U. S. DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20590

STATEMENT PREPARED FOR DELIVERY BY M. CECIL MACKEY, ASSISTANT SECRETARY FOR POLICY DEVELOPMENT, DEPARTMENT OF TRANSPORTATION, BEFORE THE JOINT ECONOMIC COMMITTEE, ROOM AE-1, CAPITOL (S-407), ON THURSDAY, AUGUST 1, 1968, AT 10:00 A. M.

My testimony today will touch only briefly on the standard framework of analysis which is normally employed to establish the case for discounting future costs and benefits and to determine a rational rate of discount. Instead it will emphasize the many unusual features of discounting transportation costs and benefits which complicate the forecasting chores of the Department of Transportation.

Standard analysis of discounting is concerned with one aspect or another of the general question: how much to invest? It is always concerned with investment, or disinvestment, because the whole point to the use of interest or discount rates is to obtain comparable present values for streams of costs and benefits which are expected to have different time-shapes. Specifically, for problems involving positive investment, at least some costs are expected to precede benefits. For individual projects, a standard question takes this form: <u>given</u> a flow of anticipated future benefits, should we incur costs now, or wait? If we decide not to wait, should we incur heavy costs now in order to gain lower costs in the future, or should we minimize present costs in return for heavier future outlays? More generally, this kind of analysis can be spread over many projects, to determine the optimum size for total investment budgets or the optimum mix for total investment programs.

The Department of Transportation obviously does not have responsibility for the total investment budget of the U. S. Government, although the Federal highway program is one of the larger single elements in this budget. So it is not directly concerned with overall investment criteria in the sense that the Treasury, the Bureau of the Budget, or the Council of Economic Advisers would be. It does have important areas for potential investment which involve trade-offs between investment and operating expenses.

But the more important aspect of the use of investment criteria by the Department of Transportation, within its present statutory framework, is its inability to lay down uniform rules for methods of calculating future costs, future benefits, or appropriate rates of discount to convert these future costs and benefits into present values.

The outstanding example of this inability is contained in the statute itself. Section 7 (a) instructs the Secretary to "develop and . . . revise standards and criteria consistent with national transportation policies, for the formulation and economic evaluation of all proposals for the investment of Federal funds in transportation facilities or equipment . . .", but this instruction is subject to two major qualifications. Section 7 (a) itself contains a list of six exceptions, including very important ones with respect to grant-in-aid and water resource projects. This water

resource exception is at least partly balanced by provision for membership of the Department of Transportation in the Water Resources Council, but it nevertheless leaves discounting and other investment criteria with respect to water transportation in a different environment than comparable criteria for government investment in other modes of transport.

In addition, as I will later point out in more detail, the application of uniform rules is rendered difficult by the division of investment responsibility for transport facilities such as highways and certain airports between Federal and state, or Federal and local government agencies, and by divisions both between modes and within many of the modes between private ownership and investment (as with railroads, or airlines, or trucking concerns) and public ownership and investment (as with highways and major airports).

The conceptually ideal situation, of course, would be to begin with a unified approach to definitions of benefits, costs, and appropriate rates of discount to be applied to future values. This ideal situation would have special advantages in the field of transportation, due to the degree of substitutability of demand for important transportation modes-- such as the demand for freight movement by rail, by barge, or by motor truck-- as well as the possibility of trade-offs between public investment in infrastructure and safety facilities and private investment in

operating equipment. A standard discount criterion could even be useful in determining the most economical surfacing to be used on a particular highway. This conceptually ideal situation must, of course, be visualized in terms of relating the appropriate discount rate to the development of the entire economy. The very existence of new investment is incompatible with static assumptions about the economy; and, in particular, the existence of new investment in new forms of economic activity is likely to be accompanied by steadily increasing productivity.

In the rest of my statement, I will give some examples of this relationship of discount criteria to other dynamic investment criteria as well as of some of the problems created by the mixtures of competition and complementarity prevalent among modes of transportation with different types of ownership and control. But, I will introduce my general comments on these topics by a summary of the present discounting practices of our administrations.

The Bureau of Public Roads might be expected to have the most important decisions with respect to appropriate discount rates, because its annual investment budget greatly exceeds that of all the other modal agencies in our department combined. But the Bureau's investment funds are derived from the Highway Trust Fund, so that the inflow into the highway investment pool is immediately

determined by the receipts of specified taxes and not by a showing with respect to discounted costs and benefits. Moreover, the great majority of the Bureau's investment expenditures are distributed to individual states to be used according to set formulas along with state highway money. Neither the state-by-state distribution nor the percentage Federal share in each type of highway directly reflects costs, benefits, or discounts of future values to arrive at present values. State highway departments use discount rates ranging from zero percent to eight percent. The Federal Highway Administration has also agreed to use standard rates for sensitivity analysis as provided by the Bureau of the Budget. These standard rates are 7.5 percent, 10 percent, and 12.5 percent.

The Federal Aviation Administration has based its discounting on Bureau of the Budget Circulars A - 54 and A - 76, and accordingly has used interest rates which essentially reflect the cost of Government borrowing as reported by the Treasury Department. Over the past few years these rates have risen from 4.2 percent to 5.5 percent. Some recent sensitivity studies have used the same rates already mentioned for the Bureau of Public Roads: i.e., 7.5, 10, and 12.5 percent.

Although the Urban Mass Transportation Administration has been active in providing capital grants for local transportation purposes, it has not engaged in direct investment activities.

It has not established a discounting policy. Nor has discounting been utilized by either the Federal Railroad Aministration or the Saint Lawrence Seaway Development Corporation. The Coast Guard is just beginning to consider interest rates in its economic studies, and in a pending polar study it is using the rates recently suggested by the Bureau of the Budget.

* * *

Now to return to more general considerations affecting the position of the Department with respect to discounting, and to the net values derived therefrom:

1. The economics of safety.

Probably the most widespread and pervasive set of responsibilities of the Department of Transportation are those related to transportation safety. These responsibilities extend all the way from air traffic control by the FAA to the Coast Guard's role in boating safety. And the most extreme form of the problem of safety involves an attempt to guarantee that there will be a future - not simply to apply a proper rate of discount to it.

Thus the investment of most general interest to the Department of Transportation is the individual's investment in his own life. And here it should be noted that standard discounting procedures for reducing larger future estimates to smaller present values may require at least some offset. For, in a dynamic economy, the average individual of a given age is worth

steadily more through time. So the stream of future benefits to be discounted is not constant, but rising, even for just one hypothetical individual of constant age. Translated into investment policy, this means that we should constantly increase our outlays for a given assurance of saving human life.

Another corollary of the economics of safety has to do with the reduction of uncertainty. Most discussions of discounting assume a given degree of risk in comparing different investments. But the precise function of investments in safety is to reduce the risk of death or accident accompanying an individual's travel.

Therefore the most general aspect of the Department of Transportation's interest in discounting criteria is in connection with preserving our national investment in people.

2. The unit of investment decision.

It is customary to assume that investment is either "private" or "public". Private investment is usually supposed to take place in an environment characterized by a considerable degree of competition, although it is often recognized that a business firm contemplating a new investment may bear in mind the dangers of spoiling the market by depressing prices with the additional units of output it expects to produce. But public investment is usually expected to be monopolized, in the sense that it is performed by something called "the government"

which is responsible for the investment decision and all its consequences. Finally, there is no body of economic discussion relating to the special problems of competing public and private investments - railroad way and structure versus highways, or, in a much more limited sense, some railroad way and structure versus airports - nor is there any received economic doctrine with respect to the complementary relationships between private investments such as planes or motor vehicles and public investments such as airports or highways. This section of my comments will sketch in only a few of the anomalies which result from these divisions of investment responsibility.

a. Multiple decision-making in public investment.

Due to the Highway Trust Fund, the United States has now come within sight of a nationwide express highway system built to minimum standards in accordance with an articulated plan. Federal funds were available for highways for a generation before the Highway Trust Fund was created. But state and local governments still receive the lion's share of the funds derived from taxes on automobile and truck use; and state and local governments dominate in providing both the funds and the criteria for new highway investment. This dominance in determining criteria is especially marked if we believe that the Interstate Highway System, with 90 percent Federal financing, confers general benefits which are hard

to quantify, while projects of more local significance may be more susceptible to detailed economic analysis.

This multiple decision-making has produced sharp contrasts in discounting policies. A number of states use zero discount rates in the process of determining the costs and benefits to be expected from new highway investment. Other states use discount rates over the entire range from zero to eight percent. These extreme differences in policy do not necessarily imply that the zero interest-rate calculations produce larger highway programs, because the total size of such programs may be determined by receipts from use taxes or other budget constraints. But, if a given investment fund proves to be inadequate at a zero discount rate, then it must be parcelled out among individual projects on the basis of benefit-cost ratios a good deal higher than unity. A combination of a zero discount rate and high benefit-cost ratios is sure to distort both the geographical distribution and the physical characteristics of highway investment. The very word "investment" implies the importance of time. Yet a zero discount rate assumes that time has no importance.

The same general phenomenon occurs in different forms in air finance. The Federal Aviation Administration, a component of the Department of Transportation, systematically employs discounting to determine the present values of future costs and benefits. Yet most investment in airports is made locally, on the basis of investment criteria which are typically unannounced even if they are known. Local airport finance may enforce some discounting rules in practice: an airport financed by revenue bonds must automatically convert some future benefits into cash flows and effectively discount these future cash flows by applying applicable rates of interest against them. But many airports are not financed by

revenue bonds. Also, the very choice between revenue bonds and obligations pledging full faith and credit produces a further option in interest rates which may be used for discounting in addition to the option created by the fact that local obligations, free of Federal taxes, typically involve interest rates lower than those available to the U. S. Treasury.

b. The ragged edge between public and private investment.

The tax differential mentioned in the preceding paragraph is, of course, even more obvious if public and private investments are compared. A locally-financed transportation investment may disregard both direct and indirect income tax payments. Income of the project itself is not taxable; and interest paid to bondholders is free of Federal income tax. A Federally-financed project involves indirect Federal income tax payments by holders of Federal securities which are the counterparts of the investment expenditure, but the project pays no income taxes directly. Private investment financed by bonds has the same Federal income tax position as Federal investment; but private investment financed by sale of new equity capital involves both direct and indirect income taxation by all relevant levels of government. To complicate matters still further, equity capital created by ploughing back earnings may greatly reduce the indirect tax liabilities of stockholders who take the capital-gains route to keep themselves in funds or who have no need to sell stock.

This description could, of course, be applied to the differences in income tax liabilities of private and of different kinds of public

investors anywhere in the economy. Its particular significance for transportation arises from the inter-relationships of public and private investment in transport investment. Where the two are complementary, as they are in aviation, the practical results may be just the reverse of the over-extension of airports relative to airplane investment which pure discount theory would lead one to expect. Hard-pressed local governments may refuse to incur further debt even if it is incurred to finance an investment which seems almost sure to be profitable. And revenue bonds may not be saleable in one big lump for a huge new airport. But the most difficult cases are not those of investment complementarity between the private and public sectors. These most difficult cases involve investment competition, in the sense of investment in facilities to provide competitive services. The outstanding example of this competition is that of highways and railroads. But the rail investment problem has so many other aspects that it requires special treatment of its own.

3. The special case of railroad investment.

The Department of Transportation operates the Alaska Railroad. The City of Cincinnati owns, but does not operate, the Cincinnati Southern. Otherwise the railroad map of the United States is dominated by private ownership. Therefore it may seem paradoxical to single out railroad investment policy in a statement devoted to Federal Government standards for discounting future costs and benefits. Moreover, most important present-day problems of railroad investment cannot be attributed

simply to public investment in highway facilities for the specific purpose of facilitating freight movement. The contrasting attitudes of the American Trucking Association and the American Automobile Association on truck size and weight limits are enough to indicate that truck and passenger car uses of highways are not automatically complementary. But the passenger automobile now dominates short-and medium-distance intercity passenger transportation as, in numbers, it dominates in the use of most highways. Therefore any system for the allocation of highway investment would have to assess an important share of the total against passenger transportation. Both the provision of highway facilities for trucks and the competition with rail freight which this provision makes possible are to some extent by-products of the provision of facilities which would be demanded in any case by drivers of passenger automobiles.

Moreover, although many segments of the national rail net are subject to competition from waterways operators who pay no user charges, this competition is specialized with respect to both area and commodity.

There are still massive problems for rail investment created by the competitive environment in which railroads operate. Many railroads are in a position to avoid payment of Federal income taxes on part or all of their income, due to tax loss carry-forwards, which helps to improve their competitive position vis-a-vis public investment by reducing or eliminating the spread between their gross and their net return. But these tax-loss carry-forwards are also a factor in the growing phenomenon of footloose railroad cash. The roadbed may be immobilized, but the cash flow derived from depreciation, net income

and sale of miscellenaous assets is not. Therefore the problem of railroad investment in the face of competition may be further subdivided into two different problems: negatively, competitive forces have cut into railroad earnings, and continue to hold them down; positively, the opportunity cost of converting railroad cash into railroad investment seems to be rising as alternative uses of the cash become relatively more attractive.

As if these problems were not complicated enough, there exists a further railroad investment problem which is a product of both history and technology. Historically, most railroads financed themselves to the maximum possible extent by the issuance of mortgages on their fixed assets. These often contain "after acquired" clauses which subject any further fixed assets to the original lien. Even without such provisions, loans against rolling stock provide the lender with more mobility and hence more security than loans against investments in way and structure. Historically, also, most railroads supplied themselves with whole systems of branch lines, and elaborate patterns of stations and yards, all built on the assumption of minimum hauls for local drays and wagons. The motor truck has revolutionized terminal services, and eliminated the need for much railroad fixed plant. Technical improvements in railroading must struggle against a financial, investment, and operating structure which combine to throw a deep shadow of the past into the present.

Finally, each individual railroad enterprise may be both too big and too small to achieve maximum credit in security markets for investment in technological advance. Individual railroads involve massive capital investments reflected in high balance sheet valuations of assets. Specific improvements due to new investment may lose most of their effect on earnings ratios due to the massive size of this asset denominator. Conversely, most individual railroads are too small to realize for themselves all of the beneficial systems effects of new investment.

To sum up: the problem of discounting costs and benefits of new railroad investment goes much deeper than is indicated by a simple contrast between "public" and "private". If railroads were experiencing the exuberant growth which characterizes highway or airport construction, many of the most glaring contrasts between railroad and other transport investment criteria would be greatly reduced. The problems of private ownership, of divided ownership, of obsolete physical capital, and often of obsolete balance sheets combine to make the development of acceptable criteria for railroad investment a matter of deep concern to the Department of Transportation as well as to the railroads themselves.

4. Trust funds, and pay-as-you-go.

Federal highway programs have always been on a pay-as-you-go basis in the sense that no new bonds were ever issued as a specific offset to Federal highway contributions. But the major present Federal commitment to highways, via the Highway Trust Fund, is pay-as-you-go

in a much more direct and meaningful sense. Receipts are earmarked for highway investment, and are thereby enclosed in what amounts to a budget within the budget.

The basic idea of a trust fund involves segregation of particular receipts from the general budget. But a trust fund need not involve the further principle of pay-as-you-go. Investment could be financed by borrowing, with future trust fund receipts hypothecated against payment of bond interest and principal. Many state highway budgets once operated on this basis. So the following remarks will not be directed toward trust funds in general, because trust funds in general have no particular relationship to the problem of discounting future costs and benefits. Instead, attention will be focussed on the special features of Federal funding of its contribution to the Interstate Highway System, via a combination of a trust fund and pay-as-you-go.

If the provision of highways had to respond to a growth in demand as rapid as that now facing airports, a pay-as-you-go type of trust fund would involve unusually high discount rates if it were the only source of investment. Conversely, a pay-as-you-go trust fund

for a relatively mature industry would involve successive investments which could be justified only at lower and lower discount rates for future benefits. The essential problem with any trust fund, therefore, is that it simply extrapolates the past into the future.

This analysis cannot be applied directly to the Federal Highway Trust Fund, because the proceeds from this fund are used as a supplement to the larger funds already available to states and localities for the specific purpose of financing construction of the Interstate Highway System. Upon completion of this system, however, the incompatibility of a pay-as-you-go trust fund with the whole idea of appropriate rates of discount for future benefits will have to be faced.

5. Money prices and shadow prices; user charges and tolls.

A benefit is a benefit, whether it is charged for or not. But the "benefit" numerator in benefit-cost calculations may assume very different values depending on the presence or absence of a specific charge for the service enjoyed. A "user charge" may also take the form of a specific charge for a specific service, in which case it might properly also be called a "toll"; or it may represent a general charge for the use of the service in general.

Neither the distinction between money prices and shadow prices nor the distinction between user charges and tolls is peculiar to charging for transportation. Moreover, neither distinction seems to have any direct relevance to the problem of a proper rate of discount for use in converting future into present values. But there are substantial indirect connections between these concepts and both transportation and discounting. The world of transportation not only involves a mixture of public and private enterprise. It also involves a jumble of real prices and shadow prices, of general user charges and specific tolls. To revert to the railroad illustration: if all railroads were publicly-owned, the case for charging rates only sufficient to cover operating costs would be better than for other forms of transport; for, as long as the rail system contains excess capacity, extra use does not entail the costs of additional investment. Elimination of all spreads between rates and operating costs would enlarge total benefits derived from the use of railroads as well as the problems of covering railroad financial charges. Conversely, the land and air space used by the most convenient large airport in a metropolitan area may be vastly preferable to those available anywhere else in the area; and expansion of the airport may be possible only with sharply-rising costs. In crowded metropolitan areas, even a public body might expect to earn large economic rent on its most favorably-situated facilities. In terms of the relationship of pricing,

benefits, and investment policy, the combination of private ownership of excess capacity and public ownership of very scarce resources may produce results which are far from perfect.

Even if the type of ownership is matched against the presence or absence of excess capacity at zero prices, there remains the fact that what matters is not the appropriate or proper discount rate, as such, but the appropriate or proper net relationship of discounted benefits and costs expressed as present values. The benefits to be derived from use of a facility at a zero price will normally exceed those to be anticipated from future use at a positive price unless special problems on congestion are created as total use increases. Once congestion appears, the whole level and distribution of benefits will be affected by the use of specific tolls, to control use of facilities, on the one hand, or by the use of general user charges, on the other hand.

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REMARKS OF M. CECIL MACKEY, ASSISTANT SECRETARY OF TRANSPORTATION FOR POLICY DEVELOPMENT, PREPARED FOR DELIVERY BEFORE THE ANNUAL MEETING OF THE AMERICAN BAR ASSOCIATION, PHILADELPHIA, PENNSYLVANIA, AUGUST 7, 1968

As lawyers we are, by the very nature of our profession, social reformers -- do-gooders if you prefer -- for we are always tinkering with existing legal arrangements so as to better adapt our jurisprudential system to the changing needs of a highly dynamic social order. We are, of course, not reformers in some grand ideological or theoretical sense. Quite to the contrary -- we tend, as a group, to be intensely practical men, accustomed to facing problems objectively and devising improved ways of coping with them. Mr. Justice Holmes put his emphasis on "experience," but the life of the law has been the dynamic, if not dramatic, accommodation of rules and institutions to the changing needs of our civilization.

It is in this conceptual framework that I want to talk with you today about automobile insurance -- or, more specifically, the matter of motor vehicle accident compensation. Here we have what I think is one of our most serious, most complex social problems -- one that demands the close attention of everyone, especially the bar. The basic issue is very simple to state: Do we have as just, as efficient a system as we can devise for providing compensation to those who sustain losses as a result of motor

vehicle accidents? If we do not -- if the present system is, as so many commentators say, inadequate to the challenge -- how do we create a better system? Those are the questions before us -- the questions that are at last beginning now to receive the formal scrutiny of the Government and of the bar.

Let me try to put the problem in perspective. In the truest sense, we have become an automotive society -- a nation literally on wheels. Today in the United States there are approximately 100 million vehicles being operated about a trillion miles a year by more than 100 million licensed drivers. This enormous number of trucks, buses, and automobiles are involved in an estimated 10 million accidents annually. Those accidents take the lives of more than 50,000 people a year and injure more than 4 million. The consequent economic losses, putting to one side the matter of psychological trauma, are staggering. Injuries alone result in medical expenses of at least $600 million a year. Wage and compensation losses come to another $2.5 billion. Property damage and loss add an additional $3-1/4 billion. And these figures, let me emphasize, are only the top layer. More than $3 billion a year is spent by the insurance companies simply for the processing of claims and related administration. Additional hundreds of millions of dollars in tax funds are spent for the operation of the courts and the police traffic services for handling auto accidents and their aftermath.

While the scale of auto accidents is large today, it is unfortunately almost certain to reach even greater proportions in the future. At recent rates of purchase, there could be nearly 300 million vehicles on the nation's streets by the end of the century. The number of drivers could double. The traffic and motor vehicle safety programs established by Congress in 1966 and signed into law by President Johnson offer very heartening evidence that we may be able to reduce significantly the number of deaths and the severity of injuries sustained through auto accidents. Still, it is not yet clear that auto accident deaths and injuries in absolute terms will not continue to rise. These are facts -- the cold, hard prospects we must fully accept in thinking about the motor vehicle accident compensation problem.

Auto-related deaths, serious injuries, and losses have already assumed a scale that almost strains the imagination, but how good is the system we have for providing compensation? The ingredients of the "system" are well known. They rest on a combination of the traditional rules of tort liability, backstopped by insurance. Those who sustain losses must either shoulder the burden themselves or attempt to shift it to someone whose fault can be defined. Proof of fault, often determined with finality

only in court, is a prelude to recovery, with insurance providing contingency insulation for the "wrongdoer."

How, in fact, is the existing tort-insurance system performing? While opinions differ on some details, the general impression of most analysts is that the system is performing poorly and inefficiently, getting worse rather than better. Some feel that it is under such severe stress that it is actually in danger of collapse. Consider these highlights: auto insurance premiums have for years been soaring steeply and steadily. Net premiums advanced from $2.6 billion in 1950 to more than $9 billion in 1966. In two decades the premium on a typical insurance policy has almost tripled -- in some areas it has increased much more than that. Since 1958 insurance premiums have increased 2 and 1/2 times faster than the consumer price index, a rate of inflation that simply would not be tolerated if it characterized the economy as a whole.

Despite the explosively rising cost of auto insurance, the distribution of compensation has become the focus of increasingly sharp criticism. For one thing, less than half of the dollars collected in insurance premiums are paid out to the intended beneficiaries. Fifty cents of the premium dollar, thus, disappears in administration and other costs. This is really rather striking, and in a way puzzling. Compare it with the situation in social security or Blue Cross, where 90 cents or more of every dollar paid-in is paid-out to recipients.

Not only is less than half of premium income paid out to those who have sustained losses, but the distribution of compensation is uneven and frequently inequitable. Perhaps as many as 50 per cent of all those who experience losses in auto accidents receive nothing at all in the form of tort-related compensation. Of the rest, some receive more than the amount of their out-of-pocket losses, some receive significantly less. The exact pattern appears to depend upon a host of random factors, ranging from the jurisdiction in which an accident occurs to the social status of the victim.

What's more, although auto accident victims get only 50 cents of every premium dollar, by the time they pay their attorney fees they receive substantially less than even this would imply. Of the 50 cents paid out to claimants, as much as a third is drained off for legal expenses. Moreover, the impact of legal fees and related expenses tends to fall more heavily on the victims of the more serious accidents -- those who typically recover smaller amounts relative to their losses anyway. Of course, lawyers respond to these facts by saying that if it were not for their services and

skills, accident victims would wind up with still less. That may well be true, but if it is, it constitutes perhaps the most severe possible indictment of the present tort-insurance system as a means for dealing with the human losses sustained in auto accidents.

In the allocation of compensation, the process of settlement is generally regarded as lethargic, cumbersome, and bureaucratic. The necessity of frequent recourse to litigation not only makes the plight of the victim more difficult and costly but places the courts in the position of becoming foils for the bargainers. Regular invocation of the adversary process slows the pace of settlement at the same time it burdens the courts with the job of resolving many random factual disputes. Laymen understandably become annoyed with a tortured process which often seems designed to reward only the rich and the persistent.

From another standpoint, consider the situation as it pertains to the auto insurance policyholder. His complaints are at least as serious as those of accident victims. Premiums have been rising steeply: that is one common grievance, but it is only one among many. Increasingly, many people are having difficulty getting insurance at all, and when they are able to secure coverage, frequently they have little assurance that they will have it for any meaningful period of time. The number of policy applications that are rejected and the number of cancellations are rising steadily. If one is white, middle-aged, middle-class and suburban, has a good driving record, no young children and happens to have the "right" kind of a job, insurance will probably be available -- at least initially. But if one is young, or old, or black, lives in the center of a major city, has the "wrong" kind of a job -- which may include being a member of the clergy -- or happens to have been divorced, it's a different story. Insurance is hard to get or keep. This, let me emphasize, is without reference to an individual's specific driving record. An accident in the past, even one which was not the applicant's fault, can make a bad situation worse. Often, when insurance can be obtained by motorists in these large groups, recourse must be made to so-called high-risk companies -- companies that may in fact be better described as high-premium than high-risk. As the Pennsylvania State Insurance Commissioner, David Maxwell, said recently, buying a car only takes money -- but getting auto insurance is "more like joining a country club."

In many ways the automobile insurance issue epitomizes today's popular demand that government intercede in the traditional economics sphere wherever necessary to redress an imbalance between private power and individual human welfare. In thinking about the recent instances of civil

unrest, one common cause for complaint is man's feeling that he is caught in a mechanistic system of which he does not approve and yet which he is unable to change. For years most people accepted this condition as inevitable and resigned themselves to it. Today that mood of passivity is being replaced by a new tone of popular activism. People to an unprecedented degree expect -- indeed demand -- that their elected officials will respond creatively to their protests. Whether it be a university official, a city council, a Congress or a President, the constituency is now insisting upon both sincere consideration of its complaints and a voice in seeking a solution. They expect their institutions and their administrative procedures to facilitate, not retard, the accomplishment of social objectives. This attitude applies to the auto insurance system as much as it does to Civil Rights and rightly so, for the facts hardly portray a system that is well-adapted to the problem or is as good as we can develop.

Understandably, many people have reached the conclusion that the present tort-insurance system is inequitable, often capricious, inefficient, cumbersome, and simply ill-fitted to an auto-oriented society such as ours. If you follow Bob Dylan's advice and "tell it like it is," you must agree that the arrangement we now have for providing compensation for motor vehicle accident victims is a mess. It pleases practically no one, aside, perhaps from those who have a substantial economic stake in the status quo. But status quo-ism, though it often has superficial appeal, usually proves to work in no one's long-term interest. Our job is to take a hard look at the total problem and come up with a better approach.

Admittedly, the issues are complex, interpretations not easily made, alternative solutions neither free of ambiguity nor free of challenge. Recognizing this, President Johnson's request to Congress earlier this year for authorization of a detailed study of the entire motor vehicle accident compensation problem constituted a sound, responsible answer to what is a crucial social problem. His request has now been translated into law and the Secretary of Transportation has been charged with the duty of carrying out such a study and presenting it, with his recommendations for reform, to the Congress early in 1970.

In conducting this inquiry we in the Department start with no neatly-defined notion of where we expect to come out. We have no panacea. We are, nonetheless, convinced that the present system is seriously deficient and that the symptoms, to which I have alluded, reflect deep underlying disorders. Many details must be explored carefully to find out the precise dimensions and character of the malady and to delineate more sharply

the symptoms themselves. We plan to probe deeply and we will not hesitate to recommend whatever reforms appear to be warranted by the facts.

The demand is for a system that is efficient -- one that is just and equitable -- one that has the capacity for continued growth in a nation where motor vehicles play so large a role. Fundamental changes in the system we now have are inevitable. These changes will vitally affect the courts, the plaintiffs and defense bar, and the insurance industry.

Lawyers quite obviously have a large stake in any improved system that might be devised for providing motor vehicle accident compensation. Let us hope, however, that we have learned something from our colleagues, the doctors, from the drug companies, and from the automobile manufacturers -- all of whom resisted reform, only to find themselves engulfed by a wave of public indignation. The historic role of the bar is one of dealing with problems in a responsible practical way. That is precisely what is needed in creating a better means of providing compensation to the victims of motor vehicle accidents.

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REMARKS OF M. CECIL MACKEY, ASSISTANT SECRETARY OF TRANSPORTATION FOR POLICY DEVELOPMENT, PREPARED FOR DELIVERY BEFORE THE NATIONAL ASSOCIATION OF WOMEN HIGHWAY SAFETY LEADERS, 2ND ANNUAL NATIONAL HIGHWAY SAFETY CONFERENCE, SHOREHAM HOTEL, WASHINGTON, D.C., MONDAY, SEPTEMBER 30, 1968, 8:00 A.M.

No man I have ever known has been able to accept an invitation to speak to an all-female audience without some trepidation. This, in all probability, is nothing more than a reflection of basic male cowardice. But in some measure it also reflects the understanding all men instinctively have of the awe-inspiring role of women in our society and in our lives. A group of women is in itself more than enough challenge for any man. A group of women who are all national leaders in highway safety, recognized in their own right, is almost too formidable for any of us.

But even more, you, as nationally prominent women are an elite; leaders among a group that:

--- makes up 51 percent of our total population;

--- owns 50 percent of our real estate and 54 percent of the common stock;

--- accounts for 80 to 90 percent of the Nation's consumer spending; and

--- furnishes the Nation with 100 percent of its mothers.

As Mary Roebling, Chairman of the Board of Trenton Trust Co., said, the U.S. is truly an economic matriarchy.

In checking the record in preparation for this morning's breakfast, I found out a few other interesting things about American women. The facts bear out a comment made by the Women's Bureau of the Department of Labor that "a revolution is occurring today in the life patterns of women and girls." I'd like to pass on to you some of the evidence describing the nature of this revolution. The American woman today can expect to live longer, be better educated, participate more in our labor force, play a larger role in technical and professional areas and influence matters of public policy far more than ever before in our history.

Another interesting bit of information I found while going through the scholarly studies was that a significantly larger percentage of women between 18-24 and 55-64 like fast driving than was true for women in age groups from 25-54. I should add that the particular survey which produced this information did not get into the question of women's preferences by age group for fast men.

Tonight Secretary Boyd is scheduled to talk with you about safety. While I am vitally concerned with safety -- as part of my DOT responsibilities and as an individual -- I will defer to him on the subject. What I'd like to talk about this morning is the future of transportation -- and the way we at DOT see that future.

First, I want to consider what the future may be like if we go on doing things essentially the way we have done them in the past. Then I would like to consider what the future can be like -- what we can make it if we face up to some hard decisions; exploit the technological potential at hand; and spend the money that is always required to go first class.

To begin, let's look at our present transportation system. It is quite literally an unprecedented network of waterways, highways, railroads and airways. We have more than 3 million miles of paved streets and roads and nearly 95 million vehicles using them. 200,000 miles of railroad serve all sections of the country. There are 25,000 miles of commercially navigable waterways. Our airlines serve 660 cities and fly more than a billion miles a year.

There was a time -- not very long ago -- when we believed it had effectively linked all of our 200 million people together. Many of us thought that in the process of transforming our Nation from a narrow coastal economy into a continental whole we had virtually ended economic, social, political and cultural isolation. Unfortunately we were wrong. The problems of our cities we are so keenly aware of; the problems of the ghettoes; the

problems of the rural poor -- all demonstrate only too clearly that despite our remarkable transportation advances we have not been able to break the cycle of poverty that entraps far too many Americans nor open the doors of opportunity to all of our citizens.

While it would be incorrect to attribute the problems of the poor, the isolation of the ghetto dweller, or lack of employment opportunity solely to inadequacies in the transportation system, the character of transportation is an important factor in each of these areas -- and what is more important, new concepts in transportation offer some heretofore unexplored avenues for helping to solve these critical problems. Any meaningful look at the future of transportation must take full account of its impact as a social force -- a force which is instrumental in shaping the kind of lives we will lead and the character of our cities and communities.

We have become increasingly aware that our transportation system, extensive though it is, has not provided adequate mobility for the large segment of our population who have handicaps of one kind or another. All too often, for the 30 million people who are hindered in travel by physical handicaps or advancing age such transportation as may be available is neither safe, convenient nor economical. But what is worse is that in far too many cases transportation, for all practical purposes, is non-existent for the handicapped. From the standpoint of design, scheduling, and access, the person with a handicap is the forgotten man or woman in transportation.

Any view of the future must add these considerations to the more apparent problems we have come to associate with our existing transportation system to get a full picture.

First, there is urban congestion. Every metropolitan area in the U.S. has a congestion problem. The traffic jam for many areas is no longer confined to a narrow span of commuting hours nor is it limited to working days. For many of our urban areas, cities and suburbs alike, the traffic jam has become a way of life.

Are things much better in the air? Frequently not. Air travel -- until recently transportation's premiere service -- has deteriorated substantially. More and more of our major airports are straining at capacity. Delays are commonplace and congestion occurs at almost every step of an air trip, beginning with our efforts to reach the airport and continuing through stops at the ticket and baggage counters.

The passenger train -- once a reasonable alternative to the airplane and the automobile for intercity travel -- is hardly a factor at all today and in its present form seems well on its way to extinction.

The environmental impact of transportation deserves close attention too. Our transportation system too often creates an environment which is noisy, dirty and unattractive. Aircraft noise invades our peace and quiet. Highway noise is an ever-increasing problem. Automobiles foul the air we breathe. Jet aircraft dump tons of pollutants on us every day. Pleasure boats pollute our lakes and streams. Freeways cut wide swaths through our cities and too often split neighborhoods and do irreparable harm to historic and aesthetic values.

Confronted with these problems in the present system, it seems fair to ask, What will the future be like? What kind of relief can we expect? When will it come? Sadly, I have to tell you that it appears inevitable that things will get worse before they get better. This applies to almost every area. The growth which we anticipate in all parts of the economy will, by itself, add tremendous strains to our already overburdened system and forestall any immediate relief.

Our gross national product is about $850 billion today. By 1975 it will be at least one trillion dollars and by the year 2000 it will be $3.5 trillion.

Our population, already more than 200 million, will go to 220 million in 1975 and exceed 320 million by 2000.

The percentage of our population living in urban areas has been increasing steadily. It is now about 70 percent. By 1975 it will be 78 percent. By the end of the century it will be approaching 85 percent.

A 4-day work week will probably be typical by the end of the century, and personal disposable incomes could well be three times present levels. Our highly urbanized population will find itself with more time on its hands and more money in its pocketbook. While it is impossible to know exactly how people will use this time and money, they will undoubtedly travel far more on the average and place greater and greater demands on all parts of our transportation system.

Just to give you some feel for the kind of impact this growth will have, we expect that by about 1975 one million Americans will be boarding commercial airlines every day. We can't make an accurate forecast today of what that number will be by the year 2000 but we certainly expect it will be several million.

Let's come back to the surface travel again for another example of what may be in store for us. If the historic pattern the American public has followed in acquiring motor vehicles is projected to 1975, it indicates about 125 million vehicles on the roads. If these same trends are projected

to the year 2000, we see the prospect of about one vehicle per person for the entire population --something in the neighborhood of 325 million motor vehicles.

These are staggering projections and the implications are equally staggering. Perhaps the most immediate and most natural reaction is to say that they are impossible, that we know intuitively that there will not be that many cars, trucks and buses produced, sold or driven by the American people -- even in the year 2000. Our reaction is to say that there will simply not be enough highways to drive them on nor places to park them -- that the traffic jams they would create would be absolutely intolerable. The thought of 325 million motor vehicles in place of the present 95 million tends to carry with it such an image of adverse environmental impact that we recoil in horror. And the outlook does not become any more sanguine when we reflect on the astronomical cost of the highways 325 million vehicles would need.

Yet before we can assume that the trends which give us these figures will be reversed, we have to ask ourselves what is going to happen to change the trends. If we are not going to follow the simple course of paving over larger and larger portions of the country, trying to meet a seemingly unlimited demand for concrete, what <u>are</u> we going to do? Should we, for example, consider limiting the production of automobiles? Or would we consider restricting the individual's freedom of choice in purchasing automobiles? Will we limit the individual's freedom of choice to drive where he chooses when he chooses? What about raising the cost of driving -- through tolls, much higher parking fees, or additional taxes? Should we adopt a national policy intended to shift freight from trucks to trains to help relieve congestion on the highways? Will we change tax laws and zoning ordinances which tend to encourage urban sprawl and generate the demand for motor vehicle usage which grows so steadily? Or will we just let congestion and inconvenience serve as a self-regulating mechanism? As you can see, these are not easy or pleasant questions -- but they are <u>very</u> real.

I was contemplating some of these problems earlier this summer and decided that the time had come for some personal action -- something I could do to help solve my own transportation problems -- and incidentally to put some of the fun back into going places. To solve my surface problems I bought a motorcycle -- I now ride it to work; my wife takes it to the shopping center. We both enjoy it and we help reduce congestion and ease parking. You might want to consider this yourself. If you have a junior high school daughter, it will help your credibility tremendously!

I've also adopted a new form of air travel. It's safe, quiet, non-polluting and more fun than you could ever imagine. I've taken up free ballooning. There is literally nothing like it and I am convinced it's the wave of the future. Here too my wife is a fellow enthusiast for which I'm duly thankful. After all, it's a lot less fun being in a basket when you're all alone. We both recommend it -- and with only about 75 balloons in the country and maybe 200 qualified aeronauts to fly them, there's plenty of room for newcomers.

But just in case you and all the other 200 million Americans can't solve their problems in this pleasant way, DOT will keep working on other solutions too.

The transportation system which we now have and the problems which go with it are largely the result of uncoordinated growth and fragmented responsibility for planning the future. We have tried to build facilities -- highways, airports, railroads, waterways -- to meet whatever demand for transportation services developed. While there has been little overall coordination of transportation planning, there has been even less done to relate transportation to land use planning and the accomplishment of community goals and values.

But times have changed. The very size of our population, the complexity of our technology, the magnitude of the financial costs, the social problems that cry out for attention -- all make it impossible to think of allowing unplanned growth, unconstrained demand and a lack of social and aesthetic awareness to be the order of the day for transportation.

In a very real sense the creation of the Department of Transportation was a recognition of the fact that we believe our transportation system can be made closer to our heart's desire -- and that a focus of responsibility at the Federal level was essential to the accomplishment of this goal. The Department of Transportation was created to facilitate and develop improved and coordinated transportation. It has the job of stimulating technological advances in transportation. In doing these things, the Department was told by the Congress that great importance should be placed on the preservation of the natural beauty of our countryside, of parks and recreation lands, and historic values. We know also that transportation must serve the poor, the disadvantaged, the unemployed, and the handicapped -- and that the transportation system must support economic development and serve accepted social goals.

These may sound to some of you like dry, technical, bureaucratic phrases. Don't be fooled -- they have within them the seeds of a revolution -- a revolution in the way the American people view their own transportation requirements and the way they expect those requirements to be met.

We are a rich country. We have vast resources. In transportation we have a great deal of what economists refer to as social capital. Our system provides the basic services but we are far from satisfied. From a technical standpoint we can and will improve it with such things as:

Bimodal vehicles. Vehicles designed to run on fixed tracks, either automated highways or rails, for certain parts of a journey but also designed to operate independently on city streets for other parts of a trip.

Vertical takeoff and landing aircraft -- ones that are safe, quiet and economical. These airplanes which will operate between city centers and to and from outlying areas around our cities should be commonplace in the not too distant future.

Non-polluting propulsion systems. There is already a lot of research and experimentation here. Steam cars, electric cars, cars powered by so-called hybrid propulsion systems, all are realistic possibilities. The propulsion system of the future may well be something more closely akin to the present internal combustion engine but with the polluting effects reduced to near zero.

Mass transportation systems. Virtually every metropolitan area of any size will, of necessity, have extensive mass transportation facilities. Some will resemble our present rail systems; others will rely on something similar to our present buses. Some may use more exotic technological advances such as tracked air cushion vehicles with linear induction motors.

Quieter aircraft. With additional research it should be possible to produce significantly quieter engines for the airplanes that will be the mainstay of long-haul intercity passenger travel. Relief is necessary even from present noise levels.

High speed trains. A new generation of high performance rail systems, especially for trips in the 300-mile range, will probably be inevitable.

It is clearly possible for us to have the kind of transportation future we would all like. We can have transportation that is safe, fast, convenient, economical and stylish. We can have a system which serves the various needs of all our citizens. But we must be willing to spend the money. And, equally important, we must be willing to plan ahead and change many of our old habits and attitudes.

While I'm not certain just exactly what this system of the future will look like, I am certain of one thing. It will look very much the way the women want it to look.

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