-criminal offense the driver has two alternatives. First, he may appear before the

designated official, admit the violation, and pay a specified statutory fee. The driver is allowed to make an explanation of his action. The official may waive, reduce, or suspend the statutory fee or bond.

Second, the offender may request a hearing on the offense charged. If the hearing official finds that the offense was committed, he levies the specified statutory fee and makes appropriate reports to the state driver licensing authority.

An adverse decision by the hearing official may be appealed to the District Court for "trial anew" and to a jury, if requested. If the court finds the offense to have been committed, no further appeal is allowed.

If a driver fails to choose one of the alternatives, he is deemed to have committed the violation charged and this is reported to the licensing authority. If the driver fails to appear at the time designated without paying the statutory fee or posting and forfeiting a bond he is guilty of a misdemeanor.

British Columbia

The Canadian Province of British Columbia has enacted a "no fine" law which applies to moving violations such as speeding and careless driving, but not to the more serious moving violations, such as driving while intoxicated, reckless driving, etc. Traffic violation reports are served on persons who commit moving offenses and court charges and appearances are eliminated.

Unless the driver chooses to dispute the violation charged, the reported violation becomes a permanent part of his driving record in the office of the Superintendent of Motor Vehicles. Upon accumulation of a number of violations the Superintendent is authorized to issue a warning, require the licensee to take a driver training course, or suspend the driver's license after opportunity for a hearing before a judge to determine whether the offense actually took place. No fines or civil penalties other than action against the license by the Superintendent of motor vehicles are imposed.

The legislative changes in these states and in British Columbia suggest four major legal-policy themes which contain most of the technical, legal issues raised by the statutes. The four themes which we shall consider are:

1. The nature and classification of traffic offenses

2. The forum for traffic offense adjudication

3. The procedures to be followed in traffic offense adjudication

4. The penalties imposed for traffic offenses

THE NATURE AND CLASSIFICATION OF TRAFFIC OFFENSES

The argument whether traffic offenses should be classed as criminal or civil proceeds on two levels. First, at a philosophical level, is the question whether the nature of traffic offenses is such as to justify use of the criminal law to prevent them. Defenders of tradition insist that it is, for criminal courts are most likely to be able to impress upon the errant driver the seriousness of the offense he has committed. Furthermore, it is said that conviction of a criminal offense is a most important deterrent to future driving misbehavior. This is supported by the current NHTSA Traffic Court Standard which requires appearance in court on charges of hazardous moving traffic violations. In addition, some defenders insist that because driver failure constitutes a serious risk of death or injury to others, jail sentences are justified in some circumstances.

On the other hand, critics argue that most traffic offenses should be reclassified as civil offenses and perhaps removed from the court system. Consider the 1973 position taken by the National Advisory Commission of Criminal Justice Standards and Goals:

> All traffic violation cases should be made infractions subject to administrative disposition, except certain serious offenses such as driving while intoxicated, reckless driving, driving while a license is suspended or revoked, homicide by motor vehicle, and eluding police officers in a motor vehicle. Penalties for such infractions should be limited to fines; outright suspension or revocation of driver's license; and compulsory attendance at educational and training programs, under penalty of suspension or revocation of driver's license.

Implicit in this 1973 recommendation is the notion that traffic matters are not essentially criminal in nature.

Similarly, the Model Penal Code has for several years recommended the creation of a non-criminal offense termed a "violation." The authors of the Code state that "this reflects the purpose of the Code to employ penal sanctions only with respect to conduct warranting the moral condemnation implicit

in the concept of a crime." The authors point out that strict liability offenses pervade modern regulatory schemes and should be recognized as unique. It is their judgment that decriminalizing "will service the legitimate needs of enforcement, without diluting the concept of crime or authorizing the abusive use of sanctions of imprisonment."

Other critics of the status quo insist that the lack of a mens rea requirement sets the traffic offense apart from the normal crime. Furthermore, it is argued that as a practical matter the massive volume of traffic offense convictions shared widely by a large segment of the driving society serves to destroy any deterrent value of the criminal sanctions. To repeat: "once it becomes respectable to be convicted, the vitality of the criminal law has been sapped." Thus, the initial question is: Does it make sense to class all traffic offenses as crimes?

Second, at a more pedestrian level the issue of decriminalizing traffic offenses is argued in terms of efficiency, opportunity for a fair hearing, and penalties. Comments about case backlogs, graft and bribes, "cafeteria courts," inefficiency, and disparity in sentencing are typical. Defenders of the courts insist that many of these criticisms could be met by upgrading the status of the courts, by emphasizing the seriousness of traffic offenses and by better administration to achieve greater efficiency.

Court critics stress that criminal traffic offenses impose unnecessary constraints on traffic court procedures. Proof of guilt beyond a reasonable doubt, the right to a jury trial, the indigent's right to appointed counsel, and problems of bail or jail before trial are the most significant. It is said that greater efficiency could be achieved by decriminalizing to permit a lower standard of proof, eliminate the right to a jury trial and appointed counsel, and simplify arraignment and bail problems. Only imprisonment could not be imposed as a civil penalty.

Defenders of the courts point out in reply that it is as important to convey the impression of dispensing justice as it is to dispense it. Hence, additional courts should be created with better trained judges to permit the traffic offender to form healthy concepts about law and order for the reason that traffic courts are the show place of the American judicial system. The critics respond that actual practice in many urban traffic courts leads to disrespect by defendants because of the rather summary treatment which they receive. Implicit in suggestions for reform is the assumption that fair hearing procedures and justice may be administered less formally and, perhaps, in a forum other than a court. Our sampling of statutory changes in New York, California, North Dakota, and British Columbia indicates some movement toward decriminaliza-

tion and perhaps signals a national trend in that direction. Wisconsin has gone so far as to make first offense driving while intoxicated non-criminal, but New York, California and North Dakota continue to classify as criminal DWI and other serious offenses.

Closely related to the question of whether any, most, or all traffic offenses should be classified as criminal and adjudicated on an individual basis is the issue of where should the adjudication take place? Given the range of possible classifications of traffic offenses, what are the alternatives with respect to the forum where the adjudication should occur? Should we continue to use criminal courts to process civil as well as criminal offenses? Perhaps the courts should develop an ancillary hearing procedure to be staffed by commissioners or hearing officials acting under the authority of and responsible to the courts.

Some persons believe that the adjudicative function should be performed by an administrative agency, and suggest that this should be the agency responsible for driver licensing. It is argued that combining traffic offense adjudication with driver licensing authority constitutes a more rational and efficient organization for comprehensive regulation of driver behavior.

THE FORUM FOR TRAFFIC OFFENSE ADJUDICATION

Criminal courts will be needed if the more serious traffic offenses such as driving while intoxicated and reckless driving are classified as crimes. One of the arguments for decriminalizing most moving violations is to permit the traffic courts to concentrate on the serious offenses which appear to justify criminal treatment. Thus, traffic courts are needed to adjudicate the important criminal cases in which there are close and important issues of fact and law, and where it may be expected that the defense will be vigorous. It is in this setting that the training, experience, and skills of the traffic judge, prosecutor, jury, and defense counsel are most appropriately employed.

If, however, some traffic offenses are to be reclassified as civil violations the question of what is the appropriate adjudicative forum becomes significant. Several alternatives are available. For instance, criminal court procedures might be employed in the trial of civil offenses. Before 1970 this was the practice in New York for the adjudication of traffic infractions. Or civil procedures could be used by traffic courts. A third alternative would be to transfer the adjudication process to an administrative agency for determination by an administrative hearing officer.

California "violations" are adjudicated in the court system by a traffic commissioner in a specialized proceeding. In North Dakota "non-criminal offenses" are heard, at the option of the driver charged with the violation by a "designated official." He may be a district judge, a county court judge, a county justice, a municipal judge, or in some circumstances a person appointed by a district judge to serve as a hearing official. In New York, "traffic infractions" in cities of 275,000 or more population are heard by representatives of the State Department of Motor Vehicles.

The process of hearing criminal and non-criminal traffic offenses in courts using appropriate procedures raises few legal issues. However, if courts adopt administrative procedures such as those employed in California or North Dakota, there is a potential for confusion in the appellate courts. Mixing criminal and administrative procedures in courts may raise judicial hackles. Unless administrative law issues are carefully researched and skillfully argued, use of the administrative process as an adjunct to a criminal traffic court could lead to unfortunate court decisions. Appellate courts might reject the process or cripple it by imposing a higher burden of proof, the right to jury, or the right to counsel in the hearing process.

The suggestion that traffic offense adjudication should be transferred from courts to an administrative agency has evoked a heated and somewhat inaccurate response from sponsors of court adjudication. Despite its long use as a forum for adjudication in federal and state regulatory programs, and despite the fact that both federal and state courts have upheld the constitutionality of this practice, some legally trained persons contend that the adjudication of individual rights by an administrative agency is unconstitutional. Even if it is constitutional, they say it is certainly improper and should be avoided at all costs.

Such deep concern about the legitimacy of the administrative process necessitates brief consideration of the administrative agency concept.

ADMINISTRATIVE AGENCY CONCEPT

It is elementary that administrative agencies commonly perform executive, legislative and judicial functions. The executive function is exercised through the administration and implementation of the organic statute which identifies the social problem which the agency was created to solve. In the process of creating a program to address the social problem perceived by the legislature it is commonplace for agencies to adopt procedural and substantive rules and regulations which amplify and flesh out a typically imprecise statutory charter.

Finally, it is normal for administrative agencies to adjudicate the rights of individuals or organizations subjected to the authority of the agency. Obvious examples include the administrative adjudication of driver's license suspensions; the administrative adjudication of social security benefits, veteran's benefits, or income tax liability; the grant or denial of liquor license or a license to practice medicine; or an FCC award of a TV channel license to one of several competitors.

In purest constitutional terms, combining governmental powers is not possible,for it violates the concept of separation of powers which is part of our constitutional heritage. However, there is little historical basis for such a puristic approach to the doctrine. In The Federalist, Madison tells us that the concept of separation of powers does not mean that there cannot be some controlled blending of them. The real thrust of the doctrine is that each department of government must be kept free from the control of coercive influence of other departments. Therefore, the blending of powers is not prohibited, but a total submission of one power to another is forbidden.

According to Professor Frank Cooper* the state courts have permitted the combination of functions of government in a single agency where a practical necessity exists. However, it will be permitted only so long as workable checks and balances exist to guard against abuses of administrative discretion. It is in connection with claims as to the finality of administrative action that the question of separation of powers becomes important. Professor Cooper states:

> So long as the legislature can effectively change the agency's rules, and the courts can effectively correct errors made in the adjudication of cases, it is of comparatively little concern that an agency's powers possess at once legislative and judicial characteristics. Indeed, it could almost be called an identifying characteristic of agencies that they combine the powers of rule making and of adjudication. The mere existence of blended powers has not been a cause of concern. It is only when the blending of functions creates a danger of unchecked power that concern arises.

This should not be a problem in driver licensing and administrative adjudication of traffic offenses. In these

*State Administrative Law, American Bar Foundation (1965).

areas legislators retain power to revise the authority and the regulations of driver licensing agencies. Furthermore, statutes commonly subject agency adjudication (e.g., driver's license actions, and traffic infractions cases in New York) to relatively broad judicial review. It is simply inaccurate to state that adjudication of traffic offenses in an administrative agency would violate the concept of separation of powers.

Another constitutional doctrine which is supposed to forbid the adjudication of traffic offenses in administrative hearings is the dogma that the legislative and judicial powers of government cannot be delegated to administrative officials and administrative tribunals. Nevertheless, the actual practice of legislatures permitting such delegations and the decisions of courts sustaining them leave no doubt that courts do not apply the doctrine literally. Early court opinions rationalized delegations of legislative power by means of "true tests" such as the following:

> 1. An administrative tribunal may not be given power to make the law, but may be given discretion as to the execution of the law.
>
> 2. An administrative agency may not be vested with discretionary power to determine policies, but may be empowered only to determine the facts to which the legislatively-declared policy will apply.
>
> 3. Administrative tribunals may be empowered only to fill in details by making subordinate rules within prescribed limits.

Despite these tests it is obvious that administrative tribunals do make law, and they fill in "details" which are so broad in scope that it is apparent policy decisions are being made.

More recent attempts to control legislative delegations of power to administrators are based on the notion that the statute must impose "standards" sufficiently precise to control the discretion of the agency. Professor Cooper demonstrates the failure of this approach. The fact of the matter is that the felt necessities of the times and the need for comprehensive regulatory programs have prevailed over the arguments of constitutional purists. Delegation has been allowed.

Instead of relying on constitutional dogma, modern state court decisions on the question of delegation of power are motivated by practical considerations. Professor Cooper identifies eleven factors which influence court decisions.

Those which are relevant to regulation of driver behavior include the following:

1. The tradition in a particular field may control decision.

2. Broad discretionary powers may be delegated where judicial review is available to correct abuses.

3. Broad delegations are sustained where statutes require notice, hearing and fair administrative procedure.

4. Broad delegations are upheld where there is an obvious need for expertise.

5. Broad discretionary powers may be delegated where public health, safety or morals are significantly involved.

6. Delegations of power to fix penalties are not favored.

In summary, Professor Cooper states, "most cases . . . must be resolved not by application of any convenient 'true test,' but by agonizing weighing of the competing demands of the private against the public interests involved."

The courts of fifty states may reach different decisions on the question of whether the authority to adjudicate non-criminal traffic offenses may be delegated to an administrative tribunal. And it is beyond the scope of our inquiry to attempt to predict what the decision might be in a particular state. Suffice it to say that the issue must be carefully researched and analyzed under the constitution, statutes, and case law of each state. However, the listed factors of decision support delegation, and the long history of court decisions approving delegation in highway safety indicates that most states would permit administrative adjudication.

A third proposition advanced is that administrative adjudication would violate due process of law. This argument simplistically equates due process with judicial process and concludes that any adjudication procedure which does not imitate court process is unconstitutional.

This viewpoint has been expressed as follows:

> An overwhelming number of cases support the proposition that regardless of what name

> or classification be given to minor offenses, if penalties may be imposed, then the defendants are entitled to all protections afforded by the due process rules of criminal procedure.

However, the Supreme Court of the United States has held that due process does not necessarily mean judicial process. It means that process which is fairly due an individual in the particular circumstances. In short, the Court has made it clear that the requirements of due process may vary according to what individual interests are at stake. Accordingly, federal agencies are allowed to adjudicate cases over due process objections.

State courts have been especially generous in upholding delegations of authority to permit agencies to deal effectively with matters of traffic safety. The hearing procedures employed to determine whether a driver's license should be suspended or revoked (i.e., the imposition of a form of civil penalty) have been sustained by many court decisions. Does due process of law require court-like procedures for the imposition of a civil monetary penalty which is usually less significant to the individual than loss of his license? Federal law does not, and most states would not so require.

Our concern about fair hearing procedures justifies brief consideration of the procedural alternatives which are available in both courts and administrative agencies.

THE PROCEDURES TO BE FOLLOWED IN TRAFFIC OFFENSE ADJUDICATION

The due process rules of criminal procedure are well known. At a minimum the criminal defendant may expect to receive adequate notice of the charges and adequate opportunity to prepare a defense. The prosecution must establish guilt beyond a reasonable doubt. Opportunity for confrontation and cross-examination must be provided and an opportunity for a jury trial cannot be denied if there is a possibility of imprisonment for a period of more than six months. If there is a potential imprisonment the accused must be represented by counsel.

The equally familiar civil trial procedures could be utilized by courts - even criminal courts - for the adjudication of traffic offenses declared to be non-criminal. Civil trial of non-criminal offenses authorizing imposition of monetary penalties could eliminate jury trial and right to counsel; the burden of proof could be scaled down; and bail and arraignment problems could be simplified or eliminated.

A third type of procedure within the court system could be an administrative type hearing before a traffic referee or a commissioner in a quasi-judicial setting. The California system exemplifies this approach. The new North Dakota scheme should be considered also. North Dakota has decriminalized traffic violations except for those serious offenses specified. Judges and magistrates serve as hearing officials.

Procedurally there are three levels in the North Dakota system. At the first level, the person charged may choose to admit the offense and appear briefly to make a statement in explanation of his action. The hearing official may assess, waive, reduce, or suspend the statutory fee specified.

At the second level, the driver may contest the charge by requesting a hearing before a judge. The burden of proof is on the prosecution, and the commission of the offense must be established by a "fair preponderance" of the evidence. The statute does not specify, but presumably the procedure would be similar to that followed in an administrative adjudication.

The third level in the adjudication scheme provides for de novo appeal of the finding of a hearing official to the district court, with right of jury trial. The burden of proof is a "fair preponderance" of the evidence and if the court finds the offense was committed there is no further appeal.

Most legally trained persons are quite comfortable with courts and court procedures. They are, however, not so tolerant of the procedures followed by administrative agencies. We who are legally trained should not allow our familiarity with court methods to lead us quickly to conclude that anything else is improper. We must not fall into the trap of assuming that court methods are the only legal means by which fact finding and law application can be accomplished.

In most respects, the hearing processes followed by administrative agencies offer opportunities and protections substantially the same as those available in a civil trial to a judge sitting without a jury. It is true that an administrative hearing is less formal and there is less emphasis on the rules of evidence, but much the same may be said of judge-tried cases. Basic due process requirements must be met or the agency may expect summary reversal by a reviewing court. For example, appropriate notice and opportunity to prepare and present a defense must be provided.

Usually the burden of proof in an administrative hearing is satisfied if there is "substantial evidence" in the record. But, the legislature may easily impose a higher standard. In New York traffic infractions must be established by "clear and convincing evidence." This is the highest proof standard associated with civil fact finding (e.g., civil fraud) and is slightly less than the "beyond a reasonable doubt" standard of the criminal trial. The proof standard in North Dakota hearings is the familiar "fair preponderance" requirement of civil trials.

Rules of evidence are relaxed before administrative agencies as they are commonly when facts are found by a judge. The practice is accepted because exclusionary rules of evidence are designed for jury trials. Who has not heard a judge make the familiar statement "I'll take it for what it's worth" in admitting evidence over the objection of opposing counsel. Administrative hearing officers are usually legally trained persons who have the experience which qualifies them to sort the evidentiary wheat from the chaff in the same fashion as does the judge.

It is said that traffic judges should adjudicate traffic offenses because of their special skills and expertise in the field. The judge is said to be well equipped to determine who is telling the truth and select an appropriate penalty if it is established that the offense was committed. The inference is that the hearing officer of an administrative agency lacks this talent. However, a hearing officer experienced in the determination of driver's license suspension actions may be as well qualified as a traffic judge to make these decisions. Furthermore, proponents of administrative adjudication say that he is in a better position to select a penalty because he may consider the individual's driving record as well as the facts of the case. Therefore, the opportunity to coordinate a traffic offense penalty with driver improvement action such as license restriction, suspension, or driver improvement school must not be overlooked.

Administrative adjudication proceedings are commonly recorded to provide the basis for a transcript if necessary.

To ensure that he has carefully considered the evidence in the record and has rendered his decision on the basis of that evidence, courts and legislators commonly require the hearing officer to make findings of fact and state conclusions of law. This requirement is similar to that imposed upon trial judges.

Critics of the administrative process often fail to recognize that administrative decisions are not final. For example, in New York persons found by administrative hearing

officers to have committed traffic infractions may appeal to an Appeals Board. If the Appeals Board does not provide relief, there may be an appeal to the state courts for judicial review of the decision.

In addition to the general requirement of due process and the procedural requirements of the agency's organic statute, state administrative procedure legislation may impose other administrative hearing requirements and establish the method and scope of judicial review of administrative adjudications. Legislation of this type ranges from rudimentary to comprehensive among the fifty states, but its importance must not be underestimated. Legal analysis of administrative hearing procedures and judicial review must include the state APA if it applies to the agency concerned.

To conclude this discussion of the major legal themes we shall consider briefly the matter of criminal and civil penalties.

THE PENALTIES IMPOSED FOR TRAFFIC OFFENSES

Imposing criminal penalties upon conviction of traffic offenses is historically well established and presents no significant legal questions. For years criminal courts have had the authority to impose fines and imprisonment upon drivers.

Our principal concern at this point is, therefore, with civil penalties. Driver's license suspension and compulsory participation in a driver education or training program are civil penalties in a technical sense although they are imposed for remedial and driver improvement purposes. Courts and administrative agencies are authorized to impose such penalties.

On the other hand, there may be some question about the legality of imposing a monetary fine as a civil penalty following a civil hearing in court or an administrative adjudication hearing. Fines have the flavor of crime and penalty rather than remedy. The Model Penal Code establishes non-criminal "violations" and it indicates a "fine" may be imposed upon conviction of the offense. Similarly, the 1973 report of the National Advisory Commission on Criminal Justice Standards and Goals recommends the infractions-administrative disposition approach to traffic offense adjudication. It recommends that the penalties for infractions include "fines."

Courts generally have upheld the authority of administrative agencies to impose fines despite the argument that the imposition of a money penalty is properly a judicial rather than an administrative function. However, this legal issue should be researched carefully on a state by state basis.

If civil fines may be imposed by an agency, the principal question is whether the amount of the penalty must be specified by the legislature or whether the amount may be determined by the agency. In North Dakota, for example, after a hearing on commission of a non-criminal offense, the hearing official collects a "fee" prescribed by the statute. In California, the amount of the penalty for "violations" is determined by the traffic commissioner in some circumstances. However, because the California traffic commissioner acts as part of the court system, his discretionary authority may present no legal problem. On the other hand, in New York the Commissioner of Motor Vehicles is authorized to establish a schedule of monetary penalties to be imposed where there is no hearing and the charge is admitted. If there is a contested hearing the hearing officer is authorized to impose any penalty authorized by the Vehicle and Traffic law of New York except the monetary penalty cannot exceed the amount of a fine which could have been imposed by a court.

The legality of "fixed" and "flexible" penalties imposed by an agency must be determined on a state by state basis. Analogy to the authority of an administrative officer to specify driver's license restrictions or to determine the specific period for which a driver's license is to be suspended suggests that the "flexible" monetary penalty should be sustained. However, the remedial nature of driver improvement actions as distinguished from the punitive implications of a monetary penalty could be significant to the decision.

CONCLUSION

Analysis of legal issues which are relevant to a system of traffic offense adjudication is obviously useful. However, we must not delude ourselves into believing that a catalog of legal alternatives provides answers. Technical legal information is an important component of the legal-policy decision, but it is only one of many components and not the single or the controlling element.

Consequently, the legal-policy decision determining what sort of traffic offense adjudication system we should have must be based on all the knowledge - legal and non-legal - which may be brought to bear on the problem. To demonstrate the interdisciplinary nature of legal policy decisions is one of the purposes of a symposium on adjudication. Lawyers may ask, why begin a symposium of this type with material on the systems approach to traffic safety which emphasizes the highway and the vehicle as well as the driver? The reason is that scientific research into all aspects of managing the highway safety problem should be considered. To stress, as so many past conferences have done, only the legal elements is, in our judgment, a simplistic approach to the problem, which will bear little, if any fruit.

APPENDIX B

State Symposium Goals
Presented to the Plenary Session
Friday, November 16, 1973, and
Summaries of State Discussion Sessions

STATE SYMPOSIUM GOALS PRESENTED TO THE PLENARY SESSION FRIDAY, NOVEMBER 16, 1973 AND SUMMARIES OF STATE DISCUSSION SESSIONS

THE DISTRICT OF COLUMBIA

Goals

1. Passage of legislation having for its purpose the decriminalization or reclassification of traffic offenses and establishment of effective adjudication and education techniques under the aegis of the District of Columbia Department of Motor Vehicles.

2. Giving paramount priority to the goal of identification of the problem driver, provision for treatment and re-education, and monitoring the results thereof; and

3. Creation of an adequate electronic data processing system to serve police, law enforcement, driver licensing and traffic adjudication functions, especially for the purpose of identifying the problem driver.

Group Discussions

The District of Columbia delegation, during its group discussion sessions, examined "the effectiveness of the legal system's response to the highway traffic safety problem." The delegates recommended that "serious consideration be given to the proposition that the present traffic court system is totally ineffective in changing driver attitudes." They thought that continuing instruction and legal sanction can be effective in improving driving performance, but required court appearances were considered as possibly more detrimental than beneficial in improving the attitudes of the accused violator.

The group suggested the following action:

1. That education and/or rehabilitation countermeasures be imposed on traffic violators.

2. That only drivers charged with a serious violation (driving under the influence, leaving the scene of an accident, or, in the District of Columbia, exceeding the speed limit by 30 miles per hour), be required to appear before a traffic court judge.

3. That penalty imposition be left to the discretion of the court, rather than be made mandatory.

FLORIDA

Goals

1. To pursue formulation and implementation of rehabilitative programs for problem drivers and habitual offenders, so that the problem driver is re-educated and the habitual offender is removed from the highway.

2. To institute a legislative program for reclassification of traffic offenses and to provide for decriminalization of less serious offenses by classifying them as infractions of the law, with a view toward emphasizing driver education programs, evaluation of drivers' abilities, and removal of the dangerous driver from the highway.

3. To provide an administrative hearing procedure for traffic offenders charged with non-criminal traffic offenses, so that persons charged with minor traffic offenses will not be classified as criminal and will be given speedier individual consideration.

4. To continue within the Florida Supreme Court Office of State Court Administration to:

(a) Coordinate with each circuit the orderly merger of municipal courts into the state court system to be completed by January 1, 1977.

(b) Maintain close liason with local courts through uniform court reporting procedures that provide information relating to case load, courtroom space, and facilities.

(c) Evaluate information from court reports to determine the need for additional judgeships or hearing officers and the performance of the court.

5. To accomplish these goals without additional appropriations.

6. To accomplish these goals by October 1, 1974.

Group Discussions

During their group discussion sessions, the Florida delegates considered the effectiveness of educational rehabilitation programs in improving driving performance. They concluded that such programs could be helpful and that judges should consider imposing these countermeasures on the traffic violator.

The delegates also thought that legal sanctions may help improve driving performance and that all drivers charged with a hazardous moving violation and all repeat offenders whose violations result in accidents should be required to appear before a judge in a traffic court. Mandatory penalties for illegal drinking and driving were also believed to have value, and the Florida delegation recommended that legislation be enacted providing for such mandatory penalties.

MARYLAND

Goals

It is recommended:

1. That encouragement and support be given to the introduction of legislation concerning administrative adjudication, even if it is minor in nature, at the 1974 session of the General Assembly.

2. That the Maryland Department of Transportation cooperate with and assist the Maryland State Bar Association, the Association of State Attorneys, and the Association of District Court Judges with any resource materials or other information needed for a complete and thorough consideration of administrative adjudication of minor traffic offenses. It is suggested that firm legislative proposals be developed and drafted by each of these groups.

3. That at the conclusion of the 1974 session of the General Assembly, the Governor appoint a task force to consider the proposals developed by special interest groups concerning administrative adjudication. Hopefully, the Governor will charge the task force with the responsibility of developing a specific legislative proposal for the 1975 session of the General Assembly which will be acceptable to all the various interest groups involved.

Speaking for the Maryland delegation in the plenary session of the Symposium, Joseph Carroll commented on the obvious lack of meaningful data concerning highway safety and on how little is known about the subject even by people actually working in the field. He suggested that the ad hoc committee on administrative adjudication of the National Highway Traffic Safety Administration Advisory Committee provide guidelines to the states for needed research in the field of highway safety adjudication.

Group Discussions

During the discussion sessions, the Maryland delegates considered the question of who commits traffic violations. They concluded that all drivers regularly commit violations (most of them of a minor nature), and that the drivers generally are not apprehended or involved in crashes, although they may be. In fact, the delegates stated that non-fatal crashes are only partially caused by violators, and that driver behavior, vehicle defects, environmental conditions and other factors are also responsible.

The Maryland representatives believed that driving instruction can improve the driving performance of violators if the instruction is well suited to the individual driver's needs. And it was thought that legal sanctions can be used to improve driving performance if judges are sufficiently trained in administering penalties. The delegates also accepted the premise that the threat of legal sanctions can be used to reduce driving-while-drinking violations, but they added that public knowledge of mandatory penalties is probably necessary if the penalties are to have any significant effect.

Because the adjudicator needs assistance from other disciplines in developing measures to improve traffic safety effectiveness, the Maryland delegates stressed the importance of co-ordinating the entire system, including education, enforcement, adjudication and post-adjudication processes.

MICHIGAN

Goals

Prior to the Symposium, a committee was formed in Michigan to consider highway safety problems and this group drew up a Resolution of Goals. As a result of their attendance at the Symposium, the Michigan delegates made minor revisions to this Resolution, but basically it remained the same.

The Resolution states:

WHEREAS, the Conference recognizes that the present system of handling traffic offenses is less than adequately effective, particularly with respect to its resulting impact on traffic safety; and,

WHEREAS, it is apparent that modification of existing procedures is essential to attaining the ultimate goal of improving the present accident picture ; and,

WHEREAS,it is the consensus of the Conference that a need has been shown, not only to streamline the process of the determination of guilt or innocence of alleged violators, but also to develop better rehabilitation programs for use in accordance with those determinations; and,

WHEREAS, it is concluded that there is insufficient evidence to show that either the present judicial approach or administrative adjudication system is totally effective,

IT IS HEREBY RESOLVED:

1. That initial efforts be made to decriminalize many of the present traffic offenses, which will eliminate the necessity for many of the protections required in criminal trials, and to establish streamlined procedures less formal than those presently available; and,

2. That a segment within the present judicial system be responsible for the expeditious determination of guilt or innocence in non-criminal traffic offenses; and,

3. That those offenses which are determined to necessitate a continuation of the present criminal aspect of the more serious offenses be retained within the criminal court structure; and,

4. That the department of the Executive Branch assigned the responsiblity and control of driver licensing establish procedures and programs providing for rehabilitation of offenders; and,

5. That further and continued study be made of alternate approaches to dealing with the traffic safety area.

As a result of their attendance at the Symposium a minority of the delegates wished to recommend the creation of an administrative adjudication system, exclusive of certain specified offenses and with adequate provision for appeals to the judiciary. The Michigan group expressed its intention to continue working together to insure that its recommendations

come to the attention of appropriate authorities.

Group Discussions

During the Symposium group discussions, the Michigan delegation expressed some faith in the legal system's ability to correct the incidence of violations. The representatives thought that education or rehabilitation countermeasures could be effective and that the judge or administrator should have the option of imposing them on violators. They also thought that in fashioning such measures consideration should be given to the particular individual's needs.

Michigan delegates favored requiring a court appearance for drivers charged with a moving violation. They believed that legal sanctions for drinking while driving were most effective on the social drinker, but that mandatory penalties were probably not an effective deterrent.

MISSOURI

Goals

1. Implementation of organizational and structural change in the judicial branch of the state government, as it is both appropriate and relevant to the problems of traffic law adjudication.

2. Establishment of minimum standards for traffic law adjudicators. These standards to include training and educational qualifications, central registration, reporting of work on a periodic basis, and rules to govern the procedure under which traffic cases are adjudicated.

3. Reform of the St. Louis City Court system in an effort to streamline court procedures and assure defendants speedy, impartial disposition. Changes to include administrative adjudication for some offenses, establishment of computer connections to the conviction records of the Department of Revenue, and improved court docketing procedures.

4. Changes in the Substantive Law:

(a) A serious and extensive study of legislation to permit direct administrative action on the question of whether drivers convicted of violations should retain their license privileges.

(b) Enactment of legislation which will take strong action against the driver who cannot be deterred or rehabilitated by conventional means, but who continues to drive even after his license has been revoked.

(c) Technical corrections in the law to assure uniformity in traffic enforcement. In particular, to make uniform the procedures by which persons may obtain hardship driving privileges while under suspension or revocation.

The Missouri delegation notes that as a result of these substantive changes in the law, a medical advisory board may be established by administrative regulation, driver rehabilitation training may be required, and provisions may be made for periodic driver re-examination in order to ascertain which drivers may be developing problems which will create hazards to traffic safety in the future.

5. Changes in Administrative Procedures:

(a) The appointment of additional traffic court liason officers. (At the present time two such officers have been appointed by the Department of Revenue to work with the courts, law enforcement officials and driver license examiners in an effort to assure proper disposition of all cases involving suspension and revocation of driver's licenses.)

(b) The interfacing of traffic violation convictions into the statewide traffic accident records system as soon as possible; hopefully this will be within the next two fiscal years.

6. Continuing public education to inform all citizens of Missouri of the seriousness of the problem of motor vehicle offenses and the need for substantial changes in statute law, enforcement of the law, and public attitudes toward the law. Comprehensive traffic safety education in all Missouri schools, not limited to driver education and beginning as early as the primary grades is recommended.

Group Discussions

A preference for administrative adjudication of traffic offenses over the traditional criminal judicial process characterized the Missouri delegation's approach to traffic violation adjudication during their group discussion sessions. It was believed, however, that criminal penalties should still be used for the "worst" offenders - those charged with serious offenses. The delegates stressed the importance of being able to identify a really serious violation, and cautioned that an offense can be labeled "serious" only with respect to the

individual circumstances. No offenses are "serious" per se.

The Missouri delegates favored use of driving schools if they are operated according to individual needs and control is exercised in getting individuals to attend. They expressed doubt about the effectiveness of driving schools for drivers convicted of DUI; they felt that often the schools are just a political gimmick. However, for some individuals, it was thought that the schools might be useful; and as a deterrent, required driving schools or other rehabilitation and education programs were considered to be effective. The importance of public education in highway safety as a preventive measure was also stressed.

It was the opinion of the Missouri delegates that legal sanctions are effective as a deterrent for the social drinker and, generally, for the average driver. Furthermore, it was thought that it is more important to require that a violation be adjudicated, no matter what the penalty, than that mandatory penalties be set for a conviction.

NEW JERSEY

Goals

The need to develop a new system of adjudicating traffic violations in the State of New Jersey was stressed by Bill Metcher, speaking for the New Jersey delegation on the final day of the Symposium. He said that a bill providing for such a system had been introduced into the New Jersey legislature, and that this bill embodies the goals for the State of New Jersey. Now, as a result of attending the Symposium, Mr. Metcher said he realized a need to form a reviewing committee which would include opponents to the bill, as well as its supporters. In that way, everyone's views would be voiced and, hopefully, as a result, New Jersey would be able to develop its own individual approach to the traffic safety adjudication problems. "We've got a new administrator of the courts, we've got a new Chief Justice, we've got a new governor, and we've got a new legislature," he concluded optimistically, "and who knows what will happen!"

Group Discussions

The New Jersey delegates joined with those from New York for the group discussion sessions. Their meetings together were marked by pessimism concerning the possibility of predicting who will be involved in crashes, combined with a degree of optimism for the potential of the legal system to

deter and correct traffic violators and prevent crashes through the use of educational programs and appropriate legal sanctions.

The group advocated effective enforcement of traffic laws and an increased emphasis on educating the mass of the driver population using prelicensing programs and improved testing procedures. It was thought that mandatory penalties for DUI violations would be effective if reasonable, but that they could possibly interfere with the problems of individual drinking drivers.

NEW YORK

Goals

Mr. Don Bardell presented the State goals for New York at the symposium plenary session. He commented that even though New York had pioneered in the development of administrative adjudication of traffic violations, he had found from attending the symposium that New York could learn from the other states' experience and from the work done by individual researchers. In addition to the State's goals, three objectives to be considered were also put forward:

1. An accurate and current record system on all motorists.

2. The ability to obtain immediate access to this record system to facilitate the processing of traffic violations and the identifying of unsafe drivers.

3. Qualified referees or judges who are subject to a state code of ethics and who are specially trained to deal both judiciously and impartially with traffic violators.

The State's goals, presented within the framework of the existing noncriminal approach to traffic offenses, were:

1. To evaluate the adjudicatory component within the administrative adjudication program, and based on such evaluation, to redefine, refine and improve techniques and procedures.

2. To evaluate the program of administrative adjudication in terms of highway safety cost benefit effectiveness.

3. To continue the integration of the adjudicatory process with the promotion of highway safety by increasing the use of existing driver improvement programs in that process.

4. Contingent upon a favorable evaluation of experimental programs designed to assist individuals in solving their own driver behavioral programs, to recommend to the New York State Legislature that these programs be fully integrated within the administrative adjudication process.

5. To recommend to the Administrative Board of the Judicial Conference of the State of New York:

(a) That outside the cities of New York, Rochester and Buffalo, within the existing court system, the processing of traffic cases emphasize driver improvement oriented programs where available, as well as adjudication; and

(b) That imprisonment as a sanction for traffic offenses below the class of misdemeanor be abolished and traffic infractions be procedurally decriminalized.

Group Discussions

The New York delegates joined with those from New Jersey for the group discussion sessions. Their meetings together were marked by pessimism concerning the possibility of predicting who will be involved in crashes, combined with a degree of optimism for the potential of the legal system to deter and correct traffic violators and prevent crashes through the use of educational programs and appropriate legal sanctions.

The group advocated effective enforcement of traffic laws and an increased emphasis on educating the mass of the driver population using pre-licensing programs and improved testing procedures. It was thought that mandatory penalties for DUI violations would be effective if reasonable, but that they could possibly interfere with the problems of individual drinking drivers.

OHIO

Goals

The State goals for Ohio were presented at the symposium plenary session by Judge Sidney Golden, who noted that the opportunity to get together with other state delegates and exchange ideas had been of considerable value to Ohio's representatives. The Ohio goals are:

1. To conform the Ohio Traffic Rules to the Ohio Rules of Criminal Procedure, thereby providing a clear, simple, and uniform procedure for the processing of traffic cases in all the courts.

2. To shorten and clarify the Ohio traffic rules and the uniform traffic ticket.

3. To provide for more expeditious methods of disposing of those traffic cases in which a court appearance is not required.

4. To develop a statewide criminal justice information system which can be used to provide driving record information about traffic offenders to all traffic courts.

5. To develop and implement supervisory rules for the general superintendents of traffic courts in order that lower court judges who are handling traffic cases can be made directly amenable and accountable for their performance in office to the Supreme Court of Ohio.

6. To participate in the development of a multi-state procedure which (a) allows the state in which an offense occurs to report the offense such that it becomes part of the offender's official driving records and counts against any point or offense system, and (b) allows the court of the state in which the offense occurs to suspend the offender's license if the offender fails to appear at a required traffic offense hearing.

Group Discussions

During their discussion sessions, the Ohio delegates decided that the present legal system is generally effective in deterring the normal driver, but does no help to rehabilitate either the normal or the problem driver. They favored improved educational and rehabilitative measures for the accident prone and recommended use of pre-arrest programs for all the public; these programs would explain the problems of traffic adjudication and the fact that the great majority of accidents do not involve the repeater.

Ohio's answer to the question, "Is it possible to reliably identify and predict who will be involved in crashes?" was "no". The delegates did feel, however, that past traffic violations should be considered by the judge and that in some instances the repeater should be taken off the road.

PENNSYLVANIA

Goals

Introducing the goals for the State of Pennsylvania was Mr. Ed Morris, who stated that the most important aspect for the Pennsylvania delegation had been their getting to know one another and developing a working relationship. The State's goals are:

1. To eliminate the fixing or adjustment of traffic cases.

2. To perform further research concerning violations and accidents.

3. To consolidate functions such as licensing, sanctioning, and financial reporting so that the number of convictions reported for financial purposes correlates with the number of convictions reported for disciplinary purposes.

4. To make violators' driving records available to the judicial officer.

5. To further evaluate and study the judicial process.

6. To revise the state judicial process to include the tools and facilities utilized by the New York and Chicago adjudication processes.

7. To perform a management study of all the traffic courts in Pennsylvania with a demonstration project on effective adjudication in the Philadelphia traffic court.

8. To implement a uniform traffic citation in 1974 in all jurisdictions in Pennsylvania.

9. To completely revise Pennsylvania's vehicle code with a traffic safety orientation.

10. To continue the close working relationship developed by the Pennsylvania delegates at this symposium.

Group Discussion

Pennsylvania's delegates were quite skeptical of research findings that there is only a minimal correlation between previous violations and future crashes. They suggested that the researchers' findings were based on faulty and insufficient data and that there was a need for more and better studies which would not be biased by the fixing of tickets or

by failure to notify licensing officials of convictions.

It was believed that the present legal system does have some deterrent effect on offenders and that an appearance before a judge or administrator should be mandatory for drivers charged with a moving violation. The delegates stated that mandatory penalties for drinking while driving can be highly effective, if publicized and efficiently enforced; but they questioned the effect of driving school, saying its results were still unknown, and further studies were needed.

RHODE ISLAND

Goals

The goals for the State of Rhode Island are incorporated in a bill before the State Legislature.* Its provisions include:

1. Administrative adjudication of minor traffic violations. Serious traffic violations to be retained within the courts' jurisdiction.

2. Imposition of penalties other than imprisonment for minor traffic violations.

3. Establishment of a traffic hearing board within the department of transportation, division of motor vehicles. The purpose of this bill is two-fold: the furtherance of highway safety and the reform of the Rhode Island court system.

Group Discussions

At their group session, the Rhode Island delegates concluded that it might be possible to predict those drivers who would be involved in crashes by reviewing individual driver history and that the judge should consider a driver's past record before sentencing. The delegates considered it to be of little help, though, in reducing crashes to take violators with past records off the road, for there is not a high correlation between violations and future crashes. And since most accidents involve nonrepeaters, the Rhode Island delegation recommended education for all drivers, as well as improved roads and safer vehicles. The delegates disapproved of re-

*R.I. Gen. Laws Ann. § 31-43-1 (1956).

quiring a court appearance for drivers charged with a minor violation; such action, they thought, only makes drivers cynical about the court system. They recommended that mandatory penalties be enforced for drinking and driving violations, except for problem drivers, who should be given education and rehabilitation.

APPENDIX C

Discussion Group Materials

DISCUSSION GROUP MATERIALS

(At the commencement of each discussion session a question and related assumptions, implications, and consequent actions were distributed to participants. After consideration of the question and a discussion among participants, research abstracts relevant to the question were distributed, and further consideration and discussion followed. These materials are presented here as they were used during the discussion sessions.)

Definition of the Highway Traffic Safety Problem*

Question One

Question: By whom are traffic violations committed and under what circumstances do such violations result in crashes?

ASSUMPTION	IMPLICATION	ACTION
Traffic violations are committed by a limited number of drivers who make errors in their driving performance which may result in crashes.	A. People who commit traffic violations were driving irresponsibly.	A. The judge should see everybody who commits a traffic violation.
	B. If this limited number of drivers were taken off the road, the highway safety problem would be greatly reduced.	B. One of the judge's primary responsibilities is to take this group of drivers off the road.
	C. The average driver seldom makes mistakes and is not often involved in crashes.	C. The judge will seldom have cause to see the average driver.

* Based in part on material prepared by ABT Associates, Inc. under DOT-HS-240-2-414.

Definition of the Highway Traffic Safety Problem

Research Abstract, 1A

Source:

Stonex, K.A., "Law, Traffic and Engineering Technology," Highway Research Board Special Report 86: A Colloquy on Motor Vehicle and Traffic Law, National Academy of Sciences - National Research Council, 1965.

Discussion:

The author, an automotive safety engineer at the General Motors Technical Center, notes that we have attempted to legislate regulations for the "proper path and action and conduct of every driver along every foot of the road every minute of the day and night, so that no drivers who follow these definitions, or regulations, faithfully should ever be involved in an accident."

At the same time he reports that since Proving Ground Drivers run off the road once every 24,000 miles because of human failure, it stands to reason that those of us in the general public must fail more frequently.

The author combines the inevitability of human failure with the frightening fact that as we drive a typical 4000-lb. car we guide a "projectile with kinetic energy equivalent to 165 30-06 deer-rifle bullets, or more than one-tenth that of our best anti-tank weapon--possibly the equivalent of a 105-mm. howitzer."

He reports that it is suprising in light of these factors that we do not have more serious accidents.

Conclusions:

The author takes the strong position that the highway traffic fatality problem will not be solved by additional regulations defining proper conduct or by improved enforcement or court procedures.

"Reductions can be made only by recognizing that our highway network does not leave room enough for the occasional unreliability of us drivers. . .The solution is to remove the obstacles, trees and rocks and sharp ditches, and opposing traffic."

He concludes that the system is "precisely that which we would have built if our objective had been to kill as many people as possible."

Recommendations:

The application of engineering technology to our highways will reduce the number, cost, and severity of accidents. Specifically favored is removing the solid obstacles and converting roadways to one-way operation.

Definition of the Highway Traffic Safety Problem

Research Abstract, 1B

Source:

Hutchinson, Cox and Maffet, "An Evaluation of the Effectiveness of Televised, Locally Oriented Driver Re-education," Highway Research Record 292 (1969) cited in Automobile Insurance and Compensation Study, Driver Behavior and Accident Involvement: Implications for Tort Liability, Department of Transportation, October 1970.

Discussion:

Three researchers from the University of Kentucky studied driver behavior at eight intersections in urban and rural locations in Lexington-Fayette County, Kentucky. Eleven types of driver errors were observed and reported.

The errors were recorded on 16 mm film. The films were subsequently shown on local television.

Prior to the broadcasts, with all of the normal inducements to safe driving present--traffic laws, safety campaigns,and tort liability for accidents resulting from negligent conduct--more than a quarter of the drivers committed an error at the intersection studied.

After the films were televised, the proportion of drivers committing errors dropped only slightly. Over 20 percent of the drivers observed and committed at least one error.

Conclusions:

In spite of the claim by the researchers that the program was a success since it reduced the incidence of both errors and accidents, even the reduced level reflected errors by more than 20 percent of the observed drivers. "At least at intersections, driver errors are common and resistant to change even in the presence of unusual (measures)."

Definition of the Highway Traffic Safety Problem

Research Abstract, 1C

Source:

Boek, "Automobile Accidents and Driver Behavior, "Traffic Safety Research Review (December, 1958) cited in Automobile Insurance and Compensation Study, Driver Behavior and Accident Involvement: Implications for Tort Liability, Department of Transportation, October 1970.

Discussion:

The New York State Department of Health conducted a "car-following" study by observing a random sample of drivers from another car without the drivers' knowledge of a distance of between one and two miles.

The drivers were scored in 9 areas--such as speed, observation of lane markings, yielding--as "safe" and "unsafe."

The report found that no driver was rated entirely unsafe (committed errors in all 9 areas), 48 percent were judged entirely safe (committed no errors). One-half of the observed population operated their vehicle so that at least one error was observed in the one-to-two mile trip.

Research Abstract, 1D

Source:

Edwards and Hahn, Filmed Behaviors as a Criterion for Safe Driving, American Institutes for Research (Washington, D.C., February 1970) cited in Automobile Insurance and Compensation Study, Driver Behavior and Accident Involvement: Implications for Tort Liability, Department of Transportation, October 1970.

Discussion:

The American Institutes for Research published a study in February, 1970, describing the behavior exhibited by average urban male drivers.

A sample of 304 white male District of Columbia resident operators was filmed from a following truck. The films were then evaluated by the police officers and a traffic safety expert. The drivers were rated on their performance. The sample was biased toward middle-aged "white-collar" drivers.

The perhaps unexpected result was that the average driver committed more than nine errors (e.g., failure to stay in lane, turning without signalling, speed) in five minutes of urban driving. In addition, the average driver committed nearly four different kinds of errors.

The researchers then viewed the accident records of the drivers before and after the 1962 observation. The average number of errors per driver for the accident-free group was 9.04, while that for the drivers involved in two or more accidents for the prior period was only 11.14. The authors concluded that "the difference, while it does exist, hardly indicates a striking dichotomy with regard to observable behavior behind the wheel between accident-free and accident-involved drivers."

Conclusions:

Considering the bias of the sample in favor of those operators usually considered less likely to be involved in crashes, the number of driving errors is striking. This study suggests most drivers commit errors regularly.

Definition of the Highway Traffic Safety Problem

Research Abstract, 1E

Source:

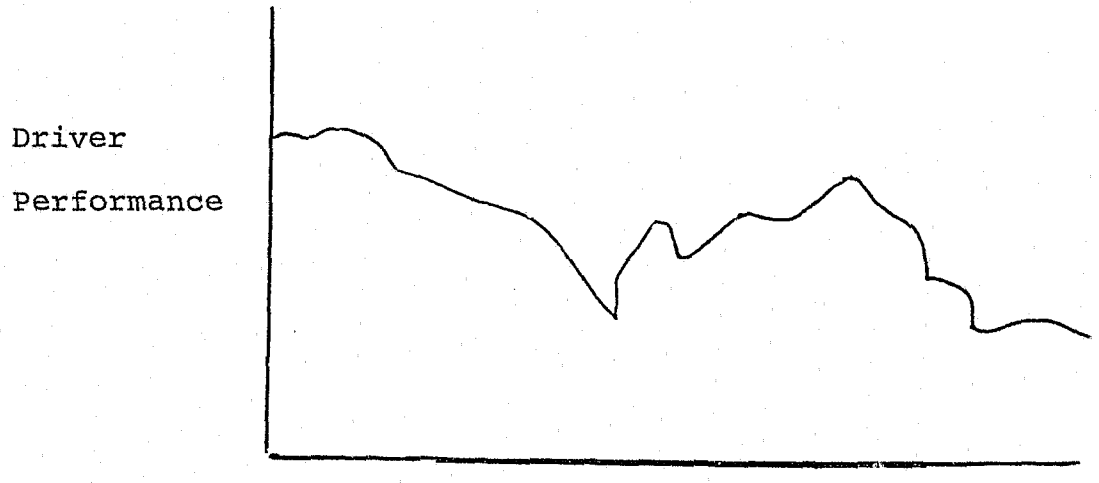
Blumenthal, Murray, "Dimensions of the Traffic Safety Problem," presented to the Automotive Engineering Congress, Detroit, Michigan, January 1967.

Discussion:

The presentation attempts to place traffic safety in a broader framework than traffic accident statistics which "describe not the problem, but its symptom."

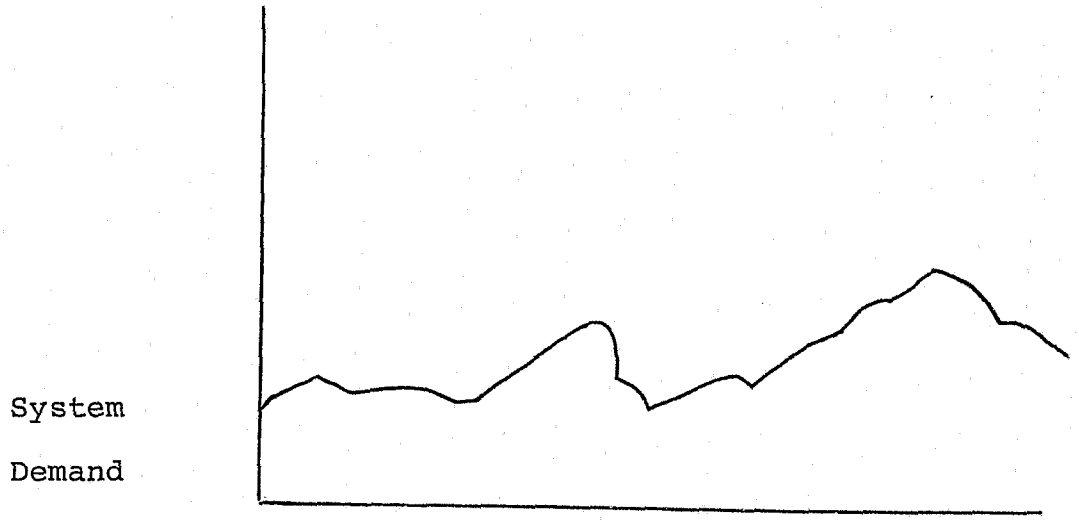
The author proposes that accidents are inevitable when one realizes the imbalance between the technology of the motor vehicle transportation system and the demands made upon driver capabilities. The driver is expected to compensate by his decisions for the vehicle, the highway, and his fellow driver. It is remarkable that he does so most of the time. But every year about 25 percent of all drivers cannot meet the demands made upon them.

Graphically, the performance of a normally competent driver varies--at times he is more or less careful, distracted, fatigued, etc.



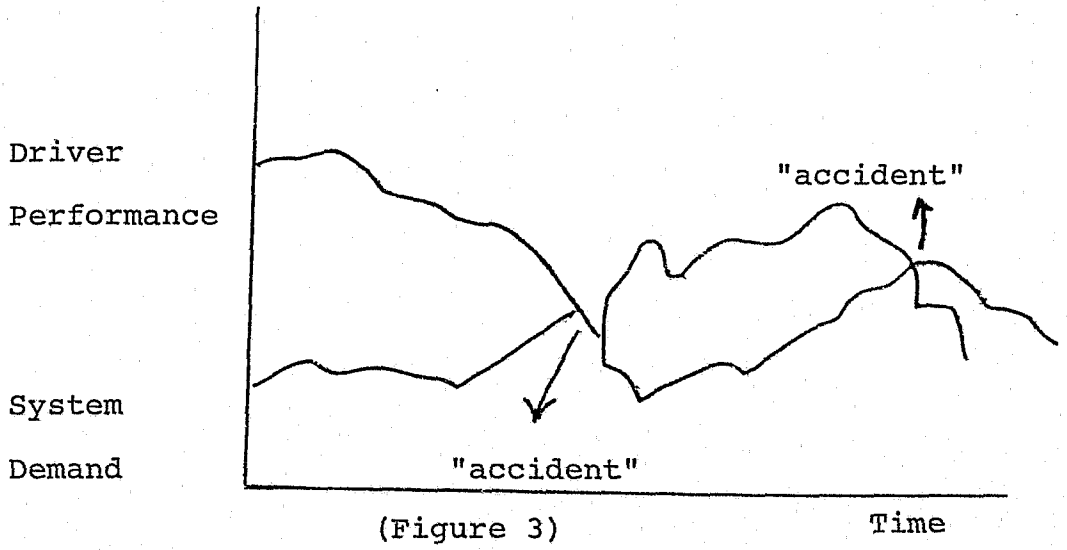
(Figure 1)

The demands made upon the driver vary--poor weather, congestion, uncontrolled access, etc.



(Figure 2)

When the system demands exceed driver capability or alternatively, if driver performance does not meet the system demands, an accident occurs.



(Figure 3)

Accidents thus become a problem for most drivers. If one considers the performance curves for drivers who are inexperienced, aged, or problem drinkers, the likelihood of an accident is even greater. Modification of the road design--reducing performance demands and increasing the "forgiveness" of the road--inevitably will reduce system failures (accidents).

Conclusions:

In a society which promotes industrial safety under the principle that every type of accident which may occur should be anticipated and safeguards should be provided, the notion that "if only drivers were more careful, accidents wouldn't happen" is inappropriate. Society should promote highway safety by anticipating human failure and therefore providing safer vehicles and less demanding, more "forgiving" roadways.

Recommendations:

Society should recognize that human failure on the highway is unavoidable and predictable. Given the human cost of accidents, society should apply its technological, political and economic resources to the improvement of all elements of the system.

Definition of the Highway Traffic Safety Problem

Research Abstract, 1F

Source:

Forbes, T.W. Editor, Human Factors in Highway Traffic Safety Research, Wiley, New York, 1972.

What might be called the "driver culpability theory" was and still is often accepted. In other words there is a tendency to blame the driver for inefficiencies and breakdowns in the system, and especially for accident occurrence. Clearly the driver must do his part, must remain alert, must make proper judgments and responses to the increasingly complex situations which confront him in modern traffic. And for a small group of drivers, special characteristics may result in repeated accidents. However, this is not by any means the whole story.

.....

A quite different point of view may be called the "driver overload" theory. An early formulation of a multiple-factor theory of accident causation pointed out that not only multiple-factors of highway and vehicle but also errors, misjudgments, or lapses on the part of several different drivers simultaneously may be involved in the causation of motor vehicle accidents.

.....

By far the largest share of traffic accidents is experienced by drivers who have only one accident. These mishaps involve misjudgments or lapses of the "normal" driver and a combination of causal factors which overload a driver's abilities.

Definition of the Highway Traffic Safety Problem

Research Abstract, 1G

Source:

New Yorker (November 30, 1968), Talk of the Town, New York.

An article in the New Yorker described a Long Island Parkway police campaign for higher wages:

> Scorning the banality of a strike, the policemen have devised a strategy that is marked by the simplicity of genius and the iridescence of madness. They are working at their jobs. They are doing what they are paid to do. When they see a motorist violating the law, they give him a ticket. In five days, they have issued about thirteen hundred summonses (their previous rate being about forty a day)...A Long Island lawyer has obtained a court order challenging the move, and the troopers' lawyer has answered, with impeccable logic and a perfectly straight face, "I can't see how the Long Island State Park Commission can ask its police authority not to enforce the law."

Definition of the Highway Traffic Safety Problem*

Question Two

Question: Is it possible to reliably identify and predict who will be involved in crashes?

ASSUMPTION	IMPLICATION	ACTION
There is a high correlation between previous violations and future crashes, i.e., drivers with several violations are very likely to be involved in crashes.	A. It is possible to identify/predict who will be involved in crashes by reviewing individual driver history.	→ A. The number of previous traffic violations should be a critical factor in the judge's evaluation of any case.
	B. If all traffic violators with past records were taken off the road, the highway safety problem would be greatly reduced.	→ B. The judge should work to identify the repeated traffic violator and take him off the road.

* Based in part on material prepared by ABT Associates, Inc. under DOT-HS-240-2-414.

Definition of the Highway Traffic Safety Problem

Research Abstract, 2A

Source:

Forbes, T.W., "The Normal Automobile Driver As a Traffic Problem," Journal of General Psychology, Vol. 29, p. 471(1939).

Discussion:

In 1939, Forbes pioneered efforts in determining the relationship between traffic violations and accidents. As a member of Yale University's Bureau for Street Traffic Research, he analyzed the records of almost 30,000 Connecticut drivers between 1931 and 1936.

His studies refute the hypothesis that most accidents result from the actions of "accident-prone" drivers. In fact, if persons with two or more accidents in three years were removed from the road for the next three years, then in those next three years 96.3 percent of the accidents would happen anyway because they would involve other drivers. It is the so-called "normal driver," not the driver with a record of past accidents, who is involved in the overwhelming percentage of the accidents.

Conclusion:

The "normal driver" constituted 98.7 percent of the driver group studied and caused 96.3 percent of the accidents.

Research Abstract, 2B

Source:

Peck, McBride and Coppin, Accident Analysis and Prevention, Vol. 2, No. 4, P. 243, 1971.

Discussion:

The authors hoped to determine whether a driver's past violation record was a good predictor of future accident involvement.

Their concern is based on the policy question of whether concentration on the accident repeater through rehabilitative and/or restrictive measures will substantially reduce accidents.

They found that "the low stability index for accidents indicates that the accident population is largely composed of different drivers from year to year...of those drivers who were accident-involved in both 1961 and 1962, 87 percent were accident free in 1963. Conversely the previously accident-free drivers accounted for the vast majority of the accidents in 1963."

Conclusions:

Programs focusing on the accident repeater cannot be expected to bring about a substantial reduction in accidents because the repeater is only a small part of the problem.

Recommendations:

"This, of course, does not mean that accidents cannot be reduced through selective application of driver improvement action, or that driver improvement programs should be discarded. What these findings do indicate is that selective driver improvement efforts should be based on realistic objectives and evaluated accordingly."

Definition of the Highway Traffic Safety Problem

Research Abstract, 2C

Source:

State of California, Department of Motor Vehicles, The 1964 California Driver Record Study - Part 4: The Relationship Between Concurrent Accidents and Citations, May, 1965.

Discussion:

In the 1964 study, a random sample of 225,000 California driving records were reviewed. The records were placed on computer tapes and analyzed. To be considered, the subject's record had to be complete for 3 years prior to the study.

This part of the study was concerned with the relationship between a driver's conviction of moving traffic violations and traffic accidents. The report was concerned with the question:

If one knows a driver's record of convictions for moving traffic violations, how sure can he be that the driver has also been involved in a traffic accident?

Conclusion:

There is a low correlation between citation (conviction for moving traffic violations) and accident involvement.

Definition of the Highway Traffic Safety Problem

Research Abstract, 2D

Source:

Campbell, B.J., Report in "Signal 99," North Carolina Governor's Highway Safety Program, Spring, 1971.

The report is quoted at length below.

Discussion:

In any given year in North Carolina, about 200,000 drivers are involved in accidents. This is approximately seven percent of all drivers in the North Carolina driving population. If the same seven percent caused the accidents year in and year out, the State could do something about it. On the other hand, if an entirely different seven percent of the drivers have an accident each year, then the State would be helpless in identifying those who may have future accidents.

The truth is somewhere in between, but the fact is that the overwhelming majority of people who have an accident in one time period do not have an accident the next time period. Indeed, 30.7 percent of N.C. drivers who have accidents in one two-year period do not have accidents in the second two-year period.

A study of drivers in North Carolina shows approximately the same situation regarding past traffic law violations and their predictive value in determining who will have accidents. The analysis showed that a person's past driving record is statistically related to future accidents, but the relationship is weak. Indeed, analysis showed that most accidents involve drivers who had no records of traffic violations in the prior two years.

The following chart shows the number of accidents experienced over a two-year period by drivers with varying numbers of traffic violations during the preceding two years. The chart shows the difference in the accident experience of drivers with many violations and those with few or none, but this difference accounts for only a small portion of the accident toll. If all the drivers with three or more violations in the past two years were removed from the highway and kept off 100 percent effectively for two years, North Carolina would still experience 96.2 percent of the accidents

it would have had anyway. Moreover, of the drivers removed, 71 percent would not have been involved in an accident.

VIOLATIONS IN YEARS 1 & 2	ACCIDENTS IN YEARS 3 & 4: 0	1	2	3	4	TOTAL
0	1,890,951	185,069	18,451	2,094	370	2,096,935
1	247,266	43,379	6,759	1,012	229	298,645
2	56,457	13,407	2,693	532	127	73,216
3	15,862	4,647	1,078	247	73	21,907
4	8,124	2,539	680	143	51	11,537
TOTAL	2,218,660	249,041	29,661	4,028	850	2,502,240

(Actually, according to a California Department of Motor Vehicles Study, some 33 percent of drivers whose licenses are suspended and 68 percent of those whose licenses are revoked continue to drive anyway. On that basis, 100 percent effectiveness of driver removal is generally considered impossible by Dr. Campbell and others in the highway loss research field.)

A notable exception to the finding, it added, is the abusive drinker who drives. North Carolina drivers with a history of drunken driving during one two-year period were found to be involved in more accidents than the average driver during the next two years, the publication quoted a state Department of Motor Vehicles statistician as reporting.

Conclusions and Recommendations:

Dr. Campbell feels that all levels of traffic safety administration must modify the belief that the accident repeater is the main source of trouble on the streets and highways.

"The accident and violation repeater is a small part of the overall accident problem, and the state should (and does) have programs to deal with these people. But the great bulk of the accident problem lies with essentially 'normal' people who have accidents, and it is in this area that the bulk of our progress must come."

This would include information that would help the individual driver sharpen his skills, highway directive and warning signs and adequate markings that are easily understood, and cars designed and compatible with the human operator.

The Effectiveness of the Legal System's Response to the Highway Traffic Safety Problem*

Question Three

Question: How effective is the legal system in deterring or rehabilitating offenders and preventing crashes?

ASSUMPTION	IMPLICATION	ACTION
The driving performance of traffic violators can be corrected through instruction in better driving skills and attitudes.	A. Education and/or rehabilitation counter-measures are effective in reducing violations and therefore crashes.	A. The judge should impose education and/or rehabilitation counter-measures on the traffic violator.
The driving performance of violators can be corrected through the use of appropriate legal sanctions.	B. A court appearance helps to improve the attitude of violators.	B. All drivers charged with a moving violation should be required to appear before a judge in a traffic court.
Illegal drinking and driving can be reduced through the threat of legal sanctions.	C. Mandatory penalties are effective in deterring illegal drinking and driving.	C. Legislation should be enacted that provides for mandatory penalties for illegal drinking and driving.

* Based in part on material prepared by ABT Associates, Inc. under DOT-HS-240-2-414.

The Effectiveness of the Legal System's Response

Research Abstract, 3A

Source:

State of California, Department of Motor Vehicles, "An Abstract of the Effectiveness of a Uniform Traffic School Curriculum for Negligent Drivers," June 1971.

(The abstract is quoted at length below.)

Discussion:

The traffic violation repeater has been of concern to driver's licensing authorities and traffic safety administrators for many years. As a result, a variety of driver improvement programs has been implemented throughout the country in an attempt to rehabilitate and/or control the problem driver.

How successful are these driver improvement systems? In the case of court-mediated traffic school programs, very few evaluative studies have been reported and most of these are marred by serious methodological deficiencies. Evaluation has generally consisted of comparing driver records before and after subjects have attended traffic school without using a comparison or control group. One study reported that a 27 percent reduction in traffic convictions and a 40 percent reduction in accidents were found for subjects who attended a driver improvement course. Without a comparison or control group, however, it is impossible to assess whether these subsequent changes in driving record were due to traffic school or incidental factors such as experience, maturation, other treatment programs, statistical regression, etc.

The present study represents an attempt to establish the basis for an effective court-mediated educational program for problem drivers.

Conclusions and Recommendations:

The study was designed to evaluate the effectiveness of a uniform traffic school curriculum developed for the traffic violation repeater. The evaluation indicated that attendance at the school resulted in an overall 11.8 percent reduction in accidents and a 6.2 percent reduction in convictions for male drivers. In addition, the effectiveness of the traffic school was found to vary according to the type of driver treated. For females and certain male subgroups, there was no evidence that

traffic school resulted in driver improvement.

Cost effectiveness figures showed that the traffic school resulted in savings of $3,807 per 100 male drivers, which is substantially less than that achieved by a one-session group educational meeting given by the Department of Motor Vehicles. Therefore, lengthy traffic school courses should not be considered desirable alternatives to one-session group educational meetings, nor should they be implemented on a state-wide basis without further modifications to improve cost effectiveness. These modifications might include (1) shortening the length of the course, (2) modifying course content to improve those types of drivers who did not benefit from the course, and (3) focusing only on those drivers who benefited from the course. The authors feel that a more systematic approach would be to utilize the more extensive court school programs for those drivers who continue to violate after having already received a warning letter and attended a group meeting. However, implementation of an integrated state driver improvement program will require greater coordination between DMV and the courts than has existed in the past.

The Effectiveness of the Legal System's Response

Research Abstract, 3B

Source:

State of California, Department of Motor Vehicles, "An Abstract of Modifying Negligent Behavior: Evaluation of Selected Driver Improvement Techniques," March, 1971.

Discussion:

In California, as elsewhere, each year large amounts of money and manpower are expended on programs aimed at the negligent driver--the driver who is habitually involved in collisions and convictions. This study evaluated the effectiveness of various driver improvement programs, including:

Warning Letter - Each subject in this group was sent a standard warning letter which was then being used as part of the regular driver improvement program.

Group Meeting - Each subject was scheduled for and sent an "invitation" to attend a group treatment session (only about 50 percent actually attended). All group sessions

were conducted by eight special driver improvement trainers.

Individual Hearing - Each subject was scheduled for an informal hearing and sent a notice to appear. If he did attend the hearing (and over 80 percent did) the department's regular procedures were used to determine what action was taken. If the subject was found negligent, recommendations were made regarding the subject's license; the options ranged from a warning to revocation.

Data on each subject's driving record was coded for a three-year period prior to and for one year after his selection; this information, together with some estimates for the cost of collisions and programs, is the basis for comparison of the various programs.

Conclusions and Recommendations:

As a first contact for negligent drivers, the group meetings are successful in reducing the collision rate for both men and women. While the group meetings resulted in only a small reduction of collisions for men, it is the only program studied which was at all promising for male drivers. For women there were several programs which resulted in lower collision rates, one of which is the group meeting; the others include the individual hearings (most effective) and warning letters.

A follow-up hearing is useful for those male drivers who continue to accumulate convictions and collisions after their initial program (group meeting, warning letter, etc.). Such a follow-up hearing results in further collision reduction. This was interpreted as support for DMV's practice of progressing from mild to more severe actions when a driver continues to be involved in collisions and traffic convictions.

Cost/benefit results indicate that the best program combination from a collision reducing standpoint (group meetings for males and individual hearings for females) would produce a net savings to the people of California of over 3.7 million dollars a year. Using the group meetings for both sexes produces a slightly smaller net savings of about 3.4 million dollars.

The Effectiveness of the Legal System's Response

Research Abstract, 3C

Source:

Blumenthal, M. and Ross, H.L., Two Experimental Studies of Traffic Law, DOT-HS-249-2-437. Volume I, The Effect of Legal Sanctions on DUI Offenders.

Judges of the Denver, Colorado, County Court agreed to assign penalties of a fine, conventional probation, or rehabilitative probation according to a fixed schedule to 495 drivers convicted of a first offense of driving while intoxicated. Judges' departures from the agreed schedule in large numbers of cases made it necessary to introduce statistical controls in comparisons of subsequent records. In neither the original treatment groups nor the groups created by the judges' actual sentences were there found any significant differences in subsequent crashes, moving violations, points, DUI convictions or time to first subsequent crash or moving violation. Those drivers sentenced to jail rather than to one of the three prescribed treatments also were found not to differ from the balance of the group in subsequent records.

Clients represented by lawyers, though having poorer prior driving histories, were more likely to have the dispositions of their charges delayed, to be found not guilty, to have their charges reduced or dismissed, and to receive an unscheduled fine rather than either type of probation. Defendants with reduced charges had poorer subsequent records. Those receiving unscheduled sanctions showed no benefit in terms of subsequent records from the departure from the research plan.

The research did not yield evidence that the types of sanction currently utilized in Denver produce measurable differential effect on driver behavior and highway safety. However, it was found that representation by a lawyer is powerfully effective in obtaining a more favorable legal treatment for defendants accused of driving while intoxicated.

The Effectiveness of the Legal System's Response

Research Abstract, 3D

Source:

Blumenthal, M. and Ross, H.L., Two Experimental Studies of Traffic Law, DOT-HS-249-2-437. Volume II, The Effect of Court Appearance on Traffic Violators.

This study compared the effects on subsequent driving records of 5434 moving traffic violators not ordinarily required to appear in court, of a required court appearance vs. simpler and less costly alternatives. There were no differences in subsequent crashes, moving violations or moving violation points between required court and the standard clerk, mail-in or warning citation groups. However, the required court appearance group, on the average, recorded a subsequent moving violation or crash sooner than the other citation groups. When initial differences between the experimental groups were controlled statistically, a better record following court appearance was occasionally found among certain subsamples, but the subsamples showing such benefits varied from one comparison to another and did not clearly support the experimental hypothesis of a beneficial effect of a required court appearance on subsequent driving records.

The Effectiveness of the Legal System's Response

Research Abstract, 3E

Source:

Finkelstein, R. and McGuire, J.P., An Optimum System For Traffic Enforcement/Driver Control. Final Report, Volume I, October 1971. GTE Sylvania, Inc., with the support of the California Dept. of Motor Vehicles and the NHTSA.

Mandatory Jail Sentences

The Vehicle Code specifies that mandatory jail sentences are to be imposed upon conviction of the following violations:

- Drunk driving causing injury
- Second drunk driving conviction in seven years
- Driving with a suspended or revoked license (except for a financial responsibility suspension)
- Second conviction of driving with a suspended or revoked license within seven years (financial responsibility suspension)

An analysis of driver records showed that only 35 percent of the drivers convicted of any of these violations were sentenced to jail. Included in this 35 percent are those drivers who had their jail sentence suspended. Thus, according to the conviction abstracts which the courts send to the DMV, the courts are failing to follow the sentencing requirements of the Vehicle Code in 65 percent of the cases involving mandatory jail sentence.

The Effectiveness of the Legal System's Response

Research Abstract, 3F

Source:

Ross, H.L., Law, Science, and Accidents: The British Road Safety Act of 1967. The Journal of Legal Studies, Voume II (1), January 1973.

The British Road Safety Act of 1967, which introduced scientific tests to determine and define the crime of drinking and driving, has been the subject of much interest among American lawyers and social scientists. Perhaps the chief reason for this interest has been claims that dramatic decreases occurred in the British traffic casualty rate as a result of the legislation. These claims provide some hope that police patrol and traffic courts can be justified by results other than the mere generation of revenue through fines.

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The report presents and analyzes a variety of data obtained in Great Britain for the purpose of evaluating the Road Safety Act of 1967. The claims of effectiveness in reducing the casualty rate are examined, as are the ramifications of the legislation in the system of citizens, police, lawyers and judges through which the Act was applied and by which the Act

was in fact modified.

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Within a very few weeks of its inception, lower casualty rates were cited in support of claims that the legislation was achieving its goals. The initial claims were founded on insufficient evidence, but application of interrupted time-series analysis to a longer series of data confirms the interpretation that the Road Safety Act had a sharp, immediate effect in diminishing deaths and injuries on British roads. The effect was particularly noticeable in hours when drinking drivers were likely to have been most numerous, the weekend nights. However, the analysis also suggests that the strong effect of the legislation on casualties was only temporary.

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For the police, the Road Safety Act had the advantage of increasing efficiency in prosecuting and convicting drinking drivers, but public relations problems and an open-ended potential for enforcement rendered their attitude ambivalent. The police utilized the Act to charge apprehended drivers but there is evidence that they did not change their methods of patrol or apprehension to the degree that the legislation might have permitted. The Act had the effect of reducing the number of charges taken to a jury trial in the higher courts and it increased the number of convictions. However, for various reasons, including the reduction of judicial discretion in sentencing brought about by the Act, the courts seemed to regard it with some hostility, expressed by their widely publicized acquittals of many drivers on the basis of specious technicalities. This attitude seems to have been reversed with time, in part as a result of the demonstrated effectiveness of the Act in reducing casualties.

.....

It is posited that the legislation with its attendant publicity at first increased drivers' expectations of punishment if they were to drink and drive. The ambivalence and moderation of the legal system in applying the legislation rendered these expectations baseless, so that the learning process based on drivers' personal experience reduced the effectiveness of the Act over time.

In sum, the study of the Road Safety Act of 1967 provides support for the hypothesis that subjective certainty of punishment can deter socially harmful behavior as exemplified by drinking and driving in Great Britain. However, the basic difficulties of detection, along with organizational problems in the legal system, undermined the objective probability of

punishment and permitted individual learning eventually to reduce the deterrent effect of the legislation. If this analysis is correct, it follows that a revival of the deterrent effect of the Road Safety Act depends on overcoming organizational problems rather than on changing the formal rules, as currently suggested by many authorities in Britain.

APPENDIX D

Questions from the Audience

QUESTIONS FROM THE AUDIENCE

(The audience participation sessions were a very popular segment of the Symposium program. Following is a sample of the speaker-audience exchanges during one of these sessions.)

Q. What happens when a citation arises as a result of an accident and the individual wishes to protect his civil liability? Can he enter a guilty plea with explanation? Is that under New York Law admissable in the civil action?

A. (Commissioner Donald J. Bardell) Yes, it is.

Q. Do you have a provision then for a "no-contest" plea or must he resort to a "not-guilty" plea?

A. (Commissioner Bardell) We do not have a provision for a "no-contest" plea. His pleas are as we stated today, either guilty or guilty with an explanation.

Q. So a person who wishes to preserve his civil liability is forced into a "not-guilty" plea even though he may have been guilty of the traffic offense in order to protect his civil liability?

A. (Commissioner Bardell) Yes.

Q. I wonder if you can comment on the remarks that the last couple of speakers have made about the possible image problem of administrative adjudication, as opposed to adjudication by a presumably more neutral judicial officer?

A. (Commissioner Bardell) I find it very difficult to follow the thinking about a neutral official. I think it depends on the individual who is sitting and whether he is in a judiciary or whether he is with our agency. I am looking to substance, as you are, and not to form. And that is what we are talking about when we talk about fairness. I would like to point out that the individual, I think, indicated that there would be an appearance of fairness in his system. That is form. We feel we have substance with respect to

fairness. It is interesting to note that of approximately two million complaints handled, and over 714,000 hearings held, under our program we have experienced only a little over one thousand administrative appeals. And of this latter number, less than one dozen were appealed to the courts, and all of them have been unsuccessful, except for one case.

Q. As a legislator I feel it is only right to give proper authority to the judicial branch of government, but not to breach that authority on either side, whether it is executive, judicial or legislative. I would like to ask this panel what your thoughts are with regard to withholding adjudication, so that a person who is arrested is not entered in the record books as having been adjudicated, without the court having the statutory authority to do so.

A. (Dr. John Reese) Do I follow you that it is the idea of doing away with the total concept of adjudication in the sense of an offense for each transaction, similar to the British Columbia system? Is that what you are driving at?

Q. No, Dr. Reese, we have some judges in our state who like to circumvent the administrative rule purely and simply by withholding adjudication. And there is no way in the world our Governor or the Governor's Highway Safety Commission can determine which judges are doing a good job, although, of course, if the record is known, then the Governor has a right to remove them from the bench. Frankly, I think the Clerk of Court ought to report within ten days the adjudication of every single case. If they withhold adjudication there is no possibility of knowing whether they are doing their job or not.

A. (Dr. Reese) The purpose is to avoid license action?

A. (Prof. Joseph Little, Chairman) I believe you probably have the presentation of the case and probably the determination in the mind of the judge, at least - perhaps even by jury - that the person is guilty; yet the judge does not enter a judgment, but holds it on some conditional basis. If you are a good boy for a year, then nothing will happen to you.

A. (Dr. Reese) I am not prepared to go into that in detail now, but it does suggest to me some of these constitutional law questions that are flavoring this whole discussion. For example, deferred prosecution - this is a subtle twist on the concept of deferred prosecution, and it brings to mind some of these Supreme Court decisions where they had people under charges but just never did try them. This whole range of things is something we need to work on whereby I think a judge could

at least be slapped on the wrist or removed from office for doing that; but, of course, you still have to find out about it.

A. (Chairman Little) If I am not mistaken, the state of Maryland at one time not too long ago was the only state in the Union that had an official category of that type. I wonder if there is someone here from Maryland. Bill Bricker, would you comment briefly about that, please, in the experience in Maryland.

A. (Mr. Bill Bricker) As a matter of fact, at the time that became an appellate decision in Maryland, I was in the Attorney General's office and argued it because we do have in Maryland something called "probation without verdict disposition." Under the British system it worked well and is really intended for criminal matters, where you may have a man who has for instance a top secret clearance with a government agency and is involved in some minor altercation like assault in a criminal case, which if he were convicted of might well cost him his clearance and his job. The way the British System works is that in a probation-without-a-verdict situation you would in effect post the cash bond, conditioned on your good conduct, for say $500.00 for a year, and at the end of the year, if you have behaved youself, the bond was returned to you. In Maryland in effect what the judges did, and which our Court of Appeals found unconstitutional, was that they gave probation without verdict and then imposed a fine. In our old magistrate system, before we had the district court system, it was really abused by judges, because, in effect, they could take a drunken driver and they would give him "probation without verdict" and impose a $500 fine and that kind of salved their conscience. But under motor vehicle laws "probation without verdict" was not a conviction by definition, which meant we could not record it. And the offender could travel with impunity all over the state and each time say, "Well, I've never been convicted, judge"; and the judge would feel sorry for him and he would wind up with no traffic record at all, but, in fact, had been a regular visitor to the traffic court system. Our Court of Appeals says the judges cannot impose a fine, although we still have "probation without verdict." It can be a valuable tool, but not in the highway safety field.

A. (Commissioner Donald Rosenberg) In California we have a law which I think reads something to the effect that if a judge takes a case for more than ninety days he loses his right to get a salary until he decides the case. Now this is on the books; it is a little harder to enforce than it is to put into law.

A. (Mr. Bricker) In Maryland, our Constitution provides that judges must render decisions within 90 days, and the only time it was ever tested, our Court of Appeals said that it is directory and not mandatory, and so they just dismissed it completely.

Q. (Mr. Bricker) I was quite impressed with what Judge Corbett had to say about the Seattle system, until he said the highway safety aspect is incidental. That really hurt me as far as the Seattle system was concerned. I have a question for Judge LeFevour, Judge Corbett, and Commissioner Rosenberg. In Chicago where you say you handle four million tickets, I wonder how many of those are really pay-outs, that are just paid and not court appearances. While that does not disturb me - how many pay it out as opposed to how many appear - what all of you have said and almost every speaker has said is that this system works for us, but all it seems to me is that it works from the administrative processing standpoint. I fail to see any highway safety aspects. If Judge LeFevour tried so many cases in a day, how about the people who are pay-outs? For instance if they pay out their fine and that goes into the Illinois Motor Vehicle Department (I assume you have a point system set up there.), that conviction may result in a point system accumulation and it could result in suspension. Now under the New York system when that ticket goes up to Albany, if it means in effect a point system suspension, they return it and say you must stand trial. We won't let you pay out that ticket. So, in effect, by letting people pay out tickets, you are really treating them unfairly, and there really is not any highway safety aspect to it.

A. (Chairman Little) Let me ask first that Judge LeFevour address himself to that question. The question is: "Of the four million people that you adjudicate, how many of them are pay-outs, and what is your belief about the highway safety effectiveness of this system, assuming that a number are pay-outs?

A. (Judge Richard LeFevour) In Chicago we use an order called "supervision." It is now on appeal, taken up by our State's attorney. It does require the defendant to return to court at the end of the period of supervision for the judge to enter some sort of final order or discharge.

In relation to your question, three million of those tickets are parking; most of them are pay-out. Of the million moving violations we probably see about 700,000 in court. Three hundred thousand are pay-out. There are two categories on the ticket: "you may pay this fine before

court" and "you must appear in court." The police officers are instructed (but they don't do it) that if it is the person's second offense they are supposed to check the "must appear" box. But to ride herd on the police to be sure that they are processing the arrest as we have asked them to does not work. Our Secretary of State in Illinois, who handles the licensing provisions of the State of Illinois, is looking into the situation that you described. If we do get a pre-payment case and it does result in a person being suspended for a three- or four-month period, at that stage of the game maybe we should not accept his plea of guilty and a fine but send it back to him and say come into court and let us have a hearing in court. That is under a study group right now of the Traffic Safety Committee of the Secretary of State's office. In general, though most of the people come in.

A. (Judge Patrick Corbett) I was perhaps a bit too brief because of time to outline the safety project that we have undertaken. In part, the project will be experimenting with categories of offenses and with backgrounds of particular defendants who will be required to appear before the magistrate. It is our hope and it has been our experience with the magistrate that he does deal very effectively on a safety question because he has such close contact with the defendant and access to his record. So it is not incidental in the sense that as he deals with it, he deals directly with it and the defendant. It is an incidental product of a much larger system, though. If you look at the experience of the Denver study, probably any sanction you impose is not going to prevent recidivism. It might, however, effect some degree of deterrence, and this is why your fines still have to remain in the system.

To address the question that was posed on the legislative basis. Why not vest with the judge the power to lift the license? If you give him the power to say, in this particular case, because of these particular circumstances, the license should not be lifted for this particular man, and if you give him the weaponry, so to speak, of an adjudicative process so that he can determine what is appropriate, you have addressed the problem more directly.

A. (Commissioner Rosenberg) Briefly, most of the cases filed in my court naturally are bail forfeitures. The figures I was giving, however, were cases of defendants actually appearing in my court. I am sure 95%, or whatever it is, still forfeit bail and they never appear before me. The problem of traffic safety is in part a problem of what penalties you can impose that will be effective. Now, there really is not much information of a good, hard scientific nature that tells us. I have seen some reports that indicate that under some circumstances traffic school is an effective

penalty to use in improving a man's driving record. Now I frequently do use traffic school for a number of reasons. If I find, based on good solid evidence, something else that can be used, I would certainly use it. But we are still, as far as I know, somewhat ignorant of what the most effective penalties are - of what is more effective than just paying the fine, or even forfeiting bail sometimes.

Q. I would like to address a question to the entire panel: The two keynote speakers, both Judge Finesilver and Commissioner Tofany, made very salient points which when read together really zero in on the greatest problem yet that this conference has to deal with. That is, Judge Finesilver made the point that Courts have the jurisdiction over traffic cases merely because it all started that way and just seems to have kept on growing. And Commissioner Tofany made the point that notwithstanding the fact that, whether court adjudication or administrative adjudication is used, the number of traffic fatalities is rising every year in this country, and according to the National Safety Council would appear to be rising this year. Therefore, one must assume that we are not solving the problem that we are really intending to, and that is: cut down on the number of people being killed on the highways. That is really the bottom line. And so, the question I would like to pose to you is: what innovation do you see in your own states for solving the problem so that your system works to prevent the very thing that we are trying to prevent rather than merely adjudicate violations?

A. (Commissioner Bardell) I think you raised the issue of why we are here, and I would like to say that we have to ask ourselves what we want our system to do. Do we want our system merely to adjudicate guilt or innocence as Judge Finesilver stated this morning, or do we want to do something more than that? If we want to do something more than that and that is to prevent highway death, then we must be able to identify. And we talked about that in our sessions. Who are we going to treat? Which drivers? First you must have the capability of identification, and we feel in administrative adjudication we do. Our records are current. We are on line to our hearing sites. The hearing referee makes an adjudication, a record is updated. Therefore, we have means and we have data on which we may be able to take action with the licensing authority here in New York State that has the responsibility of highway safety. So accordingly, we feel that by putting ourselves in this position, added to the capability of identification, we are able to promote better driver improvement. Now, having gone through that phase we are looking to another phase. That is, once we have identified and used some of the tools we presently have like driver improvement clinics (called "driver

safety sessions") our problem-driver interview, sending the individual for re-examination, or imposing administrative sanctions, then we want to go further than that. And based upon evaluations of our experimental programs, hopefully, we can get to a point where we can pre-screen; we can send an individual to an analyst after he has been identified by our adjudicator. And that analyst thereafter can refer that individual to the appropriate rehabilitative sources.

A. (Judge LeFevour) I think I said in my speech that 50 percent of the people being killed involve a drinking driver, and we are not enforcing the laws that we have in the books. We are plea bargaining. When we stopped plea bargaining in Chicago, that year we cut our death rate by 52 deaths, which was very significant because over three hundred people are killed annually in the city in traffic accidents. That requires the enforcement of the laws we now have on the books; and it has been my experience in going around the country that plea bargaining is the general rule. It is not the exception. As long as we allow plea bargaining and allow the drinking driver to continue to drive we are going to have problems. And I think of the other end of the coin, something I have been getting active in. It is very easy in this country to get a driver's license. We hand people licenses and put them in these huge cars that go hundreds of miles an hour and they are really not trained drivers. And I think we have to go to the beginning of the spectrum, too. We should be sure we have a stable individual that is a trained driver before he gets his license. Finally, if we enforce the laws that are presently on the books, I think we would cut into this death rate significantly.

A. (Judge Corbett) I think what is said by Judge LeFevour, and is said by everyone, is that you have a formula that swiftness and certainty of sanction equals deterrance. If you can provide that in any system, you are going to have substantial effect on the actions of those who are not yet involved. But as to those who are now in the system, the only approach that can be taken is that of personal identification and then educational process in the hope that they will not recidivate. If you look at the criminal justice field as a whole dealing with the whole social service spectrum, you will find that we have been completely ineffective. And obviously we have not yet found a solution; nor has one been suggested here.

A. (Commissioner Rosenberg) I would like to make one comment. I think before, when I was working for the judicial counsel in California in the traffic area as one of their attorneys and we drafted legislation of various kinds, I had a lot clearer idea, of exactly what should be done than I do now. When I see people before me every day, I find it is a little

CONTINUED

2 OF 3

more complex and difficult than it seemed to be back in those days when I was just dealing with faceless persons.

A. (Professor Reese) I am going to respectfully disagree with virtually all of the comments that I heard my three panelists colleagues make. Gentlemen, we are ducking the question. You are not answering the question that was posed. The point of saying strict enforcement of the laws we now have is nice. And Don can talk about sending them to a driver analyst and all this other, but why did we go through all the labor of studying and looking at the materials of the researchers yesterday, if we are suddenly going to leap into that old fate position again of concluding that we are really going to save some lives. This is what it is all about. We do not really know that you can save that many lives through the best adjudication system in the world. And the major question is where do you spend your dollars. That is the question that you began with yesterday. Do you spend it on the driver, on the highway, on the vehicle, or in what combination of the three?

Let me repeat just briefly. If a very large percentage of drivers sooner or later get involved in crashes, or receive citations, if repeaters are a relatively small part of the total and can not be reasonably predicted, if we do not know how to effectively deter unsafe driving, and if the most effective use of the dollar could be on the highway or on the vehicle, you can adjudicate all you want, but you can not walk out of here comfortably assuming you are going to save many lives. We just are not honest if we say we really know that we have some answers. That is what it is all about.

APPENDIX E

Pre- and Post-Symposium Questionnaires

PRE- AND POST-SYMPOSIUM QUESTIONNAIRES

(This true-false test was completed by Symposium attendees at the beginning of the Symposium and again at the close of the meeting.)

		Pre- Percent	Post- Percent
1. Traffic violations are committed by a limited number of drivers who make errors in their driving performance which may result in crashes.	T	28%(25)	20%(10)
	F	72%(63)	80%(40)
2. There is a high correlation between previous violations and future crashes, i.e., drivers with several violations are very likely to be involved in crashes.	T	65%(56)	38%(19)
	F	35%(30)	62%(31)
3. The driving performance of traffic violators can be corrected through instruction in better driving skills and attitudes.	T	91%(73)	82%(37)
	F	9%(7)	18%(8)
4. The driving performance of violators can be corrected through the use of appropriate legal sanctions.	T	52%(43)	45%(21)
	F	48%(40)	55%(26)
5. Illegal drinking and driving can be reduced through the threat of legal sanctions.	T	46%(39)	54%(26)
	F	54%(46)	46%(22)
6. People who commit traffic violations were driving irresponsibly.	T	51%(43)	48%(23)
	F	49%(42)	52%(25)
7. If this limited number of drivers were taken off the road, the highway safety problem would be greatly reduced.	T	43%(35)	22%(11)
	F	57%(47)	78%(38)
8. The average driver seldom makes mistakes and is not often involved in crashes.	T	36%(30)	19%(9)
	F	64%(54)	81%(39)
9. It is possible to identify/ predict who will be involved in crashes by reviewing individual driver history.	T	51%(43)	24%(12)
	F	49%(42)	76%(38)

			Pre- Percent	Post- Percent
10.	If all traffic violators with past records were taken off the road, the highway safety problem would be greatly reduced.	T	42%(35)	33%(16)
		F	58%(49)	67%(33)
11.	Education and/or rehabilitation countermeasures are effective in reducing violations and therefore crashes.	T	85%(71)	73%(33)
		F	16%(13)	27%(12)
12.	A court appearance helps to improve the attitudes of violators.	T	42%(36)	34%(16)
		F	58%(49)	66%(31)
13.	Mandatory penalties are effective in deterring illegal drinking and driving.	T	40%(33)	36%(15)
		F	60%(49)	64%(27)
14.	The judge will seldom have cause to see the average driver.	T	65%(56)	70%(35)
		F	35%(30)	30%(15)
15.	All drivers charged with a moving violation should be required to appear before a judge in a traffic court.	T	30%(25)	18%(9)
		F	70%(58)	82%(41)
16.	Legislation should be enacted that provides for mandatory penalties for illegal drinking and driving.	T	56%(47)	50%(23)
		F	44%(37)	50%(23)
17.	The number of previous traffic violations should be a critical factor in the judge's evaluation of any case.	T	85%(72)	71%(35)
		F	15%(13)	29%(14)
18.	The judge should work to identify the repeated traffic violator and take him off the road.	T	90%(74)	74%(36)
		F	10%(8)	27%(13)
II.	Agree or Disagree			
	The courts should undertake a searching re-examination of their traditional role in the adjudication of traffic offenses.	A	99%(81)	96%(48)
		D	1%(1)	4%(2)

APPENDIX F

Symposium Opinion Survey

SYMPOSIUM OPINION SURVEY

(A Symposium Opinion Survey was conducted on the final day of the Symposium. The aim of this survey was to evaluate the Symposium and assist planning for future meetings. The survey questions and the answers obtained therefrom were as follows.)

I. Please rate each of the components of the Symposium listed below on the scale following each item with 5 being the highest rating. If you have no opinion or are uncertain, place an X in the appropriate space.

1. System Aspects of the Highway Traffic Safety Problem
   Dr. George Hartman
   Mr. Arnold Fisch

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
1	2	17	21	5	3	2

2. Discussion Groups and Plenary Session: Understanding the problem. Who violates the law; who gets involved in crashes; how predictable are repeaters, etc.?
   Mr. Ron Coppin
   Dr. B.J. Campbell

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
0	1	14	16	19	0	1

3. Discussion Groups and Plenary Session:
Effectiveness of legal system countermeasures
Dr. Murray Blumenthal
Dr. H. Laurence Ross

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
0	0	13	20	14	2	2

4. Perspectives on Problem Drivers
Dr. Leon Goldstein
Dr. Robert Voas

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
1	5	19	14	8	3	1

5. Task Force Report
Mr. George Brandt
Honorable Sherman G. Finesilver

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
0	0	3	17	29	1	1

6. Political and Economic Barriers to Change
Mr. Vincent Tofany

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
0	1	13	13	19	5	0

7. Orientation and Visit to New York State Adjudication System

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
0	1	2	12	27	8	1

8. Legal Issues Raised by the Modification or Replacement of Court Adjudication of Traffic Offenses
Dr. John H. Reese

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
0	4	3	21	21	2	0

9. Panel: Perspectives on Alternative Ways of Adjudicating Traffic Offenses
Honorable Richard F. LeFevour
Honorable T. Patrick Corbett
Honorable Donald Rosenberg
Mr. Donald Bardell
Dr. John H. Reese

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
0	3	17	22	8	0	1

10. Discussion Groups and Plenary Session: Development and report of state goals

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
2	3	13	14	14	3	2

11. Panel: Effective Implementation of State Symposium Goals
Mr. William T.S. Bricker
Mr. Tom Reel
Mr. George Brandt

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
0	4	15	17	7	6	2

12. Concluding Summary and Challenges
Honorable Sherman G. Finesilver
Dr. Murray Blumenthal
Dr. John H. Reese

(1) poor	(2) below average	(3) average	(4) above average	(5) excellent	uncertain/ no opinion	no answer
1	0	4	17	22	5	2

II. Evaluate the extent to which - in your opinion - the following Symposium Goals and Objectives were achieved, by checking a number on the scale that follows each item, (5) for "highly successful," (3) for "uncertain," to (1) for "highly unsuccessful."

1. Broaden present understanding of the highway traffic safety problem

A. The relative contributions of the man, vehicle and highway components - and their interactions - to the problem

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	0	9	27	15	0

B. The role of program evaluation and research in managing the problem

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	0	17	24	9	1

C. Necessity of an interdisciplinary approach in the traffic law systems

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	0	7	31	12	1

2. Appreciate the problems and opportunities of the legal system in its response to the highway traffic safety problem

A. Recognize the strengths and limitations of present approaches of the legal system to the problem

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	0	8	29	13	1

B. Appreciate the need and opportunities for scientific program evaluation and research in selecting those alternatives that will provide the greatest payoffs in reduced deaths, injuries and property damage

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	0	10	28	11	2

3. Increase receptivity to new ways for the legal system to respond to the highway traffic safety problem

A. Encourage development, testing and evaluation of alternatives to the present conventional approaches to the problem; alternatives such as administrative adjudication, revised judicial handling of traffic offenses and other innovations

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	0	10	24	16	1

B. Encourage implementation of rehabilitation and retraining techniques for select drivers, i.e., problem drivers, drivers with alcoholic, medical and physical limitations

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	3	7	29	11	1

4. Explore ways of improving driver behavior through the adjudicatory process

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	1	13	29	8	0

5. Examine the utilization of civil penalties in the traffic offense adjudicatory process except in serious offenses

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	3	10	29	9	0

6. Encourage state action in establishment of goals, priorities, and timetables in accomplishing Symposium Objectives

(1) highly unsuccessful	(2) unsuccessful	(3) uncertain	(4) successful	(5) highly successful	no answer
0	0	17	25	9	0

III. Additional Comments and Suggestions

1. Were the group discussion sessions:

(1) highly ineffective	(2) somewhat ineffective	(3) average	(4) somewhat effective	(5) highly effective	no answer
0	2	6	19	23	1

Comments (considering time, format, abstracts, new insights and perspectives, etc.):

2. In your opinion, what other topics should have been covered at the Symposium?

3. What suggestions do you have to improve the Symposium?

4. Which part of the Symposium did you find most significant or beneficial?

5. Do you recommend similar regional conferences elsewhere in the country - patterned after the New York meeting?

Yes 42 No 1 No Comment 3 No Answer 5

Please comment:

6. Did you attend the Symposium session on:

Tuesday evening ____(check)
Wednesday ____(check)
Thursday ____(check)
Friday ____(check)

7. How would you evaluate the over-all Symposium on a scale of 1-5 (5 being the highest rating possible)?

(1) not very effective	(2) below average	(3) average	(4) better than average	(5) outstanding	no answer
0	0	6	28	15	2

Please comment:

Date _____

I am (check one):

_____ A state high court official
_____ A court administrator
_____ A traffic court judge
_____ A private citizen
_____ A state or local bar association official
_____ A driver licensing official
_____ A governor's highway safety representative
_____ A law enforcement official
_____ An attorney general or state prosecutor
_____ A researcher
_____ A mayor
_____ A municipal counselman
_____ A legislator
Other _____
(please specify)

State _____

Name _____
(optional)

APPENDIX G

Recent U.S. Supreme Court Decisions
Affecting Traffic Court Adjudications

RECENT U. S. SUPREME COURT DECISIONS AFFECTING TRAFFIC COURT ADJUDICATIONS

(The following material was distributed to delegates at the beginning of the Symposium)

Three recent United States Supreme Court decisions (a) defining the rights of a defendant to a trial by jury (b) rights to the services of an attorney, and (c) restricting the power of Mayor's Courts, have had a profound effect on the effective adjudication of traffic violations in the Courts. An understanding of the impact of these cases upon Court adjudication is essential to any meaningful discussion of reasonable alternatives.

I.

In Baldwin v. New York,[1] the defendant was arrested and charged with an offense punishable by a maximum prison sentence of one year. The defendant's request for a jury trial was denied and he was later found guilty as charged. The case was appealed to the United States Supreme Court after the New York Court of Appeals rejected the defendant's argument that the New York law which denied him the opportunity for a jury trial was unconstitutional.

In a previous case, Duncan v. Louisiana,[2] the Supreme Court recognized the long-established view that so-called "petty offenses" may be tried without a jury, and that defendants accused of serious crimes must be afforded the right to trial by jury. In Baldwin, the Supreme Court found itself confronted with the necessity of defining the line between "petty" and "serious" offenses for the purpose of the Sixth Amendment right to a jury trial. In the majority opinion, written by Mr. Justice White, the Court held that a defendant has the right to a trial by jury under the Sixth Amendment if his offense is punishable by a potential sentence in excess of six months imprisonment. The Court reasoned that:

> "Where the accused cannot possibly face more than six months imprisonment, we have held

that these disadvantages, onerous though they may be, may be outweighed by the benefits that result from speedy and inexpensive non-jury adjudications. We cannot, however, conclude that these administrative conveniences, in light of the practices that now exist in every one of the fifty States as well as in the Federal Courts, can similarly justify denying an accused the important right to trial by jury, where the possible penalty exceeds six months imprisonment."[3]

II. A

Another landmark United States Supreme Court decision having a significant effect on the judicial administration of traffic offenses is Argersinger v. Hamlin.[4] The issue in Argersinger was the Sixth Amendment right of an indigent defendant in a criminal trial to the assistance of an attorney. In that case, an indigent defendant in Florida was charged with an offense punishable by imprisonment up to six months and a $1,000 fine. The trial was to a Judge, and the defendant was unrepresented by counsel. He was convicted and sentenced to 90 days in jail. The defendant then appealed his conviction, stating that he could not afford an attorney and that he unable to raise and present to the Trial Court sufficient defenses to the charges brought against him.

In reversing the defendant's conviction, the Supreme Court rejected the notion that since crimes punishable by imprisonment for less than six months may be tried without a jury, they may always be tried without a lawyer. In Argersinger, the Court was not concerned with the length of the jail sentence or the classification of the crime. It held that "no person may be imprisoned for any offense, whether classified as petty, misdemeanor or felony, unless he was represented by counsel at his trial." The Court was not unaware of the effect of its decision on the administration of traffic violations. The impact and expense of court-appointed counsel on the already overburdened judicial administration of traffic offenses was considered by Justice Douglas in his opinion. He indicated that "a partial solution to the problem of minor offenses may well be to remove them from the Court system."[5] Justice Douglas specifically referred to a report by the American Bar Association Special Committee on Crime Prevention and Control, which stated that:

"Regulation of various types of conduct which harm no one other than those involved (e.g., public drunkenness, narcotics addiction,

> vagrancy and deviant sexual behavior) should be taken out of the courts. The handling of these matters should be transferred to non-judicial entities, such as detoxification centers, narcotics treatment centers and social service agencies. The handling of other non-serious offenses, such as housing code and traffic violations, should be transferred to specialized administrative bodies."[6]

Justice Douglas further stated that:

> "We do not sit as an ombudsman to direct state courts how to manage their affairs but only to make clear the federal constitutional requirement. How crime should be classified is largely a state matter. The fact that traffic charges technically fall within the category of 'criminal prosecutions' does not necessarily mean that many of them will be brought into the class where imprisonment actually occurs."

Argersinger has already been cited in over 75 appellate court decisions and in a host of law review articles.[7]

B.

In assessing the impact Argersinger will have on the Courts and legal profession, it is necessary to estimate the number of misdemeanor cases where the defendant will be unable to employ counsel. There are no complete statistics on the volume of cases, and projections must be made.

In the American Bar Foundation Study in 1965[8] it was estimated that in 1962 there were approximately 5,000,000 cases including traffic offenses. From this figure, and considering that most traffic cases carry a potential jail sentence and endeavoring to project a 1973 base, it may be reasonably expected that in 200,000 to 250,000 cases, counsel must be provided yearly. Thus, a public defender or court-appointed attorney will have to represent a great number of indigent defendants in traffic offenses.

C.

The growing pressure on criminal Courts from the

adjudication of traffic violations was responded to in New York City by a program aimed at "de-criminalizing" traffic offenses. Most traffic offenses, and all parking violations, are taken out of the criminal Courts and placed in the hands of administrative agencies. Trial Judges are replaced by lawyers acting as administrative Hearing Officers. A defendant is given a specific time to appear at the office of the Hearing Officer if he wishes to contest the charge. It has been reported that a contested charge can be fairly heard in less than an hour. The State Department of Motor Vehicles handles almost all traffic tickets, with the exception of drunken and reckless driving. Parking tickets are routinely administered by the city transportation administration. Evaluations of this program have shown it to be highly effective as a method of eliminating the expense and delay involved in the "criminal" trial of traffic violators.

III.

A recent Supreme Court case arising from Ohio restricted the power of Mayor's Courts in traffic cases.

Ward v. Monroeville[9] held that a traffic offender was denied a fair trial before a disinterested and impartial judicial officer as guaranteed under the Due Process Clause where his trial was before a township mayor whose court through fines, forfeitures and costs provided a substantial portion of township's funds.

A later Ohio case held that Mayor's Courts can continue to function in traffic cases where guilty pleas are entered and in contested cases where the "Mayor's relation to the finances * * * of the municipality is too remote to warrant a presumption of bias toward convictions in prosecutions before him as judge." State ex rel. Brockman v. Proctor.[10]

CITATIONS

1 300 U. S. 66, dec (1970)

2 391 U. S. 145 (1968)

3 399 U. S., pp. 73-74

4 407 U. S. 25, dec (1972)

5 407 U. S. 25, n.9

6 ABA report, New Perspective on Urban Crime, iv (1972)

7 Illustrative law review articles: Note 41 Fordham Law Review 722 (1973); note 22 Catholic University Law Review 691 (1973)

8 Defense of the Poor in Criminal Cases in American State Courts, American Bar Foundation, Chicago, p. 10

9 409 U. S. 57 (1972)

10 35 Ohio St. 2d 79 (1973)

APPENDIX H

New Trends and Highlights
in Administrative and Judicial Adjudication
of Traffic Offenses
and
Classification of Traffic Offenses as Infractions

NEW TRENDS AND HIGHLIGHTS IN ADMINISTRATIVE AND JUDICIAL ADJUDICATION OF TRAFFIC OFFENSES AND CLASSIFICATION OF TRAFFIC OFFENSES AS INFRACTIONS

(The following material was distributed to delegates at the beginning of the Symposium)

CALIFORNIA

In 1968 California enacted legislation classifying certain minor traffic violations as infractions. The legislation established infractions as one of the three categories of public offenses, namely, felonies, misdemeanors and infractions. An infraction is not punishable by incarceration nor is there a right to trial by jury or a right to appointed counsel for indigent defendants.

The law classifies parking violations, equipment violations and certain other minor violations of the Vehicle Code as infractions, but it excludes moving violations and the more serious traffic offenses.

Under the provisions of the infractions law a jail sentence may not be imposed in lieu of payment of a fine when a defendant has been convicted of an infraction unless he wilfully refuses to pay the fine, but the court may impound the defendant's driver's license for up to 30 days.

Legislation has been recommended to extend the infractions classification to cover all but the more serious violations of the rules of the road. Legislation to date has not been enacted in this regard.

One matter concerning the procedures governing traffic infractions merits consideration. Section 42003(a) of the California Vehicle Code provides that when a person has been convicted of an infraction the judgment may provide that the fine shall be paid within a specified time or in specified installments contingent upon the person giving his written

promise either to pay the fine as provided or to appear in court on the due date. Wilful violation of the promise is a misdemeanor.

In California the traffic cases remain under the purview of the courts but outside the courtroom. Parking offenses, equipment violations and other nonmoving offenses have been reclassified as "infractions" rather than crimes, and a new court official called a traffic referee handles them. He can sentence violators who plead guilty and set court dates for those who plead innocent. A person accused of an infraction now has no right to a jury trial or a free lawyer, but neither can he be sentenced to jail.

The traffic referee system hasn't yet been put into effect in all California jurisdictions.

NEW YORK

In July of 1970, New York implemented its law removing cases involving most moving traffic infractions from the criminal courts in New York City. Under the law, these cases are heard instead by referees of the Department of Motor Vehicles. The referees are part of a well defined administrative adjudication system.

Virtually all moving traffic infractions occurring in the City are affected. Misdemeanors, however, such as driving while intoxicated, reckless driving, leaving the scene of an accident and driving without a license or registration continue to be heard before criminal court judges. Jurisdiction over parking violations are not covered by this law, but are under a separate administrative agency of the City of New York.

In this program, judges are replaced by lawyers who act as administrative hearing officers. The hearings are conducted with decorum in a quasi-judicial setting. Defendants are given a specific time to appear if they wish to contest a charge. In most cases a person can be in and out of the hearing within an hour. Persons found guilty can appeal to an administrative board and ultimately have recourse to the state trial court.

Under the law, motorists can plead in person or by mail to traffic infractions. Upon filing of a denial of the charges and $15 security, a motorist wishing to contest charges of a traffic infraction is granted a hearing before a referee, who decides the case. A motorist who fails to answer a traffic ticket is subject to having his driving pri-

vilege suspended until a response is made.

The Commissioner of Motor Vehicles is authorized to establish a schedule of fines for various infractions within legal limits. If a specific fine had been set for the violation charged, a motorist admitting the charge by mail can send the specified fine, along with the traffic ticket and the record of convictions portion of his drivers license, to the Department.

Any suspension or revocation of license by a hearing referee is delayed for 30 days to give a motorist time to appeal. No penalty set by a referee or scheduled by the Commissioner can include imprisonment.

In urging enactment of the law, Governor Rockefeller stated:

> "By relieving the criminal courts of most traffic cases, this program should enable the criminal courts to provide prompter handling of serious criminal matter in a more judicious atmosphere. The special problems of criminal court congestion, lengthy incarceration of defendants before trial and the inability of courts to grant a trial date for up to a year, should be greatly alleviated."
>
> "In addition, the hearing of traffic cases by qualified hearing officers of the Department of Motor Vehicles would result in the more expeditious disposition of these cases."

The success of the program has prompted implementation in other New York areas (Buffalo and Rochester) outside of New York City.

BRITISH COLUMBIA

In 1968, the Motor Vehicle Act of the Province of British Columbia was amended to provide for the service of Traffic Violation Reports to alleged violators of the Traffic Rules, instead of these persons being charged and appearing in court action.

The "No Fine Law" as it was denominated was introduced first in the County of Victoria on October 1, 1968. On April 1, 1970 the complete province came under the law.

The alleged violator has the opportunity of disputing

the violation and can appear before a judge of the Provincial Court of British Columbia for a hearing.

Initial experience indicated that a number of persons were disputing violations just because it was their privilege and not because they felt that the violation had not been committed.

A further amendment required that a person deposit with the Provincial Court Clerk the sum of $10.00 if a dispute was to be registered. The deposit is returned to the person if the violation is not established. As a result, the number of persons failing to appear for hearings after they had been set, dropped considerably and disputes are only registered in about 3% of cases.

After a hearing, in which full opportunity to present evidence is allowed, the Judge determines whether the Offense has actually taken place. If the Judge determines that the offense did not take place, the $10.00 deposit is returned to the motorist. If the Judge is satisfied that the offense has occurred, the Superintendent of Motor Vehicles is informed. But in no case does the Judge record a conviction or impose any penalty.

All violation reports - unless successfully disputed before a Judge - become a permanent part of an individual's driving record at the Motor Vehicle Branch. For repeated violations, the Superintendent of Motor Vehicles may take any of the following steps:

1. Issue a warning to the offender.
2. Call the offender for an interview and, when deemed necessary, require the offender to take a driver training course.
3. Suspend the offender's driver's license outright. Before this step is taken, the offender is given the opportunity to show why this should not be done.
4. Require the offender to appear before a Judge who, after reviewing his record, determines whether the offender's driver's license should be suspended.

The law applies to all driving offenses under the Motor Vehicle Act involving public safety, such as speeding and careless driving. It does not apply to the more serious driving offenses in which criminal charges might be laid. Nor does it apply to minor traffic offenses, such as overparking, for which tickets will still be issued. In all cases, the precise nature of the alleged violation is specified on the Violation Report.

NORTH DAKOTA

Following a comprehensive study by a Legislative-Citizen Committee reviewing the entire court system, a far reaching law was recently enacted in North Dakota.* The law makes traffic offenses non-criminal and provides for alternate methods of disposing of certain offenses.

In regard to its treatment of adjudication of traffic offenses a fresh approach is taken in the law.

The disposition of traffic offenses relies on existing court structure but drastically varies procedures.

Moving and nonmoving violations are covered in the law. All but the more aggravated traffic offenses are included.

Excluded are alcohol and drug related offenses; reckless driving; vehicular homicide; hit and run offenses; and driving under license suspension. A person charged with one of these offenses would be tried in the present criminal manner subject to penalty including imprisonment.

The basic rationale to provide alternative methods of disposing of most traffic offenses was primarily to decrease the caseload of the "lower" courts, and to reduce the number of appearances which private citizens would have to make before judges without legal training or training in traffic law enforcement. A secondary but important consideration was that the current system of disposing of traffic offenses did not seem to be adequately deterring poor driving habits.

The law provides that everyone cited for a state or municipal traffic offense, except serious offenses, is charged with a noncriminal offense. A jail sentence cannot be imposed. The offender is not entitled to a jury trial or court appointed counsel.

After the charge, the alleged offender has several alternatives available to him. He can appear before the designated official and pay the statutory fee prior to or at the time scheduled for his first hearing on the charge. The offender could also choose to post bond, in person or by mail, and forfeit that bond (the amount of which will be equivalent to the statutory fee) by not appearing at the first hearing.

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* Senate Bill No. 2033 was enacted by the North Dakota legislature at its regular session and took effect on July 1, 1973.

If the person desires to appear and make an explanation of his action, he may do so while still admitting the violation. If the alleged offender takes the latter course, the hearing official may waive, reduce, or suspend the statutory fee or bond. An offender who elects to follow any of the foregoing procedures is deemed to have admitted the charge, and the hearing official is to certify that fact to the licensing authority, and to also certify whether the offender, in committing the offense, contributed materially to a traffic accident; and, if the offense charged was speeding, whether the offender exceeded the speed limit by more than 15 miles per hour.

If the alleged offender does not choose one of the three methods of proceeding previously noted, he may request a hearing which can be held at the time scheduled in the traffic citation, or at some future time within 90 days. However, if a person requests a hearing, and is not indigent, he is to deposit $15.00 as a prepayment of all costs of the hearing.

If the person is found not to have committed the offense, the $15.00 hearing cost prepayment is returned, but it is retained and deposited with the treasurer of the county or city, as the case may be, if the offender is found to have committed the offense. In the latter case, the hearing official will also levy the statutory fee and will report the fact of commission to the licensing authority, and report whether the violation contributed materially to a traffic accident, and whether, if the offense charged was speeding, the speed charged was more than 15 miles in excess of the speed limit.

The offender may appeal an adverse decision by the hearing official to the district court, where he may then demand a jury trial. If he is again found to have committed the violation, no further appeal is allowed.

During the course of the appeal, the district court may, at the offender's request, order the licensing authority to stay any action suspending the offender's driver's license for a period not to exceed four months; or order a stay and direct the licensing authority to issue a temporary restricted driving certificate to the offender.

Because the offenses covered by the Law are deemed non-criminal, the prosecution must only prove its charge, at the hearing or on appeal, by a "fair preponderance of the evidence", which is the burden of proof presently required in civil law suits. In addition, if an offender appeals, the district court shall try the appeal under the present rules of civil procedure.

The law also provides that a person who fails to choose one of the methods of proceeding outlined above is deemed to have admitted commission of the violation charged, and the hearing official is to report that fact to the licensing authority. If the person charged fails to appear at the time designated in the citation, without paying the statutory fee or posting and forfeiting bond, he is also guilty of a misdemeanor.

The law establishes a "point system" for offenses leading to revocation of driving privileges. The system directly ties in the assessment of points with the adjudication of traffic offenses. Thus uniformity of treatment of offenders is built into the program.

Attendance at driver improvement facilities may reduce the number of accrued points. Thus a well defined centralized license suspension system is an integral part of the law.

The law strengthens the sanction of driver license suspension and revocation but de-emphasizes terms of imprisonment and monetary penalties.

In summary, the law makes most traffic offenses non-criminal; provides for expeditious adjudication of traffic offenses; provides for mandatory suspension of licenses when certain numbers of demerits have accumulated on driving records; provides for issuance of restricted driving licenses, implements uniform traffic summons and complaint; provides for penalties to be assessed for certain traffic offenses.

OTHER STATE ACTIVITY

The states of New York, New Jersey, Pennsylvania and Minnesota have classified most moving traffic violations as non-criminal and as a result the right to trial by jury and appointment of counsel for indigents has been eliminated.

Recent legislation in Wisconsin classifies a number of former criminal offenses, such as reckless driving and driving while intoxicated in a non-criminal way.

APPENDIX I

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