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THE INDUSTRIAL REORGANIZATION ACT

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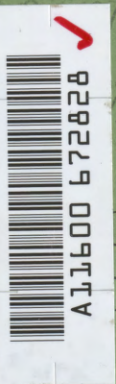

HEARINGS

BEFORE THE

SUBCOMMITTEE ON ANTITRUST AND MONOPOLY

OF THE

COMMITTEE ON THE JUDICIARY UNITED STATES SENATE

NINETY-THIRD CONGRESS

SECOND SESSION

ON

S. 1167

PART 3

Ground Transportation Industries

FEBRUARY 26, 27, 28; AND MARCH 1, 1974

Printed for the use of the Committee on the Judiciary

(Pursuant to S. Res. 255, Sec. 4)

AUTHENTICATED
U.S. GOVERNMENT
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THE INDUSTRIAL REORGANIZATION ACT (S. 1167)

(Ground Transportation Industries)

TUESDAY, FEBRUARY 26, 1974

U.S. SENATE,
SUBCOMMITTEE ON ANTITRUST AND MONOPOLY
OF THE COMMITTEE ON THE JUDICIARY,
Washington, D.C.

The subcommittee met at 10 a.m., in room 2228, Dirksen Senate Office Building, Hon. Philip A. Hart (chairman of the subcommittee) presiding.

Present: Senators Philip A. Hart, Edward M. Kennedy, John V. Tunney, and Roman L. Hruska.

Staff Present: Howard E. O'Leary, Jr., chief counsel; Patricia Y. Bario, editorial director; Janice C. Williams, chief clerk; Peter N. Chumbris, minority chief counsel; and Charles E. Kern II, minority counsel.

Senator HART. The committee will be in order. When I first introduced the Industrial Reorganization Act at the end of 1972 I knew, of course, that one day the Senator from Michigan would have to open hearings such as we are doing this morning on the automobile industry.

There was no way of knowing then the magnitude of the malaise the industry and, in turn, the Nation would be suffering when this day arrived but here we are confronting an industry, which we are told is responsible directly or indirectly for a sixth of the Nation's employment, deeply troubled.

It is anticipated that sales will be off about 20 percent this year. That means about 2 million units. More than 100,000 automobile workers are laid off indefinitely.

Consumers can't buy all the gas they need for their cars and find there is no reasonable alternative means of transportation.

The balance of payments problem promises to worsen as more consumers find the import market is a good supplier of small, fuel conscious cars.

Now, some suggest that this is a lousy time to begin these hearings. That seems a bit like suggesting the doctor not run tests to determine the exact nature of the illness because the patient is feeling poorly.

Let's see what we know as we begin. First, this is one of the most concentrated industries in a Nation of concentrated industries.

Three companies make more than 90 percent of all autos. One of these three makes 90 percent of all bus engines, 65 or 70 percent of all city buses; and 80 percent of all locomotives.

Second, this industry today is demonstrating some of the symptoms economists have lectured us about for years as cropping up in uncompetitively structured industries: Inflexibility, reluctance to adopt new technology, sort of a status quo syndrome.

Third, some of the domestic companies today are finding they aren't supplying the product consumers want: The small car. The fourth of these companies—and smallest with only 3 percent of the market—finds its sales up 27 percent.

In all of those lectures over the years, economists have told us that if there were less concentration of power in this industry it wouldn't have these types of problems. They tell us further we would have the good side of the same coin: more technological improvements, greater variety of product choice, anticipation of upcoming consumer demands. From a competitive structure, we are told, would flow more stable employment, higher stock values, better products capable of competing more successfully with imports.

In fact, they go so far as to promise that we would most likely be an exporting Nation in autos.

Now, so far this has been a battle among the theorists.

No one has taken the time to flash out the general idea of restructuring by telling us just how many pieces there should be ideally, which plant goes where and what the impact would be on workers, the stock market, the economy in general.

During this hearing we will attempt to do that. We will hear three rather detailed plans. In addition, we will take a look at how things are in other countries where they do have competitively structured auto and mass transit industries.

No one is suggesting that the subcommittee will come up with a perfect solution, but we do hope to begin building a record which will come up with an answer to one question: Is it feasible and practical to restructure the auto and ground transportation industries so things will be better for workers, consumers, stockholders and the economy?

Senator Hruska?

Senator HRUSKA. At this time, I should simply like to observe that this is not the first time we have sought to operate upon a large and very important segment of the industry and the economy of this Nation.

This history of trying to analyze and prescribe for the motor industry in America goes back almost 40 years. It was the subject of a Department of Temporary National Economic Council report.

It was the subject of hearings under Senator O'Mahoney at a later time, and in more recent times, about 15 years ago, perhaps, 12, it was the subject of the late and lamented Senator Kefauver when he was the chairman of the Subcommittee on Antitrust and Monopoly.

Somehow or another, no results ever flowed from those efforts. The Antitrust Division of the Department of Justice and the Federal Trade Commission have tried to handle these reported ills and purported ills of this automotive industry, also without a great deal of result.

I don't know that that is an argument for not trying again. As the story unfolds I think we will know more and more clearly as time

goes on why it was that no results did flow from previous attempts.

That will be when we do depart from the field of theory and apply some of the stern lessons of a free enterprise system with an economic structure that is fairly complicated and interrelated, not only within our own country but with factors and with items that arise from outside of the country, and respond to that.

So, we hope that as time goes on we will build a balanced record here that will contain all of the facts and all of the aspects; and I know that under the leadership of our chairman that opportunity will be given.

Senator HART. Senator Kennedy?

Senator KENNEDY. Thank you. I, first of all, want to extend a sincere word of congratulations to you, Mr. Chairman, for conducting the extensive hearings that you are having on the Industrial Reorganization Act and for the courage you are showing by focusing on an industry which is as important as the automobile industry in your own State. You have certainly never shirked from meeting some of the difficult and challenging questions which come before us, both before this committee and the Senate, and you are reflecting, I think, the kind of statesmanship which has brought you such respect from all the Members of the Senate.

Second, I suppose there are many Americans these days, I am sure at this very moment, who are waiting in long gas lines trying to fill the tanks of their automobiles and trying to acquire more compact models, wondering why they are denied the opportunity to do so; wondering why they are paying ever-increasing costs for gasoline and small cars; and I suppose it crosses their minds to question why there aren't adequate alternative means of transportation available to them and to millions of other Americans.

This is an issue of vital concern to the older Americans who live in many of our industrial cities and who lack the opportunities to move around safely, efficiently, and cheaply; to the young who are unable to purchase vehicles or afford the insurance costs; and to the disabled, who find auto travel difficult and public transit unavailable.

The public is wondering whatever happened to the steam engine or electric car. What happened to mass transit?

Are all the problems they are facing today merely the result of an Arab oil embargo? Or shouldn't we, in a country that is unsurpassed in technological expertise, have been able to develop alternative means of transportation which would contribute to the safety, health, and the well-being of our citizens as well as our economy?

And, so, I think these hearings are particularly appropriate at this time.

Back in 1962 the then Attorney General Robert Kennedy brought a suit against General Motors on the issue of monopolizing bus transportation. This suit was settled in 1965 with a consent decree.

In 1972 I wrote the Justice Department posing the questions and implications raised in a detailed memorandum prepared for me by Messrs. Bradford Snell and Theodore Kheel. This memo asserted that General Motors was in violation of the antitrust laws and the 1965 consent decree because of its monopolization of the bus and locomotive transport industry.

It has taken 2 years to get a response from the Justice Department, but let me say that the response that I received last week—which I would like to make a part of the record—is, I think, encouraging.

One sentence that I will read at this time says:

> Accordingly, our legal staff is presently investigating to determine whether a reopening of the decree in the *General Motors Bus* case (*U.S.* v. *General Motors Corp.*, 1965 CCH Trade Cases, 9171, 624) would be appropriate and if so, whether relief might be obtained under the terms of that decree.

So the mere announcement of these hearings has already had some beneficial effect. We have the responsibility, as the Antitrust Subcommittee, to work with the Justice Department and that particular division of the Justice Department, to insure that.

I would just say finally that the legislation which the chairman has proposed recognizes the extraordinary complexity of the growth and structure of American industry. Its underlying theme is basic to our country's economic health and to our efforts to restore, or retain, the elements of competition which are so essential to a free and open society and economy.

I don't believe this approach is in any way punitive or restrictive. It recognizes the challenge which is posed constantly to judges all over this country, of trying to enforce a law which was passed too many years ago, and of having to take into account the extraordinary changes which have taken place in terms of our own industrial growth. I think that these hearings are extremely valuable to test antitrust measures passed several decades ago against the existing concentrations of economic power that we are facing in this country.

Senator HART. Thank you very much, Senator Kennedy.

[A subsequent letter to the Justice Department and their response follows:]

U.S. SENATE,
COMMITTEE ON THE JUDICIARY,
SUBCOMMITTEE ON ADMINISTRATIVE PRACTICE AND PROCEDURE,
Washington, D.C., January 25, 1974.

Hon. WILLIAM B. SAXBE,
Attorney General, Department of Justice,
Washington, D.C.

DEAR MR. ATTORNEY GENERAL: On October 11, 1972, I transmitted to Attorney General Kleindienst a memorandum prepared for me by Messrs. Bradford Snell and Theodore Kheel concerning the activities of General Motors Corporation in the bus and commuter rail areas, which alleged that GM has engaged in acts which violate the federal antitrust laws. In my letter I indicated my belief that the memorandum had substantial merit and deserved the Department's consideration. On November 13, 1972, Deputy Attorney General Ralph Erickson acknowledged receipt of my letter and the attached memorandum and responded that the Department "will give" the allegations presented therein "our most serious and prompt attention."

The Senate Subcommittee on Antitrust and Monopoly, of which I am a member, is planning hearings late next month into the effects of concentration in the automobile and mass transit vehicle industries. In conjunction with those hearings, in response to my earlier correspondence and the Snell-Kheel memorandum, and in relation to my continuing interest in the practices and procedures of the Antitrust Division, I would appreciate having a current report on the Division's activities and findings on this matter. It would also be useful to have any additional comments or suggestions on this general subject which may be pertinent to our legislative efforts in this field.

Sincerely,

EDWARD M. KENNEDY.

FEBRUARY 22, 1974.

Hon. EDWARD M. KENNEDY,
U.S. Senate,
Washington, D.C.

DEAR SENATOR KENNEDY: This is in reply to your letter of January 25, 1974, requesting our views on the memorandum prepared by Messrs. Snell and Kheel concerning alleged violations of the antitrust laws by General Motors Corporation.

The Snell-Kheel memorandum asserts that General Motors Corporation's market position in the production of automobiles, busses and locomotives presents a serious conflict of interest and a continuing violation by GMC of the federal antitrust laws. Basically, the memorandum suggests that GMC be required to divest its bus and locomotive divisions or, in the alternative, to impose a ceiling upon GMC's production of automobiles.

We have carefully considered each of the points raised in the Snell-Kheel memorandum. While we question the proposition that the decline in locomotives and electric streetcar production over the past years may be traced directly to violations of the federal antitrust laws, we are, of course, concerned over the relatively high level of concentration which exists in the various surface transportation markets. Accordingly, our legal staff is presently investigating to determine whether a reopening of the decree in the General Motors Bus Case (*United States* v. *General Motors Corp.*, 1965 CCH Trade Cases, ¶71,624) would be appropriate, and if so, whether meaningful relief might be obtained under the terms of that decree.

The Antitrust Division's Office of Economic Policy is also studying the broader issues which may exist with respect to competition in the overall interindustry metropolitan transportation market.

Please be assured of our continuing interest and attention to these important matters.

Sincerely yours,

THOMAS E. KAUPER,
Assistant Attorney General, Antitrust Division.

Senator TUNNEY. Mr. Chairman, the Subcommittee on Antitrust and Monopoly is embarking today on a most significant set of hearings for California and the Nation. Our country has developed under a free enterprise economic system, one which traditionally has allowed maximum incentive for innovation and economic expansion. Industrial competiton is the basis for our free enterprise economy, and is the instrument which insures consumer primacy over the market. Too great a concentration of economic power in the hands of one company, or a small group of companies vertically integrated, can, however, destroy the competitive basis of the economy; thus insuring market primacy over the consumer.

Thus, it was in the early 1890's that the bases for our present antitrust laws were first framed. With the development of these laws came a concerted effort to preserve freedom in the economic marketplace, to insure honest competition, and to encourage dynamic innovation. And yet, today the pervasive power of the automobile monopoly is more appalling than any of the railroad combinations which were the impetus for the 1890 legislation.

As Chief Justice White stated more than 60 years ago, the evil to be combated by the antitrust laws is the "dread enhancement of prices." But beyond the problem of monopoly prices, we know that economic structures which restrain competition have far-reaching effects on the basic form of economic activity, which in turn have an equally serious impact upon our lives. I refer, of course, to the stifling effect on innovation within an industry, and the ability of

that industry to alter or prevent the development of competing industries and technologies. Nowhere are these deleterious effects of monopoly power more evident than in the area of ground transportation.

The American economy has become more and more dependent on the manufacture of automobiles, and automobile related products and services. Today, this area of commercial activity exhibits the classic structure of noncompetition: Complete dominance by three major firms, one of which controls 50 percent of the business sales. Integration upstream into components production and backstream into vehicle distribution is only one more manifestation of this noncompetitive structure.

Our present ground transportation system has over the past half century been heavily influenced by the plans and policies of the automobile industry. We will learn a great deal more about how this ubiquitous force has affected and continues to affect our lives as these hearings continue. One very specific area, which I have been concerned with for a long time, is the failure of the automobile industry to develop alternative forms of motive power to the internal combustion engine. Indeed, the development of pollution free electric and steam cars was further along 40 years ago than it is today. With no competition, and an immense financial stake in the machinery developed over the previous half century, the automobile industry has had no incentive to develop alternative forms of motive propulsion; which would provide not only more efficient transportation, but transportation without the present pollution problems of the internal combustion engine.

In the early part of this century there were many firms building automobiles and developing alternate technologies, particularly steam and electric propulsion systems. These firms were systematically driven out of business until by the 1940's only the Big Three auto manufacturers were seriously involved in automobile production and technology. And their technology was the internal combustion engine.

Any innovations by the Big Three auto makers have consisted primarily of Government-mandated safety modifications. In fact, there have been virtually no significant developments in auto technology since 1940—a simply staggering indictment of an industry in the most scientifically advanced nation in the world. As we know, alternate technology was developed and is currently being developed by the Germans and the Japanese.

The result of this failure of the American automobile industry to innovate has meant that basically we are locked into an anachronism, a vestige of the past, the internal combustion engine. This is the instrument primarily responsible for the pollution of our air; and yet we turn to the producers of that engine to develop a solution to the problems which it causes. I am certain that I need not detail the problems and long-run potential dangers with this approach.

Since the major auto makers have been unwilling to take any meaningful steps in the development of a better automobile engine, it is clear that the Government must spur the companies on to make a greater effort. That is why Senator Magnuson and I introduced the Automotive Research and Development Act which calls for a

Federal program to develop clean, quiet, durable, and energy efficient alternatives to the present internal combustion engine. This legislation calls for $140 million in grants and $200 million in loan guarantees to be spent in the next 4 years to accelerate these developments. We can no longer afford to have these polluting anachronisms fouling our air; and that is why this bill has been overwhelmingly passed by the Senate as part of S. 2176—the Fuels and Energy Conservation Act, which now awaits action in the House.

This tragic story of technological neglect, however, pales by comparison to the study of the distortion that has taken place in our ground transportaion; a perversion caused almost solely by the powerful automobile cartel. America today has developed a total reliance on the private, gas-powered, motor vehicle for its essential transportation functions. Cheaper and environmentally safer intercity and intracity rail or mass transit systems have been virtually eliminated, and are only now making a slow reappearance; and at enormous cost. Our dependence on the automobile has, more than any single factor, led to our present wasteful consumption of energy, and the resulting crisis we now face.

The effects of this tremendous aggregation of power in the ground transportation industry of our cities will be the subject of several of our coming witnesses, including two highly respected California mayors. Mayor Bradley of Los Angeles is scheduled to testify tomorrow, and I am especially pleased that the leadoff witness for this set of hearings is the mayor of the city of San Francisco, Hon. Joseph Alioto. His testimony will lead us right off in understanding the effect of the automobile companies' activities on urban transportation problems.

Senator HART. Let me make one additional item available for the record and then we will look forward to your introducing him. He is not only a distinguished mayor, but one of the Nation's top antitrust lawyers. It isn't often that you get that combination.

I would like to put into the record a letter to me from the vice president of General Motors, Robert F. Magill. It is dated February 21, and copies have been made available to all members of the subcommittee.

This letter expresses General Motors' concern about these hearings, in view of the fact that a case, the *City of New York* v. *General Motors*, is currently pending in the Federal District Court for the Southern District of New York.

The complaint in that case alleges an attempt to monopolize the manufacture and sale of city buses. It also alleges that GM's acquisition of the bus manufacturer, the Yellow Truck & Coach, back in 1925 violated section 7 of the Clayton Act. GM is justifiably concerned that these hearings may prejudice their right to a fair trial in that case.

They have urged that matters in litigation be excluded from consideration in the hearings that we are beginning.

This is a problem that confronts congressional committees quite often. Indeed, the General Motors letter quotes Congressman Celler and Congressman McCulloch during the House Judiciary Antitrust Subcommittee's investigation of conglomerates.

If my researchers are correct, I.T. & T. was a defendant in three Justice Department lawsuits and LTV in another during those hearings. And both parties were subject to scrutiny. The problem is inevitable when dealing with hearings on a bill such as the one before us, S. 1167. During our communications hearings earlier on this bill, we received testimony involving allegations of anticompetitive conduct by A.T. & T.

There are some 11 antitrust suits pending against A.T. & T. Another industry, where hearings are planned on this bill, is the electronic data processing industry.

As of last summer, the largest manufacturer in that field, IBM, was defending in a number of antitrust suits including a section 2 Sherman Act case brought by the Justice Department.

Another industry where this problem exists is energy. Recently the Trade Commission filed a complaint against eight of the major petroleum companies. It is reasonable to believe that all of these cases will be with us for anywhere from 3 to 10 years.

If this subcommittee were to defer from holding hearings because of pending litigation it would have the effect of foreclosing from consideration legislation, with respect to concentrated industries, for a long long time.

I feel Congress has a responsibility to determine what wise public policy should be with respect to this legislation and the industries with which it is concerned.

I do not believe that interest, relative to this, can be deferred pending the outcome of a case in the courts. Nonetheless, the subcommittee will do everything it can not to prejudice General Motors' rights in this regard.

We do not anticipate receiving testimony from witnesses on the ultimate facts in issue in the Southern District of New York. Nor do we anticipate any reference by any of the witnesses to that case.

Unquestionably, some overlap will occur by inference when witnesses make recommendations as to what wise public policy in this area should be. I regret that such is the case, but it seems inevitable if hearings are to proceed on this bill.

I would ask that the letter from Mr. Magill be made a part of the record.

[The document follows. Testimony resumes on p. 1782.]

GENERAL MOTORS CORP.,
Detroit, Mich., February 21, 1974.

HON. PHILIP A. HART,
U.S. SENATE,
Washington, D.C.

DEAR SENATOR HART: On January 9, 1974 Mr. Robert A. Nitschke, Assistant General Counsel, and I met informally with Howard E. O'Leary and other members of your Subcommittee Staff to urge that it is inappropriate for the Subcommittee to dwell on matters relating to the bus business of General Motors at the forthcoming hearings on the Industrial Reorganization Act. I am sure Mr. O'Leary has conveyed to you our strong feelings on the matter. Because of its importance, we feel compelled to state our objection formally to you as Chairman of the Subcommittee. Our objection is based on the fact that General Motors' conduct of its big busines is at issue in the case of *City of New York v. General Motors Corporation*, Docket No. 72 Civ. 4213 currently pending in the Federal District Court for the Southern District of New York.

Various Committees of Congress have recognized that it is improper to inquire into matters that are before the courts. Thus the hearings of the Anti-

trust Subcommittee, House Committee on the Judiciary, "Investigation of Conglomerate Corporations," Part 3, 91st Cong., 2d Sess., pp. 1-3 (1970) contain the following statements:

Congressman Celler:

"Although the subcommittee, in keeping with the legislative purpose of this investigation, would have the power to examine in detail the mergers (of ITT) that have been challenged by the Department of Justice, the subcommittee does not intend to do so. The subcommittee intends, on the contrary, to conduct this investigation in such a manner as to insulate to the maximum extent practicable the particular transactions that have been challenged by the United States in these cases. . . . this investigation is not needed for the purpose of analysis of ITT's growth as a conglomerate. In the interest of fairness to both ITT and to the United States, and to avoid even the appearance of interference with the Judicial Branch, the subcommittee will conduct this investigation in such manner to preserve the legitimate interests of both ITT and the Government."

Congressman McCulloch:

"What is involved today and throughout this investigation is how the committee may most fairly, justly,, and reasonably exercise its power to obtain the facts necessary to make responsible legislation judgments, while, at the same time, protecting the legitimate interest of the companies and of the enforcing agencies. More importantly, as members of the Judiciary Committee, we must be constantly vigilant lest our efforts here impair the integrity of the judicial process in which facts are found, not through the process of inquisition, but through the adversary process regulated by the rules of evidence. We are bound to act in this way not because we are Members of Congress, not because we are Republicans or Democrats, but because we are lawyers."

Congressman Poff:

"It has been the historic policy of the Committee on the Judiciary to refrain in all particulars from any conduct which might in any manner unbalance the equities in the equation which exists between or among litigants. In advance of the institution of the formal public hearings, this subcommittee in executive session reaffirmed that policy and pledged itself in all ways to treat fairly those who appear as witnesses and to make no requests for documents which might in any way have an unfair impact upon a litigant before the courts."

In the Hearings of the *Monopoly Subcommittee, Senate Select Committee on Small Business*, "Role of Giant Corporation," Part 1, 91st Cong., 1st Sess., pp 420-21 (1969), the following colloquy occurred:

Senator Nelson:

"Even though I am not familiar with the litigation, if it is something that is specifically a point in litigation, the committee would prefer it not be discussed."

Mr. Watts (Committee Counsel):

"Excuse me, Mr. Housman. I do not like to break in but I would like to suggest that we leave this line of discussion at this point because, as most of us are aware, you are now getting into the subject matter of pending litigation. This subject also has been discussed in previous Senate committee hearing records and I would prefer that you leave the subject of your problems with the Ford Motor Co. out of this record because it is before the courts."

Mr. Duffy (Committee Counsel):

"I must agree with Mr. Watts that this is an area that is pending in terms of litigation. . . . I think that Senators Dole and Cook made it quite clear yesterday, that they were concerned that it was the intention of certain parties appearing before this committee, to prove matters using this committee as a forum that they could not otherwise or were unable to prove in a court of law."

General Motors' request that the Subcommittee adhere to these general principles involves more than a regard for technical issues. At stake is the real possibility of prejudicing the triers of fact in the pending litigation.

In the first place, committee hearings are not conducted according to rules of evidence and due process. General Motors has no right to object to irrelevant or prejudicial statements, no right to cross-examine, and no right to compel the testimony of witnesses.

Moreover, this Subcommittee is certainly not the appropriate place for General Motors to present its defense to a lawsuit before the plaintiff takes on its burden of proof in the federal court.

In the second place, it is unfair for the Subcommittee to air the matters in dispute in the New York litigation, because General Motors will be inhibited in any response by considerations of legal ethics. Disciplinary Rule 7-107(G) of the Code of Professional Responsibility provides in pertinent part:

"A lawyer or law firm associated with a civil action shall not during its investigation or litigation make or participate in making an extrajudicial statement, other than a quotation from or reference to public records, that a reasonable person would expect to be disseminated by means of public communication and that relates to:

"(1) Evidence regarding the occurrence or transaction involved.

* * * * * * *

"(4) His opinion as to the merits of the claims or defenses of a party, except as required by law or administrative rule.

"(5) Any other matter reasonably likely to interfere with a fair trial of the action."

General Motors thus runs the risk of being confronted publicly by charges which it would be improper to rebut.

This concern about possible prejudice is no idle fear. Comments on General Motors' conduct of its bus business purportedly related to the Subcommittee's hearings have already appeared in the public press. Mr. Bradford Snell, whose name appears as counsel on the *New York City* complaint, is, we understand, now a member of your Subcommittee Staff and reportedly will make a presentation to the Subcommittee of many of the claims and arguments involved in the pending lawsuit.

General Motors is thus understandably concerned about the Subcommittee's hearings becoming a forum, in effect, for the litigation in which we are involved. We believe that as a lawyer you must appreciate the danger this holds for impairment of the integrity of the judicial process. We respectfully urge that these matters in litigation be excluded from consideration in the forthcoming hearings, and request that this letter be placed in the record.

I am taking the liberty of sending copies of this letter to other members of the Committee.

Sincerely yours,

R. F. MAGILL.

Senator HART. Now, to introduce our first very distinguished witness, I turn to Senator Tunney.

Senator TUNNEY. Thank you, Mr. Chairman. Mr. Chairman, I am particularly pleased with our leadoff witness for this set of hearings, the mayor of the city of San Francisco, the Honorable Joseph L. Alioto.

His testimony will lead us right off to an understanding of the effect of the automobile companies' activities on urban transportation problems.

Joseph L. Alioto is the 33d mayor of San Francisco. During a legal career spanning more than a quarter of a century he has specialized in antitrust litigation.

His career commenced in the Justice Department's Antitrust Division under Thurman Arnold and Tom Clark, but he left Government service in the early 1940's to pioneer in the field of civil antitrust litigation.

It is fair to say that the cases brought before the courts by Mayor Alioto have formulated the bulk of legal precedent for private antitrust actions.

The Supreme Court of the United States has returned nine opinions on matters brought before it by Mayor Alioto. Federal Appellate Courts have handed down 58 decisions in Mayor Alioto's cases, and Federal District courts have ruled with 40 opinions.

As Mayor of a city enjoying some success in solving its transit problems, Joseph Alioto is well qualified to speak on the problems of mass transportation development.

The San Francisco approach during his administration has included the maintainance of the city's quaint, efficient, and smog-free cable car system and the commencement of service on the BART system, the most modern subway and surface passenger rail system in the United States.

The San Francisco pattern also includes transit by streetcar, bus and electric coach. Mayor Alioto's support of consumer rights has brought him into conflict in the courts with the nation's five major corporations General Motors, Standard Oil of New Jersey, Ford Motor Co., General Electric Co., and IBM.

He was successful in five antitrust suits against these five major corporations. Ralph Nader has termed Mayor Alioto and his law firm as pioneers of consumer actions, and it is a great pleasure for me to be able to introduce a man so well versed in antitrust law, an excellent and outstanding mayor, and a personal friend.

Senator HART. Thank you, Senator Tunney.

Mr. Mayor.

STATEMENT OF HON. JOSEPH L. ALIOTO, MAYOR OF SAN FRANCISCO, CALIF.

Mayor ALIOTO. Thank you very much, Senator Hart, and I thank you for your kind and generous introduction. I would ask, Mr. Chairman, that you be a little forbearing about the gruffer quality of my voice, which is gruffer than usual.

I have been doing a little campaigning out in California, as a matter of fact, Senator, and you get this way campaigning.

Senator HART. We are an understanding and sympathetic audience.

Mayor ALIOTO. Yes, I would think so, Senator Hart. I would think so.

I am going to file the written statement, with your permission, Mr. Chairman.

Senator HART. It will be printed in full.

[See exhibit 1 at the end of Mayor Alioto's oral testimony.]

Mayor ALIOTO. What I will do then is simply give as concisely as I can an oral summary. The problem, I think, is extremely important. It is important to me as a mayor of an important California city. It is also important to me as a man who has run a law office for a long period of time which has been interested in the problem of monopoly in our life, the damage that it has placed upon us, and what we can do about it.

Let me say here in America, in almost every phase of our lives, we are faced by the unrestricted practice of monopoly power.

And I think the automobile industry is the No. 1 example of monopoly power that has changed, literally changed, the quality of our lives. It has done so, not on the basis of what people really needed, but rather on the basis of furthering corporate interests, corporate profits.

Now, if that company were serving corporate profits and were abiding fully by the antitrust concept, we could have no argument. The company would simply be an exemplification of the free enterprise system.

I think I should preface this remark by saying that I believe that competitive capitalism, as it is better called, is the best system that has ever been invented by men for the production of goods for the most people at the lowest price and the best quality.

Nobody ever apologized for the profit motive. It is simply a classic selfishness that creates magnificent things for us in the free enterprise system.

So long as that classic selfishness still competes for the benefit of somebody we call the consumer, we can't argue about it.

But if there are myriad violations of the antitrust laws involved in the pursuit of profit, then we can say something about it. I think we can say that what is good for General Motors is not necessarily good for the country.

In the field of transportation, what has been good for General Motors has, in fact, been very very bad for the country. And I think all of this should be undertaken, not on some emotional basis, but on kind of a factual basis, an examination of what is actually happening.

I think that the automobile monopoly ought to be defined. What is it we are talking about? We are talking about, basically, the Big Three automobile manufacturers; we are talking about the oil industry; the tire industry; dealers, the automobile dealers throughout the country; and some of the highway builders.

I think that in universal history there has never been this kind of aggregation of monopoly power, this kind of a power directed toward a single objective. That objective, in the light of what we know today, has very very badly damaged our major cities, and therefore damaged our country.

California is probably the number one example of a State that has been ravaged by the incidence of monopoly power in terms of pollution and congestion.

I also think that San Francisco, as a city, is probably as good an exhibit to show what can be done in fighting a monopoly, and what can be done to overcome pollution and congestion in our cities.

What do we mean by the automobile monopoly? And I think it has waged a two-pronged attack. First, a straight economic attack based on predatory practices.

The principal predatory practice, which is recognized under the concepts of the antitrust law, has been the acquisition of competitors, their destruction, and then predatory contractual arrangements to insure their permanent destruction.

I'd like to illustrate that in just a moment. And, conversely, it has carried on a lobbying activity that only can be described as monopoly lobbying. They will spend an inordinate amount of taxpayer money; call it what you will, it is taxpayer money whether it be a user's tax or a general tax.

They will spend an inordinate amount of taxpayer money for the automobile as against any other mode of transportation. And this hurt us badly, resulting in congestion, resulting in pollution.

I think General Motors and the automobile industry generally exhibit a kind of monopoly evil that we haven't paid too much attention to, even in connection with our antitrust literature.

And it is this basic evil: The evil of rival products, rival fuels, rival modes of transportation, rival commodities controlled by interlacing or interlocking companies.

If they really believe in competitive capitalism, and as I say, it is the best thing ever invented, the free enterprise system, they ought to try it sometime in the automobile industry. If they really believed it they would have to believe that rival products must be created to compete on the merits to their fullest development.

So long as a common economic interest controls rival products or rival fuels, so long as that is happening, then they will orchestrate it to achieve the development of that which has the lowest cost and the highest profit.

That's what is happening in the automobile industry in connection with the struggle of rapid transit against the automobile industry, or electric transit against gas guzzling automobiles.

And that's what is happening in the fuel industry. There are many examples of this. Let me give a few of them because, as I say, GM is a classic example, but there are others. I don't think we get fully competitive development, for example, when a common business entity controls a radio station, a TV station, and a newspaper in the same town.

Now, the common business entity can state that though they enjoy common ownership, their editorial policy is different. But that doesn't mean a lot.

I think we have to agree that maybe the Marxists are right in their insistence upon the importance of an economic basis, in the motivation of economic power. I think maybe they are right about that.

Any time you have a common control of what are essentially rival things, you don't have a free enterprise system. You can say what you want about it.

Another example is the fact that the oil companies control huge reserves of coal, uranium, and all geothermal steam. Now, again, if we really believe in competitive capitalism we are going to have to say that common control of what are basically competing fuels cannot result in their being developed entirely on their competitive merits.

So long, for example, as the oil companies control geothermal steam I am convinced it is going to be developed on a major and a controlled basis and orchestrated to maximize oil profits.

And I think that is basically true of uranium reserves as well.

There are other examples. We have brought cases, for example, where steel and concrete might be competitive in a situation where companies with a common ownership have simply collaborated through legal agreements to favor one as against the other in accordance with which one produces the most profit at any given moment.

And in that case we collected $22 million on behalf of our clients. I think there is a feeling that gas and electric power ought to be developed separately on their competitive merits instead of by the same companies.

There is actually an historical precedent for the fact that tin containers and glass containers ought not to be dominated by the same company.

Now, in the automobile industry, we have not applied that concept. We lack the benefits of having absolutely rugged free interprise competition from companies that are interested exclusively in rapid transit and not in automobiles.

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A company that is interested in automobiles, in trucks, in buses, in the locomotive, is going to use that aggregation of power to favor that element that gives it the biggest profit. It is just that simple.

And it is impossible to talk about competitive enterprise. I was interested very much in Senator Hruska's comment that he's been trying to do something about this for 40 years, and that is good.

As a much younger man, I too, was interested in the TNEC Reports, and the O'Mahoney report Senator Hruska referred to. But I just wonder, Senator Hruska, whether we now have come to that point where we so clearly see the ravages of a monopolistic automobile as against every other form of rapid transit; where we so clearly see that this country can no longer continue to be dependent upon caprice of the wind, like five sheiks in an Arabian desert; where we so clearly see these things that we have a different perspective.

And now maybe the time has arrived when we can make a determination about whether we are going to do something about it, and then actually do something about it.

It means we are going to develop electric rapid transit, that we are going to develop lighter fuels, clean and cheap ways of generating electricity like geothermal steam which ought to be taken out of the hands of the oil companies. It really ought to be taken out of their hands so that we can get competition.

So I think that after 40 years, it is true. The Department of Justice over that 40-year period of time has tried to do something about it; the Federal Trade Commission has tried to do something about it. But they have been unavailing.

At the end of this presentation, I would like to respectfully make a recommendation that whatever cure we need has got to be a cure by legislation. The courts have just bogged themselves down on the big antitrust cases. It's almost impossible to do anything because the defendants are able to carry on with a very effective war of attrition. This is what it gets to be.

But I think you can cure it now by legislation. And I think that now this has been put in such sharp delineation, the evil so clear in our major cities and in our major States, that we can do something about it.

I think it is fair to say that over the 40 years we have been talking about this that General Motors has carried on a deliberate concerted action with the oil companies and the tire companies, and I will specify in just a moment, for the purpose of destroying a vital form of competition; namely, electric rapid transit.

And let me give you a personal experience in that respect. We had in the San Francisco Bay area, connecting San Francisco and Oakland and other areas on the East Bay, something we called the Key system. It had 180 electric streetcars, and it had 50 rather sleek and fumeless electric passenger trains, 180 electric streetcars, and 50 passenger trains.

And those passenger trains crossed over the San Francisco Bay on a lower deck. In 1946, something called National City Lines acquired that Key system; National City Lines, a company that was made up of General Motors, the Standard Oil Co. of California, and the Firestone Co.

Two days after they acquired the system in 1946 they announced that they were going to convert the system to buses, and within a very short period of time that company dominated by—not dominated, operated by—General Motors, Standard Oil of California, and Firestone did in fact purchase 200 General Motors buses.

Then in 1954, that is 8 years after their acquisition, at a time when we began to talk seriously in San Francisco about building a BART system, they announced their intention of abandoning the electric rail system across the bridge—abandoning it.

It is very difficult to escape the inference in the light of the total context that they did this for the very purpose of slowing up and perhaps making impossible the development of our BART system, our Bay Area Rapid Transit system.

Nevertheless, regardless of the motive, the fact is clear. They pulled up the tracks. Now for BART we have had to spend $200 million to create that same corridor in the form of a tube on the bed of the bay.

I say this is monopolistic conduct and predatory conduct. You can look back to the classic cases of Standard Oil and American Tobacco to find precedents for the fact that this kind of business violates the antitrust laws, in a classic sense, and that this is not free competitive enterprise.

In addition to this, after they had accomplished this destruction of a completed form of transportation, they forced the company to accept an additional condition which again violated the antitrust laws, the condition being that that company had to restrict itself to the purchase of gas-using General Motors buses.

The entire acquisition and destruction of this system by contractual arrangements and otherwise, all taken together, make a clear violation of both sections 1 and 2 of the antitrust law; and we ought not to be talking about free enterprise in that concept at all, because it isn't free enterprise.

In addition to having done this in the San Francisco Bay area, they did it in a number of other cities, and just let me mention those cities.

Sacramento, Fresno, Stockton, Eureka, Oakland, Los Angeles, Glendale, Pasadena, San Jose, and Long Beach. Except at San Diego, you see that every major California city is a victim of what I think is just an old-fashioned violation of the antitrust law.

In that very fine monograph prepared by Mr. Snell, and, Mr. Chairman, I want to pay tribute to the excellence of that work; it is really a magnificent piece of work, and I think it rivals in excellence some of the old TNEC monographs that were prepared in this same area. It's really a great work.

The study points out that this just didn't happen in California. It happened in 45 cities throughout this country. Now, another thing happened, and this is all part of that same economic application. They had the money to beat us at the polls every time we started to try to get the diversion of gas tax funds or transportation funds generally for rapid transit. They can beat us every time.

We had it on the California ballot and there were some of us who had been fighting, and fighting hard, on this matter. We had on the California ballot, proposition 18, in 1970. That would have permitted,

Mr. Chairman, each local community to have the option, local option, to spend 25 percent of its gas tax funds for rapid transit.

We had a motive for doing it because we had foresight in San Francisco. This is where the freeways have always started. We told them very early that they were not going to turn what we regard as one of the really photogenic cities of the world into a vast network of cement freeways and downtown garages. We weren't going to let them do it.

We simply don't owe it to that 1.2 persons. That's what it is; that's what it is, 1.2 persons. Let me put it another way. Five automobiles for every six persons. That's what it is. That's the ratio.

We don't owe it to that 1.2 persons to turn a beautiful city into a network of ugly highways, and we simply were not going to do it. We are going to put pressure on it. You talk about political power, we're putting pressure on them.

I had just been elected mayor, but had not assumed office, and we were at that time making an application to have the State give us back our port. And the Lieutenant Governor, Mr. Robert Finch, called upon me and said that we will give you your port, perhaps, if you will give us a freeway route connecting the San Francisco Bridge-Oakland Bay and the Golden Gate Bridge, right across the northern area of San Francisco.

One of the really spectacular metropolitan views of all the world. Some people compare it to the bay in Naples. The bay in Naples should be so great, on that northern route. It should be so pretty.

But, anyhow, this is the proposition. We will give it to you if you let us build that freeway. I said, "Forget it; we don't want the port back." We got it back anyway. And 2 years later when the phrase "nonnegotiable condition" came into prominence, Governor Reagan wrote a letter to the press, which I first read in the press although it was addressed to me; I read it in the newspaper, in which he said "The mayor has nonnegotiable demands" about a freeway and I was endangering the traffic control in San Francisco by not giving in on the freeway situation.

I told him again he was correct, that it was indeed nonnegotiable. Any time they wanted to build another freeway they were going to build it underground. Well, they haven't built it at all. They wouldn't have that condition.

Well, we backed it up; we backed it up. It cost us $2.5 million a year to run that well-known cable car. There are 9 million people a year who ride that. These aren't just tourists or San Franciscans who ride the pollution free cable car.

It happens to work. It is one system we didn't let them destroy. They tried to destroy that one, too. We didn't let them destroy that one. It gives you, in addition to a pollution-free ride, a ride that is an adventuresome ride.

We also handle 185 million fares a year on electric streetcars and trolley buses.

Now, we have built a $1½ billion BART system and we did it on our own. When we started we had no idea that we were going to get any help from anybody. The Federal Government has now given a pittance that helps. A billion and a half dollar BART system, and we get a lot of criticism about it because of some slight bug.

There are some slight bugs about BART, there are big headlines in the paper. That same week General Motors recalled 1.2 million cars with defective brakes that had already killed eight people—it appeared on the back pages of the paper somewhere.

There is this kind of unconscious prejudice against any mass transit system. We'll have one so good that it is going to work; it's going to be the model for the rest of this country. We are also willing to spend our money to subsidize it, to subsidize a commuter system on the bay, to give us real balance, and special bus lanes.

We aren't antiautomobile nuts out there. What we want is balance in transportation. If three or more persons will ride in a car, they can come over the bridges for nothing in a special lane.

I think that is a real attempt to get the balance in transportation we are talking about, but it is always a fight. On proposition 18, we got swamped at the polls. Why? Because they put up $330,000 against us, and those of us who were for it spent $15,000 as against $300,000.

And the oil companies surreptitiously with cashier's checks, secret, gave an additional $95,000. And this is the kind of thing we are constantly up against. And this is why this committee has to break the back of this monopoly. We are now engaged in the struggle to get operating funds to subsidize operating deficits in mass transit systems that replace the automobile, that give us a chance to have a pollution-free and congestion-free city.

And that struggle has to work out. So we have fought. We have come all the way back.

Let me give you another example of how Government, itself, can join to perpetuate what are basically monopolistic situations in the automobile industry. In the administration of President Johnson they brought a case alleging that the four automobile manufacturers had agreed to collaborate rather than compete in connection with the manufacture of smog control devices.

They had actually agreed to collaborate. Early in 1955, there were specific instances of where they held back smog control devices. That suit was brought to break up that combination.

Shortly after that Attorney General John Mitchell—and we know from documented cases now he was engaged in selling antitrust cases like they were pieces of merchandise in some instances—gave them a consent decree, the effect of which was to cement the very conspiracy which the Government charged by providing that the automobile manufacturers must, on a royalty-free basis, license everybody else.

And if they got an invention from a third party, they have to license all of their competitors on the royalty. Doesn't that just perpetuate a lack of incentive to do anything inventive?

Our patent system is part of the free enterprise system, which is supposed to promote invention, and when you provide for royalty-free licenses you have simply taken away the incentive to invent or the drive to scoop the rest of the industry on a smog control device.

So we sit around and let the Europeans and the Japanese scoop us in this very important area.

Now, I would like to get down to the recommendations and then take whatever questions you may have in mind. I think that the

courts are now inadequate to take care of this situation; that you have to cure it by legislation. And curing it by legislation means that you have to start somewhere; it doesn't have to be a final cure, nor does anybody have to work on a final plan.

I think that you simply ought to provide by legislation that GM has got to get out of the locomotive business and get out of the bus business. As a subsidiary, even out of the truck business, and let them stay with automobiles.

And let other companies compete on manufacture and distribution of rapid transit systems. I think that is key. Whether or not there should be further dissolutions with respect to the automobile business itself can come later. It doesn't have the importance of freeing up what is basically a rival mode of transportation, from a common control, interlocking control, that I talked about earlier.

As part of this, we should have something in the form of reparation for what they have done in destroying these rapid transit systems. And the reparations could take no better form than permitting us to divert substantial amounts of Federal money from the gas tax fund to a rapid transit fund.

There is no sanctity of a trust fund in terms of an inviolable contract. You may get the user taxes, but they are taxes nevertheless. You can do it by statute. In our States, we have to do it by constitutional amendment, because it has happened so often in the past that when the monopolists give themselves a special little deal, they attempt to cement it into a State constitution so you can't change it by legislative action; you have to do it by voting action.

There is some precedent, Mr. Chairman, for acting legislatively. Remember, and I haven't put this in my paper, but I would like to mention it, the old Stockyards Act. It simply took the meatpackers out of the retail distribution of meat. They did that by legislation.

The Aviation Act told the automobile companies to divest their interests in aviation, and General Motors had started in aviation precisely where it had started in rapid transit.

It had attempted to get control of the companies, and their president put it on a very frank basis: "We have got to get into aviation to protect our automobile situation." That's what Mr. Sloan said. But the Congress decreed that they should get out of it.

GM got out of aviation, and other companies developed right away. Now there are alternate companies that can handle rapid transit. There are companies. There is no reason why the electric companies can't be involved, all of them. They can get in on a competitive basis again.

We are building a rapid transit system now, as I said, for $1.5 billion and we are finding the people to do it. I am convinced that if you can get divestiture of GM's bus and locomotive operations, you will introduce competition and make it possible for us to see daylight on rapid transit in our cities.

Thank you very much, Mr. Chairman.

Senator HART. Mayor, thank you very much for an effective summary of your prepared statement.

I have some questions that were prepared by the staff after overview of your formal statement. Let me get your reaction to them.

Your formal statement included the testimony on the Key system; once it went to San Francisco, to Oakland, and to other East Bay

areas. How extensive was this? How long was it in operation? The point we are trying to get at is whether this is a situation where BART is really just replacing the mass transit system which previously existed?

Mayor ALIOTO. Only a portion of it; the Key system existed and it ran for some 40 years prior to this time; 40 or 50 years. This was connecting the East Bay with San Francisco. BART, in addition to combining East Bay with San Francisco, combines Contra Costa County with it, and then has a separate system throughout San Francisco itself.

But if the Key system had not been uprooted, we wouldn't have had to have spent that $200 million to, in effect, replace that bridge portion of it. We would not have to have done that.

The BART system is a computerized rapid transit system, the most elaborate kind with all of the computerization we learned in the space programs, which was one of the benefits of that program.

It is a much more elaborate system, a much more extensive system, but the destruction of the Key system set us back considerably and made it very very expensive, at one point almost prohibitively expensive.

Senator HART. All right now, give us some idea of the firms that you have dealt with in getting equipment. For example, which firms manufacture the motive power of BART, and who makes the cars, and how did you make the judgment in terms of selecting which ones would supply the equipment?

Mayor ALIOTO. We simply had what was in effect a competitive negotiation. We hired the Bechtel firm and the Parsons firm to advise us on that. We consulted them. They selected the Westinghouse Co. to do the electric system and the Rohr Co. to manufacture the actual trains themselves under a $150 million contract. Rohr Co. is manufacturing the trains in California, and Westinghouse is manufacturing the system partly in California and partly in the East.

Senator HART. Now, you say that you were advised by this consultant to make those decisions for Westinghouse and Rohr. How many firms actually were in competition? What sort of choice did you have?

Mayor ALIOTO. Well, we had two firms competing in connection with the cars, and I don't know the exact number on the electrical but I assume that there were at least two other firms. But we have to face up to the fact that the competition among the electrical companies in that period of time was less than perfect, as you know, in connection with the electrical conspiracy cases.

Nevertheless, in terms of what we can do today with rapid transit systems, I think all the electric companies, all the manufacturers of turbines, all the manufacturers of generators, all of those companies would be quite competent to come in and help us out on a competitive basis to build rapid transit systems.

I don't think we suffered from a lack of companies that could get into this business, once we gave them the notion that we were going to support this system as much and as strongly as we had supported the automobile system.

Once they had that notion there would be no lack of companies, and furthermore, the Europeans and Japanese have demonstrated

that they can develop a great number of industrial companies and complexes to build rapid transit systems. So I see no reason why American technology, which I still regard as the best in the world, would not be equal to the challenge of building rapid transit systems in this country, if only we could get the financing away from the automobiles.

You know, you have a monopoly of financing here. A monopoly of financing as we are developing the automobile.

Senator HART. Mayor, Senator Kennedy's schedule requires him to get to another committee hearing, and I wonder if before he leaves, you would permit him to ask you a few questions.

Mayor ALIOTO. I would be delighted.

Senator KENNEDY. Thank you very much, Mr. Chairman.

Mayor, you have been enormously helpful to this committee in outlining the past history of San Francisco and what has happened in relationship to the aggregation of power among the highway lobby, the oil industry, the automotive industry, and the tire industry. Let me ask you this: If no action is taken either by the Antitrust Division of the Justice Department or by Congress on the proposed legislation, how would you see San Francisco and other major urban areas, say 20 years from now, or 50 years from now? What will happen if we don't take action? What do you predict?

Mayor ALIOTO. If we don't take action, Senator, we are going to lose the struggle to save the cities from congestion and pollution. I think that it is that simple. I think it is so clear now what we have to do. Failure to take action now simply would mean that we are going to lose that struggle against pollution.

Senator KENNEDY. Why is that? Is it because of the aggregation of power and the forces that exist today that are led by the auto industry?

Mayor ALIOTO. I think that aggregation of power, which as I say is the biggest aggregation of power in the history of the world, has acquired an expertise at killing off all forms of competition to the automobile, literally throwing them off, and sometimes by questionable methods, questionable current methods.

Unless you make a change and get this rival form of competition under an umbrella where the free enterprise and competitive capitalism can really operate, unless you do that, I just don't see any chance of winning the struggle against pollution and congestion.

Senator KENNEDY. Are you satisfied that the antitrust legislation on the books at the present time needs updating, needs strengthening, needs improvement in order to meet these particular demands of balanced transportation systems for the urban areas of this country?

Mayor ALIOTO. I think it needs improvement in this sense: that you have to legislate with respect to this specific industry because it has grown so strong. While the present law would justify just in terms of traditional antitrust policy, free enterprise policy, this widespread divestiture in this industry, we have to face up to the realistic fact that more courts than not are corporate oriented; and that's a hard thing to say but it happens to be true. And the possibility, therefore, of getting effective judicial action, even under the antitrust law that is quite sufficient to the purpose, I think it is so remote that it has to be done legislatively.

And I think that this is one of those times where now the circumstances are such that it would be foolish to continue to be an oil dependent Nation. The circumstances are ripe for electrification of transportation, if you break up this incredible aggregation of power.

Senator KENNEDY. Thank you very much. Thank you, Mr. Chairman.

Senator HART. Thank you, Senator Kennedy.

Mayor ALIOTO. I must say, before Senator Kennedy leaves, that he has been one of the real champions of the cities in their struggles against congestion and pollution, and to get alternate forms of transportation for them. We appreciate that support.

Senator HART. I have six questions remaining. The first, I have a hunch, will require that you provide the answers for the record rather than making you turn it around in your head.

But if you or your staff have any papers with respect to the number of jobs generated by the construction of the Bay Area Rapid Transit System, we would appreciate having that data for the record.

Mr. ALIOTO. Well, first of all, the direct jobs in the BART system itself are approximately 2,000 per year. That's the direct jobs. That doesn't really tell the story. The real story is that rapid transit has generated some $2 billion of construction in downtown San Francisco; construction which otherwise would not have taken place, in my opinion.

And that $2 billion of construction in Rockefeller Center West alone has generated 35,000 jobs, just in that one area alone. And in connection with some of the other buildings, 20,000 jobs, just because we have a rapid transit system that can deliver employees to and from the places of employment rather quickly.

There are 2,000 direct jobs. I cannot estimate the number of jobs that $150 million contract with the Rohr industry in San Diego would give us, but obviously a tremendous number of jobs.

So directly and radially, this is one of the great things. As a matter of fact, I'm trying to make that point throughout California now. At a time that we are worrying about recession and near depression, one of the things that we ought to be doing is building rapid transit systems in all of the 14 cities where General Motors uprooted those tracks and tore those tracks out. In all of them.

And we ought to be doing it on an annual basis, and this will generate the kind of employment we need and simultaneously it is employment that serves the claims of environment as well as the claims of business, because it does help us curb congestion and pollution.

Senator HART. I have asked the staff to inquire at Rohr and I suppose at Westinghouse concerning how many jobs that they identify.

Mayor ALIOTO. I think I can get that for you and send it in to the committee for its record.

Senator HART. Thank you.

[For the information requested see exhibit 5 at the end of Mayor Alioto's testimony.]

Mayor ALIOTO. It is a very important producer of jobs predicated on real competition, and as I say, there are jobs that serve the interests of ecology as well as business.

Senator HART. Now, in your statement, you make pretty clear that General Motors shouldn't be in the business of making buses and railroad locomotives, since they are competitors of cars.

I follow the logic of that, but there is a traditional antitrust concept, and I would like your reaction to it. This is the notion that when a firm moves into a related market by internal expansion, that is good, according to conventional antitrust wisdom. It means a new competitor; whereas a new entry by acquisition is looked upon dimly because that adds no new competitor and generally doesn't generate any more jobs.

I have this problem when a firm moves into a related market by internal expansion; specifically, neither Ford nor Chrysler at the present time make buses or locomotives. But if they were willing and able, should any legislation take the position that this is not to be permitted? Do you have any feelings about that?

Mayor ALIOTO. I would have to come down on the view that neither Ford, nor Chrysler, nor General Motors, ought to be manufacturing what is essentially the rival commodity. I think that they would have a tendency to plan their development of a rival commodity in accordance with how it serves the interest of their most profitable commodity, which yet remains as the automobile.

And I'll agree that internal expansion is desirable except with the internal expansion, for example, of the oil companies getting control of the geothermal fields. That is a clear example. And that internal expansion is also monopolistic, where they become the sole operators of what is essentially a rival field.

I think we should just keep our eye on this notion that basic free enterprise and basic competitive capital require that rival commodities be exploited and developed by those with a real incentive to do it, and not have that incentive diminished by reason of the fact that they have a more profitable item.

I think, in the light of that general philosophy which I hold, that it would not be a good thing to let Ford and Chrysler and General Motors all manufacture locomotives and buses.

Let me state another reason. Where there is a long history of corroborated action and only three firms are involved, the ability to really destroy collusion is almost insurmountable, if we don't want to use a harsh word. The ability to destroy collaborated reaction to the same economic facts, it's almost impossible, and then you lose the incentive that I think a truly free enterprise system requires.

And as I say, there's no question about the fact that I'm a free enterpriser. It's so good that I think we ought to stop and try it out and see if it works.

Senator HART. All right. Your counsel should carry a great deal of weight because you do speak with a long background of experience in antitrust legislation.

You tell us that it is up to Congress to split these entities. We can't look to the Justice Department for litigation of the antitrust laws, and the Public Utility Holding Company Act gives us precedent.

Mayor ALIOTO. Yes, and there are others.

Senator HART. But I have always been curious as to whether Congress is equipped to make the judgments that involve such a complex

problem as taking a large business enterprise apart and making separate, viable entities.

You are focusing in your testimony on the locomotive and the bus business, but I am thinking beyond that in terms of the possibility of it being desirable public policy to restructure the automotive activities also. It is in that area, I think, that I doubt very much if Congress is the wisest source to look to.

We have tried to provide in this bill for a special court, hopefully, composed of men and women who would have some background and develop an expertise in reviewing possible restructuring proposals in order to come up with a sound proposal. This has been criticized, sometimes very persuasively, by people who don't want a special court.

How do you, as a practitioner, react to that?

Mayor ALIOTO. First of all, I would think that the divestiture action at the congressional level could be taken up. To break off rapid transit or the mass movement of people from the automobile manufacturer and distribution can be done first.

I will agree that there ought to be some more restructuring of the automobile industry. Because one fact of the matter is that on a competitive basis we have permitted the Western Europeans and the Japanese to scoop us on too many things when really, truly competitive American enterprise would developed first. I really believe that.

And I believe that the automobile portion and particularly integration, both upstream and downstream integration in the automobile industry, are a separate consideration.

I think that the ordinary courts, if they were given just the automobile portion of the transport industry, would be able to fashion a decree that could prove effective. And I, Senator Hart, have been a student of most of the things you have done.

I must beg to disagree upon the efficiency of a special court. Given the right direction by Congress, I think the existing court can react in an area where there has been a 40-year failure, as Senator Hruska has referred to, or at least a 40-year attempt to do something about this.

And I think, for example, if you compared the effectiveness of the Federal Trade Commission with the courts, that you would probably have to come down on the side of the fact the courts have done a better job with the antitrust laws than the Federal Trade Commission has done. I think you would have to say that.

And I would first try the Congress. I am advocating congressional action here only because I think the courts would be bogged down by the immensity of the economic aggregation that we have here.

Now, once you spinoff what is basically a rapid transit business from an automobile business, I would tend to try the courts.

Now, one of the problems about the courts is whether or not you wind up with a militant Department of Justice. You have to, frankly, recognize that our attitudes, toward the antitrust laws change, depending on who is the President and who is the Attorney General.

If we had some guarantee that you would have a Thurmond Arnold or a Tom Clark running the Antitrust Division, and not a John Mitchell, if we had some guarantee of that, then I think that the Antitrust Division could get this job done. I really do.

But since this is a thing which does change from administration to administration, Congress should do the initial work. In addition, Congress should provide for financing of rapid transit. I have some question about a special court until it is demonstrated that our regular courts cannot handle just the automobile section of the ground transport.

Senator HART. I will review this. I would hate to be the district court judge in trying to figure out what to do just with the automobile industry.

Mayor ALIOTO. Yes; we know, for example, that there was a conspicuous failure when they tried to do something with the west coast oil industry. It wound up that the district court not only refused divestiture, but then the Department of Justice went for a consent decree which approved many of the restricted contracts, including the consignment contracts. Then an associate of mine representing an independent dealer in the Mission District of San Francisco got to the Supreme Court in the *Simpson* case and got the Supreme Court to say that the consignment contract, which had been approved both by the Department of Justice and the district court, was, in fact, a price fixing vehicle.

So, I know the problem. But we have to face the realistic fact, too, Senator, that there are Supreme Courts and there are Supreme Courts. And in different periods of time, they have a little different view about the importance of really tough, free-enterprise, competitive capitalism.

This is why I think Congress must act in the first instance in the matter of legislation. Let's see if our other agencies can act under specific direction of Congress to do something about it.

Certainly the comparison of the inventiveness of the foreign automobile manufacturer as against the Americans ought to make us hang our head in shame and determine that we are going to get back to a free enterprise system.

Senator HART. Senator Hruska?

Senator HRUSKA. Thank you, Mr. Chairman. Mr. Mayor, you are not a stranger in this committee room, and we always look forward to your coming.

Mayor ALIOTO. Thank you very much, Senator. That's very nice of you to say.

Senator HRUSKA. Not only the substance of what you say, but the sincerity and the enthusiasm with which you have delivered it is refreshing. It has often been said that the more things change, the more they are the same.

Twenty years ago this year we had ourselves a whale of an investigation on the streetcars and buses and the ownership by General Motors of stock, the disappearance of the streetcar, and went into it in great depth.

I say to you that a resume of the court records regarding the case of General Motors and the National City Lines is found at page 3919 of part 3, with reference to a study of the antitrust laws of the United States, the "Administration Interpretation and Effect," pursuant to Senate Resolution 61.

So, the things that you bring up here about the Key system, and BART, and the manufacture of buses, and so on, and the alleged predatory practices is not something new.

There was a criminal case in 1954 pending against General Motors. At that time, there was a big civil case pending against General Motors, and they tried it in Chicago under Judge Campbell, who I am sure you know, and members of this committee came to know him well before his retirement from the Federal bench.

Now, maybe this is a debate of which came first, the chicken or the egg. But if there's any implication in your testimony, or in your thinking, Mr. Mayor, that General Motors wrecked the streetcar system, that wouldn't be very accurate, would it?

Was it General Motors and its bus building capacity that really wrecked the streetcar system in America?

Mayor ALIOTO. I think, Senator, that the answer to that has got to be yes. The answer has got to be yes because General Motors actually formed the company together with the oil companies and the tire companies to go in and to buy out these streetcar systems, to then dismantle them, and to substitute buses for them, when the contractual provisions were clearly illegal.

I think you would have to say that the answer is yes, on the broader implication of your question. In other words, there had been so many attempts, that this is where I came in. I have heard this record before on the broader implication of that question; there is, perhaps, the other side.

The other side is that 20 years ago we were not cognizant of how bad the problem of pollution and congestion was going to get. We just weren't. We didn't have that clearly delineated. Now we have had clearly delineated for us how bad that problem is.

And the mere fact that there is a persistent demand in the face of 40 years of failure would indicate in itself that the claims for reform may be well-founded. And also may indicate in itself that up to this point the claims for reform have been defeated because of an overwhelming economic problem, rather than something on the merits.

Senator HRUSKA. Well, I would like to respectfully suggest that there is a reason why streetcar companies were dismantled. And it has nothing to do with General Motors. General Motors came into the situation when streetcars were inordinately inefficient.

They were not flexible. Their costs were so great that they couldn't furnish the service. The municipalities and States converged upon them with a limitation of fares that they could carry and what they could charge.

And they didn't serve most of the people because there happened about that time, and has been happening for the last 40 or 50 years, such a thing as the development of suburbia. It was impossible, economically, for streetcar companies to build tracks to every suburb when the suburb very often had four houses to an acre instead of the metropolitan situation that you have in downtown San Francisco.

Now, whether General Motors ever existed or not, the streetcar system just could not function. It could not meet the demands of modern residential building and development.

Do you know of any streetcar system that could service San Francisco with all of its outlying communities and suburbs?

Mayor ALIOTO. Senator, let me make the point again; perhaps I wasn't very clear on it. I am not an antiautomobile nut; and there are some people like that in this country.

I am simply suggesting that we want balance in our transportation. I do not want to outlaw the automobile. I am not suggesting that it is not a convenient way of traveling. I am suggesting that it must be supplemented by rapid transit.

I cannot accept the argument that rapid transit systems broke down because of their complete inefficiency to serve the public, because the experience of Western Europe and Japan belies that argument.

And the experience, the current experience of San Francisco, the BART and it's cable cars and the other mass transit systems, the commuter bus, and car pooling and special bus lanes—that belies it, too.

And finally, Senator, I must say, with great deference, that if it is true that the streetcar companies were breaking down of their own weight, why was it necessary for General Motors to join with Standard Oil and the tire company to go in and buy the systems and tear up the tracks?

Well, this was an active act of monopolization. It was not, simply, a filling in where the competitive method had failed.

Senator HRUSKA. Well, that was one of the allegations in the lawsuit 20 years ago. It was decided in 1954, and the statement that they actually monopolized by buying out these companies was not borne out. There was purchase of nonvoting preferred stock, which is of record. And any other participation they had in there was laid on the counsel table and before the court. It was held not to be illegal and it was held to be, in fact, legal.

Now, maybe it is up to Congress to change the laws on that but there they are. The point of the matter is, however, and let's dispose of that in the first place, that the criminal case failed.

That civil case against General Motors failed. And there was a relation and a narration here by one of the former Government attorneys who organized the record in that case, but didn't try those cases, and the memo to which I referred back there on page 3919. Unfortunately what was brought out during the testimony of this former Government attorney was an inaccurate and incomplete picture of the facts shown in the court record. So incomplete and so inaccurate was it that actually no mention was made that the final outcome of several years of litigation in this case: A denial of the relief requested by the Government, and a dismissal of the action in Federal court against General Motors.

Now, that is by way of background. You make all kinds of allegations about this and that and the other thing and condemn and not hold any griefs for General Motors. But we have a matter here involving a course of business conduct, a breakdown of the streetcar systems, and a substitution, therefore, of a more economical and more flexible and a more efficient bus transportation system. And as we get in the testimony here, there are the figures of the people carried by a public transportation and those carried by private automobile.

But the fact remains that here was a breakdown of a system, a mode of transportation, and in came the bus.

Mayor ALIOTO. There was a breakdown, Senator, only in the sense that it became a stepchild of Government. If you were spending $15 billion a year of user taxes for rapid transit and electric trains as you have spent on the automobile, if you were spending that kind of money, or only a portion of it, Senator, you would have had a balanced system of transportation. You would have had that. But they acquired so much economic power that got translated into political power that we couldn't get the money fast, except in isolated pockets like San Francisco, for a rapid transit system.

But now, Senator, we have something we can argue about. What we have is a breakdown of automobile transportation and the congestion of pollution of our city.

And we realized that it was very fine in terms of personal liberty and personal desires about design to encourage people, but now we know, we're just moving automobiles. We aren't moving people at all. And we're still spending $15 billion a year. And all we're asking for is a balance. Let the automobile take its competitive place in that picture. These court hearings that you're talking about, in some cases, were simply a simple war of attrition carried on in those courts.

And that's all it was. And they finally settled that on a relatively insignificant basis. But you're dealing with a current situation where the monopoly of automobile transportation has created evils so obvious, in terms of congestion and pollution, I think we have to do something about it.

Senator HRUSKA. Well, you could never get rid of the bus, even with BART. I go there quite often, and I am familiar with some of the suburbanites' problems.

First of all, they have to get to BART. BART can go only on the main highway.

Secondly, when they get to the other end and get to the terminus to which they travel, they have a third problem. The first problem is to get to BART and then the second problem is get on BART and travel it; the third problem is to get to that part of the San Francisco community which is removed from the terminus at BART.

Now, you cannot get away from the buses, can you?

Mayor ALIOTO. I am not trying to get away from buses.

Senator HRUSKA. The way you talked, I thought you were trying to eliminate General Motors and buses.

Mayor ALIOTO. We are not only spending $1½ billion for BART, we are subsidizing huge special bus lane arrangements on our Golden Gate Bridge.

All I want is balance, Senator. I don't want the automobiles to have a complete monopoly. And you can talk about the inconveniences of rapid transit, but when you start multiplying sitting in line at peak times in an automobile, going down to a downtown garage and paying $5 just to park your car, and we have to build a freeway into our beautiful city in order to permit you to do that, when we balance all of these things we are always going to come up with the same answer.

We don't want to abolish automobiles. We don't want to abolish electric trains. We don't want to abolish buses. We don't want to abolish boats.

We want all of them based upon their competitive merits and competitive balances and you ought not to reward the automobile with $15 billion a year and treat everything else like an orphan child.

Senator HRUSKA. Of course, that $15 billion accounts for a lot and it covers a lot. And without it, many Americans couldn't live.

Now, let's not attack $15 billion as something that is pernicous and evil.

Mayor ALIOTO. All I am saying, Senator, is that when we generate in San Francisco $22 million of that $15 billion, and we don't want to build a freeway that would have cost $348 million, we would have liked to have used some of that money to extend the rapid transit system.

That's all I am saying. We want a portion of it, not all of it. All I am asking for is balance and nondiscriminatory treatment of other forms of transportation. That is what it gets down to.

Senator HRUSKA. Well, of course, when the exception is taken to the Key system taking over the bridge, and replacing the tracks with the paving that would accomodate buses, that was competition wasn't it?

Mayor ALIOTO. No.

Senator HRUSKA. Then BART came along years later and said, "look, why don't we get a chance at that bridge?" And now we have to build a tunnel under the bay. So, there is a form of competition there.

Now, had they waited for BART to be built, San Francisco would still be a country village. It would be a struggling little county-seat town.

Mayor ALIOTO. I don't agree with that.

Senator HRUSKA. Because they could have never got off their feet.

Mayor ALIOTO. Well, we don't agree with that.

Senator HRUSKA. If they had waited for BART to be built—it is not finished yet, after all these years, is it?

Mayor ALIOTO. No, and the highway system took a long time to build, too, even on a favored-treatment basis. It took a long time to build, but the point is it is built, and if we are prepared to build rapid transit systems on an annual basis, with adequate funding, and with just a measure of the favoritism which has been shown the automobile, Senator, we will have a balanced system of transportation, and that is all we are talking about.

Senator HURSKA. You know, in Washington there is a very famous and popular game, and that is to pursue the Government agency that has cost overruns.

BART has proved, hasn't it, that that disease is not confined to Washington. BART has had an overrun, hasn't it?

Mayor ALIOTO. Senator, everything done by private industry, by the biggest corporations of this country in the past 10 years, has had an incredible cost overrun.

Let me give you an example. For building BART, it gets into a cost overrun because we go through an inflationary period that nobody anticipated.

Simultaneously, they are building a series of buildings by the big insurance companies, a series of buildings by the banks, a huge tower

in San Francisco by the radio companies and by the newspaper companies.

The cost overruns on BART and in private industry, by the biggest and best managed corporations in the world, have not been different. They have been the same.

But the inordinate emphasis upon the cost overruns of BART, as against the cost overruns of private industry, makes me wonder why we can't get equality of treatment in the press on the fact that we have had this terrible inflation.

As a matter of fact, the cost overruns on that giant tower, which looks like the Eiffel Tower, is 700 percent. And the delay was about 100 percent. If that had happened on BART, we would never hear the end of it.

Another thing, if there is a slight little accident on BART, the door opens, and nobody gets hurt, big headlines.

General Motors recalled a million cars, Ford recalled 400,000 cars for deficiencies; not a word. After literally thousands of people have been killed on those highways, not a word.

So, I am suggesting to you that rapid transit suffers not only from a discrimination in terms of not getting enough money, but from a discrimination of inordinate publicity for things that private industry is doing simultaneously.

Senator HRUSKA. It is my hope that these last 3 minutes of testimony on your part will be well-publicized in Washington, because many agencies in Government, particularly the Defense Department, can hail one of the champions, one of the very able apologists, for this business of overruns, which are due to many factors, and which are inescapable; and you will be a hero among them.

Mayor ALIOTO. Senator, there is a different view among public workers. I got a telephone call not too long ago, the fellow says, "Mr. Mayor, I am looking out the window and there are a bunch of workers fixing a hole in the street," and he said, "one fellow is working and four people are standing around, what about that."

I said, "Would you mind going out to the window and tell me what insignia is on the truck?"

He came back, he says, "I am sorry, it is the telephone company."

Well, all I am saying is that the measure of performance, whether it be public or private, is about the same, except that the public takes a bigger beating for it.

Senator HRUSKA. That is right. But at any rate, you are having a tough time with BART now, in order to make it work fully, but also to get it to places where it can make a complete enough service that it will pay, and also to pay for it.

How much does this 1-cent sales tax in three counties yield a year?

Mayor ALIOTO. As I recall, the 1-cent sales tax yields approximately $27 million.

Senator HRUSKA. In San Francisco?

Mayor ALIOTO. $27 million for the three counties per year.

Senator HRUSKA. And, of course, that goes into the pot.

Mayor ALIOTO. I want to raise a question, though.

Why can't we use part of the gas tax funds that we generate in San Francisco to pay for that instead of inflicting it in the form of a sales tax on workingmen and workingwomen?

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Senator HRUSKA. Mr. Mayor, you are talking to an expert on the distribution of tax revenues, gasoline tax revenue, because in my State, where I represented the city of Omaha and Douglas County for many years, that was our perennial battle with the upstate counties and cities.

And you ask why they can't do it. The formula is easy and the answer is easy: There are more votes of those who want to keep the gas tax that they now have than there are votes among those areas of a given State that want to change that formula, and this is a democratic representative form of government we have in America, and that is the end result.

Mayor ALIOTO. If that were on the competitive merits, fine, I really wouldn't have any argument with that. I just wonder whether the incredible aggregation of economic power which has gone into what we call the automobile lobby, and that includes the auto companies as well as the automobile manufacturers, whether that incredible aggregation of power has not resulted in a disproportionate political power that has nothing to do with numbers of people so much as it has to do with numbers of dollars.

Senator HRUSKA. Well, I don't know. The membership rolls of the automobile clubs are quite substantial, and I think the numbers of people in the California Automobile Club have something to do with the result of the vote on proposition 18. Would you hazard a guess that is a possibility?

Mayor ALIOTO. No, I think the real thing had to do with something else. We are going to vote on it again in June. We have it on the ballot again, and it is one of those ideas whose time has come, and I think it is not so much the number of automobile votes, as the fact that $330,000 was spent in the campaign against it, and $15,000 was spent in the campaign in favor of it. I think that has something to do with it, too.

Furthermore, the absolutely dishonest advertising that proposition 18 was going to increase taxes, "pay more taxes, vote no on 18." It seems to me that that had something to do with it, too.

Now, Senator, I am not an antiautomobile nut. I drive and enjoy it myself. I want to make that plain. All I am asking is for balance and that we be treated in rapid transit without discrimination.

Senator HRUSKA. Well, wasn't that the question? How do we achieve balance? Do we achieve it by breaking up the large manufacturing companies, the large oil companies, the large banks, the large insurance companies, or do we achieve that balance in another fashion? That is what we are concerned with.

Mayor ALIOTO. Senator Hruska, there is nothing wrong with bigness if bigness has competition. Under a free enterprise system we ought to break up any situation where competitive products have an interlocking control.

I think that is good free enterprise, it is good competitive capitalism; and you and I believe very, very strongly in that.

Senator HRUSKA. Yes, I think so; and then, of course, we get into another line of the hearing. The chairman was here when we had hearings on the American Telephone & Telegraph. Not too long ago one of my staff, who was a newspaperman, got out to the town where they have the big rodeo, Burwell, Neb., in the sand hills. He

wanted to file a story. The Governor came out there and he rode out on a little horse and he had a great time. The newspaperman wanted to file this story with the Lincoln Star. He went to the telphone exchange, and they had a black exchange and they had a red exchange. He couldn't get a connection to connect to Lincoln, Neb., which is only 180 miles distance.

And somehow or another, that idea of competition lost flavor in his liberal mind and philosophy then and there, because he didn't see why he had to put up with that kind of competition which was competition to be sure, but no service.

So, we get into those things, you see, and you say all business should be treated alike—even the A. T. & T. that hooks up a nation like this. That is one of the things we are struggling with under this same bill that is being considered in these hearings today. The one introduced by our beloved chairman of the subcommittee.

Mayor ALIOTO. Yes. Well, Senator, first of all, I don't regard competition as a liberal concept. The antitrust laws were passed by a very conservative Congress, and signed by a relatively conservative President, and I think that the first big push was given by Theodore Roosevelt in a Republican administration, and Taft gave it a big push forward.

So, I don't think competition is liberal or conservative.

I think we believe in the free enterprise system, and a free enterprise system means competition, and it means competition particularly so far as competitive commodities are concerned.

Senator HRUSKA. Well, we will get into these matters further.

Mr. Chairman, I would suggest that selected excerpts from this 20-year-old testimony, commencing at page 3919, and going for a suitable period beyond that, be inserted at this point in the record so that we can demonstrate that adage, "the more things change, the more they are the same."

Thank you for being here.

Mayor ALIOTO. Thank you very much.

Senator HART. The excerpts will be printed.

[The excerpt referred to appears as exhibit 6 at the end of Mayor Alioto's testimony.]

Senator HART. I am not sure that the maxim is correct, "the more things change, the more they stay the same." I had the impression that things had gotten worse.

Mayor ALIOTO. It is very bad. It is just outrageous that Western Europe and Japan should do so much better than we are doing in this area, and they aren't hurting the automobile.

Senator HRUSKA. There is a solution for that. The Americans should move to Japan and Europe.

Mayor ALIOTO. No, no; that isn't the solution at all.

Senator HRUSKA. But when we don't have conditions like theirs, it makes it a little difficult.

Mayor ALIOTO. No; the solution is to restore competition and free enterprise in America. That is the real solution.

Senator HRUSKA. Have the railroads in Europe got competition, Mr. Mayor? They are Government owned.

Mayor ALIOTO. There is competition in terms of developing electric trains, specialty buses, smog-free automobiles. There is competi-

tion in that area which has not been restrained by the heavy hand of one or a group of companies controlling all of those rival forms of transportation. They have that much more competition than we have.

Senator HRUSKA. Every one of those modes of transportation are Government owned. That is a monopoly.

Mayor ALIOTO. But a Government monopoly. A. T. & T. is a legalized monopoly, too.

All I am suggesting is that even though Government owned, they are at least permitted to develop competitively on their merits, and in America that has not been the case. We have developed on the basis of monopoly orchestrated for the automobile, and I think that is the answer.

Senator HART. Senator Tunney.

Senator TUNNEY. Thank you, Mr. Chairman.

I hate to interject myself to the colloquy that is going on between Senator Hruska and Mayor Alioto, I was enjoying it so much. I am afraid my questions are going to seem somewhat dull by comparison.

I was very interested in what you had to say, Mr. Mayor, with respect to the way the automobile industry has sought to control all means of transportation within the city of San Francisco; the dieselization, or attempted dieselization of the transportation system within the city; the dieselization of the system as it went across the bay and took over the commuter traffic to Oakland and to Marin County; the fact that the highway lobby, including the automobile industry, fought the bill; the freeways in the city; and the fact that GM made efforts to block the construction of the BART system, which is contained in your written statement.

I noted you commented favorably on the monograph that was written by Bradford Snell, and which was presented to our subcommittee.

Mayor ALIOTO. Yes.

Senator TUNNEY. On page 32 of that monograph, Mr. Snell writes:

> In April of that year [1949], a Chicago Federal jury convicted GM of having criminally conspired with Standard Oil of California, Firestone Tire and others to replace electric transportation with gas- or diesel-powered buses, and to monopolize the sale of buses and related products to local transportation companies throughout the country.

Now, if that was the ruling in that case, why is it that suits weren't brought in San Francisco in order to block the takeover of the transportation system in that city by General Motors, Firestone Tire, and Standard Oil?

Mayor ALIOTO. That decision, I recall, was 1949, and thereafter a civil suit was filed, I think, in Chicago, to which the Senator has referred. The unfortunate thing is that out of that civil suit you could not get an effective divestiture.

Now, as to why lawsuits weren't brought at that period of time, I think you have to recognize that except for a few of us, nobody was bringing any such lawsuits back in 1949 on behalf of cities.

We have now come to a point, thanks largely to the electrical conspiracy litigation, where there is a greater antitrust consciousness among private persons, but more important, you have a greater number of members of the bar who are now competent and quite able, and quite willing to bring this sort of litigation.

So, the fact that litigation was not brought back at that period of time could be explained in part by that, but there is another element. After all, this was done by private arrangement between General Motors and the Key system, and at that time we didn't have well-recognized public interest litigation. The class action had not been developed. The statute was later developed largely by cases we brought in the late 1950's and early 1960's.

There are lots of reasons why litigation was not brought.

The more important thing is, the Government did, in fact, bring litigation. But as happens so many times, when litigation against admittedly illegal conduct that violates our concept of competitive capitalism is brought, the Government gets tired waiting for relief and quits too early. This has happened too many times.

Senator TUNNEY. I noticed in that case that the treasurer of General Motors, H. C. Grossman, was fined $1 by the court.

Mayor ALIOTO. That is the other thing. It wasn't until the electrical cases, actually, that we got the notion that maybe we ought to be a little tough on fines against those who repeatedly violate the antitrust laws, as they have.

You remember, they found them guilty of monopolizing the financing. They were found guilty in a criminal case in the seventh circuit of monopolizing financing.

DuPont was forced to divest its stock interest in General Motors because it would seem to be anticompetitive.

National City Lines suffered both a criminal case and a civil case.

So, it is not that actions weren't brought. We just didn't ultimately get the kind of relief that was necessary.

Furthermore, judges, up until recently, have been reluctant to grant divestitures, and that is why I think Congress can better do it. Congress did do it in the aviation industry. You told General Motors you didn't want them in the aviation industry. You told them to get out, and they got out, and I think that you ought to be doing the same thing so far as rapid transit is concerned.

Senator TUNNEY. Could you just sketch in general terms—I know that it would be impossible for you to do it in any detail in this particular setting—the major thrust of such legislation and the general areas that you think such legislation should address?

Mayor ALIOTO. I think the legislation should simply call for the divestiture; not unlike what you did in the Stockyard Act for retail distribution; not unlike what you did in the Aviation Act when you got the automobile manufacturers out of the airplane industry. I think that divestiture should be limited, first of all, to the bus and rail business of General Motors.

We have had experience with divestitures and the organization of new companies where the same stockholders, for example, would simply take different interests in various portions of the company. We did that in connection with motion pictures.

In 1950, you recall, there were consent decrees after long litigation which required the motion picture producers and distributors to divest their theaters, and they went through the organization of new companies and a rearrangement of stockholders with new management.

You did that in connection with banks. The Trans-America Co. is one example. Another bank that was part of the Giannini family of companies and when divestiture was ordered, it started out still acting as though it were a sibling company. But later on, it developed quite independently and competitively.

So, I think the initial legislation should be on freeing the equipment that we need in rapid transit, putting it in the hands of those who don't have automobile motives in their plans. I think we just need good, old-fashioned, free enterprise that is not controlled by related considerations of a rival form of transportation. And I think that you can form new companies out of that, and you can encourage other companies to get into it.

But simultaneously, you must provide funds. And the President is now beginning to do it. For the first time the President has proposed to use Federal funds to subsidize operating deficits—for the very, very first time. And Congress is getting a new awareness about financing rapid transit operations, both in terms of capital additions and operating subsidies.

Unless you couple that legislation with a real intent to finance rapid transit, not on the same basis as the automobile—we don't expect such favored treatment, but we want to be treated not like Cinderella, too, we don't want to be treated like an orphan in this setup.

And if you do it that way, I think you are on the road to establishing a truly competitive mode of transportation, and I think San Francisco serves as a pretty good example of it.

On the matter that Senator Hruska touched upon, we have people now driving up from the peninsula, parking their car in Daly City where it doesn't cost as much as downtown garages, and where there is more space for parking, and getting on the BART system and going downtown.

You see, the natural interplay of competitive forces will kind of take care of many of the things; you are getting a real balance there.

People come from the peninsula where you don't have a rail system, park in the outskirts of San Francisco and get on the BART system.

So, you combine both elements, but you don't bring the automobile right into the central city where congestion and pollution become serious problems.

Senator TUNNEY. That, of course, is also true, isn't it, Mr. Mayor, that with the increased price of fuel—it is estimated, for instance, that American consumers are going to spend $50 billion more for fuel, for energy, this year, than they did last year—that rapid transit becomes more competitive?

Mayor ALIOTO. The basic reason, I guess, Senator, for the better balance in transportation in Western Europe and Japan is exactly because gasoline costs so much in those areas.

It is also the reason for a little inventiveness in design and in compact cars, and tendencies such as that.

So, there isn't any doubt that what has happened on the price of oil is going to make a lot of people think in terms of the advisability of balancing the automobile with clean and cheap and good rapid transit rides.

Senator TUNNEY. Well, Mr. Mayor, I would ask you many more questions, having the expertise that you have in the antitrust field. There are many shades of definitions that I would like to go into with you as related to the legislative possibility for this committee. But I can tell that your voice is getting a little fragile, and we have other witnesses as well.

So, I just want to thank you very much for making such a fine statement to the committee, and outlining, as an expert in the field—not only in the field of antitrust law, but as an expert in the field of trying to develop a balanced transportation system in your city—what the problems are, and ways that we can remedy the tremendous stranglehold that the automotive industry has on transportation systems within our major urban areas. I subscribe in almost every detail to what you have said, which probably opens up a possibility for some dialogue with Senator Hruska.

Mayor ALIOTO. Thank you very much.

Senator HART. Mr. Chumbris?

Mr. CHUMBRIS. Mr. Chairman, the question of rapid transit came up several times and I have a statement by Thomas C. Mann, president of the Automobile Manufacturers Association given before the Subcommittee on Housing of the House Committee on Banking and Currency, March 12, 1970, wherein he testified in support of S. 3154, which would have provided from general revenues, $10 billion over a 12-year period in Federal assistance for public transportation facilities in the urban areas. This sum is to be supplemented by $5 billion of locally contributed funds.

Along with that I have a second statement, presented on March 11, 1970, to the same subcommittee of the House Banking Committee from General Motors Corp. also supporting S. 3154 and H.R. 16261, the Urban Mass Transportation Assistance legislation, which would have provided long-term Federal financing assistance to local communities for expanded urban mass transportation; also I have an article here dealing with the BART system, "San Francisco: A Brainy System With a Big Headache" is the subtitle of it.

I would like to have the three articles mentioned received for the record. Thank you.

Senator HART. They will be printed in the record.

[The following was received for the record. Testimony resumes on p. 1839.]

MATERIAL RELATING TO THE TESTIMONY OF MAYOR ALIOTO

Exhibit 1.—Prepared Statement of Mayor Alioto

STATEMENT OF HON. JOSEPH L. ALIOTO, MAYOR, SAN FRANCISCO, CALIF.

It is my firm conviction that the effects of monopoly are one of the major—if not the major—problems of our time.

The energy crisis is demonstrative of that point of view. Monopolists, both home and abroad, have seized control of oil, the world's most developed and accessible energy source. The effect has been the literal whipsawing of consumers in every nation by the monopolistic creation of artificial shortages, which continually trigger higher prices to provide inordinate profits for the oil monopolists. Indeed, the actions in concert by multinational oil firms are endangering the economics of not only North America but Western Europe, Asia, and the Orient.

The basic monopolistic practice in the auto industry is the interlacing and interlocking control of competing modes of transportation. It is a problem I

believe has never been fully considered in antitrust law. It is a problem which has never been fully attacked.

In fact, the interlacing control over rival products has become widespread enough to create a wilderness of predatory business practices.

Among interlacings, we find that oil interests control 30 percent of the coal resources of this nation and are major investors in 50 percent of the largest coal producing companies. Yet coal and oil are basically competitive energy sources. The production of one is orchestrated to the suppression of the other. That orchestration has been attuned to the most profitable, which has been oil.

In Northern California, we have geothermal fields holding promise as major sources of energy. Yet we find these geothermal fields under lease to major oil companis with measured, controlled development.

Nor is it a secret that oil interests have assumed control of at least 30 percent of uranium supplies, a rival source of energy that has made little headway in realizing its potential for peaceful power production.

It was my personal experience as a trial lawyer to bring to public attention the case of two absolutely rival products merging interests solely to allocate markets and assure greater profits for each. I am also happy to recall my clients $22 million in damages from these conspirators acting in restraint of free trade.

The rival products were steel and concrete. The conspirators were producers of large diameter irrigation pipe and their customers were, in the main, governmental agencies. Pipe of this size is interchangeable.

The steel and concrete pipe men sat down and assigned themselves code identities—white for concrete and black for steel. Then they divided the market, with white performing where the profit would be greatest in concrete installation and black performing the work when conditions were to his advantage. It was a classic case of interlacing control by rivals who logically should have been at each others economic throats, a stance that would have benefitted the taxpayers underwriting the costs of their pipe installations.

There have been instances of orchestration in this nation whereby gas and electric monopolies have dictated which service will be provided to housing in new subdivisions, thus assuring the currently popular and most profitable energy source will control the market.

This interlacing of controls of rival products has continued to expand despite the United States Supreme Court voicing its objection in strongest terms in 1964. At that time the court upheld the decision voiding the merger of Continental Can Company and the Hazel-Atlas glass manufacturing company. The court held, in effect, that it was a violation of antitrust laws for the manufacturer of one basic product to seize control of its major competitor.

At the time of agreement to merge, Continental was the nation's second largest producer of metal containers. Hazel-Atlas was then the third largest producer of glass bottles and dominant in the manufacture of resusable glass bottles common to the beer industry. A predictable result of the merger, according to the court's view, was that reusable bottles would disappear from the marketplace. As noted by the court, the best estimate of the effect of monopolizaion was that the $3 million annual reusable bottle business would be transformed into a $90 million annual, non-reusable, metal container business, with the public obliged to suffer the $87 million penalty for predatory commercial practices.

No mention was made in the decision of the effects of the disposal of $90 million worth of so called one way beer cans but today we are all aware of the environmental scars left by the used beer container.

Exhibit Number One of the subcommittee's inquiry into the monopolization by automakers, is the concerted effort by General Motors Corporation to effectively control production of all ground transit vehicles and manipulate the marketing in favor of its most profitable product, the automobile. There is much evidence to prove the premise that General Motors has been willing to go to almost any length either to eliminate or control of all competitive forms of ground transportation—busses, locomotives, street cars, and electric busses—so the automobile remains number one.

My experience, both as public official and private practitioner of antitrust law, has been that the automotive industry presents the biggest monopolistic aggregate of power in the history of the world. Because of its operations in many different nations, the multinational character of the industry has conferred power equal, and sometimes greater than governments of sovereign states.

In San Francisco, it would appear at first glance that the automotive monopolists have won the battle. The city, in which I am mayor, is noted for having the greatest concentration of automobiles per square mile of any city on the globe. But second glance will show that San Francisco is winning the war against automobile saturation. San Francisco is a courageous city.

It has been able to maintain diverse and often competing forms of mass transportation. The cable cars, unique to the city and beloved by native and tourist alike, carry nine million passengers per year in what might be termed smogless splendor. Our Municipal Railway provides service for 185 million riders by electric driven track streetcars, by smog free electric busses, and by diesel busses. Our experience has been the bus has been the least efficient and most smog producing form of transport. It is a manifestation of the concerted effort by the diesel bus monopolists to end all electricity powered mass transportation but it, happily, has been only a partial manifestation. The city has rejected all plans for final and complete transformation to busses and private passenger autos. What might be termed the newest gem of San Francisco's mass transportation concept is the subway and surface system provided by BART, the Bay Area Rapid Transit District. BART has provided the city with the most modern, smog-free, electric trains in service in the nation. Soon it will be sending its vehicles via tube beneath San Francisco Bay to link Oakland, Berkeley, and other east shore communities of the bay in a truly integrated mass transit system. We in the Bay Area feel BART is the first genuine attempt in more than half a century to combat the pernicious effects of the combustion engine by luring people out of their cars.

This "San Francisco Experience" has been carried out in defiance of the auto, truck, and bus industry's dicta that environmentally pure electric mass transportation must inevitably perish to be replaced by the smog producing diesel and gas driven vehicles.

The San Francisco experience also includes defiance to the freeway-at-any-cost concept. The highway lobby, which is nationwide and financed in the main by monopolists of the auto, tire, and oil industries, was insistent in its demand that freeway extensions be literally rammed through San Francisco. There was total disregard for destruction of homes to make way for new freeway routes. There was equal disregard for the realities of a city with too many cars and in no condition to absorb more autos hurtling into it, courtesy of the destructive freeway system. However, the highway and auto lobbies, with the aid of the well organized automobile associations, ruled that San Francisco must accept freeways no matter what the cost to the environment and hardship to the citizens.

The result was the "freeway revolt" of 1959. That was when the city's supervisors reacted to public outcry and said an unequivocal "no" to construction of additional freeways that destroyed the beauty of the city and dislocated living arrangements of hundreds of residents.

I was injected into the freeway revolt in 1967 when I was mayor-elect but had not yet assumed office. At the time it was one of my political goals to see the Port of San Francisco taken from the administration of the State of California and turned over to purely local administration.

As an example of the power of the freeway lobbies, I was visited in my office by Robert Finch, then the lieutenant governor of the state. His candid suggestion was that if I wanted the state to relinquish the port I must approve the building of a freeway across the city's northern waterfront. The freeway would destroy one of the most magnificent views in the city.

I declined. I am happy to report that San Francisco was successful in assuming control of its port and is in the process of revitalizing it.

The matter did not end there. In early 1969, Governor Ronald Reagan accused me in an open letter of making "non negotiable demands" in my insistence that no surface or above ground freeway would destroy the beauty of the waterfront. My reply at the time—and it is still my conviction—was that the proposed freeway would be built "only over my dead body".

Today, some freeways in San Francisco terminate in stub ends. But the city has not become the catastrophic scene envisioned by the pro-freeway factions. It continues to operate without multilane highways serving no useful purpose and will so operate until freeways can be constructed in areas least harmful to the normal life of the city and preferably underground.

The city's battle against freeways has not been, however, without penalty. Frustrated lobbyists for monopoly have been continuously successful in pre-

venting state and federal gasoline taxes generated in the city from being allocated to improving mass transportation.

More than $24 million is generated in the city annually. While major portions are returned to the city, there remains a significant gap of approximately $3 million per year between what is generated in San Francisco and what can be spent there. The potential loss is even greater because of my city's freeway revolt. The loss could be set at $348 million because that is the sum that was programmed to have been spent over a period of years on the freeways that San Francisco would not allow. That vast sum now is programmed to be spent in another area of California, but only for freeways. I cannot avoid speculating on the greater benefits to San Francisco and the Bay Area if even a portion of that sum was being programmed for improvement of mass transit systems.

A demonstration of the terrifying power of the automobile monopoly occurred in the demise of the Key System that once linked San Francisco to Oakland and other communities of the east bay region.

Key operated 180 electric streetcars and 50 sleek, fumeless, electric passenger trains across a right-of-way on the lower deck of the San Francisco-Oakland Bay Bridge. Key was the corporate child of Railway Equipment Co., a locally based mass transit company.

In 1946, National City Lines, a holding company organized and financed by General Motors, acquired the controlling interest in Key's parent company. A scant two days later, GM's newly acquired transit company announced that street cars would be replaced by busses. The busses, a fleet of 200 vehicles were purchased during the next two years from GM.

In 1954, Key announced its intention to replace its bridge trains with busses. The announcement came amid reports that the once sleek and comfortable trains had been allowed to deteriorate and that Key already had been running paralell busses on the transbay span.

In early 1958, Key began demolishing its track system so that the bridge deck would be paved and readied for additional auto traffic. This occurred at a time when the embryonic BART Commission was making first plans for a transbay mass transit system and could have used the Key System bridge right-of-way.

Ultimately, BART was forced to spend $180 million to make a transbay tube connect on. Meanwhile, automotive traffic rolls on the paved over bridge right-of-way that would have been the least expensive and most logical connection.

Two years after completion of the track destruction, National City Lines sold the assets of its total bus system to the Alameda-Contra Costa County Transit District for $7,500,000. The amount of profit to the GM controlled seller was not reported but the contract of sale pledged the transit district to replace its equipment with nothing but GM manufactured busses.

In all, General Motors, acting through subsidiary mass transit companies, acquired 46 street car systems in 45 cities and converted all to smog-producing bus operations.

The experience of Key System was not the only manifestation of the fingerprints of monopoly on mass transit in the San Francisco Bay Area. Another might be termed "the BART experience."

When initially organized, the total cost of the Bay Area Rapid Transit District had been estimated at approximately $1 billion. However, steady inflation, unforeseen development difficulties in a radical technology, and a score of other setbacks, left the BART treasury empty long before its first train was in operation.

In 1970, backers of mass transportation in the fight against the automobile, placed on the general election ballot a measure which once more would attempt to divert gasoline tax money to mass transit developments. The measure also would have allowed spending of gas moneys for smog control. Earlier history had proved such themes anathema to the auto and gas monopolists.

A well financed group—it reported collecting $348,000 and spending $333,000—began the vigorous campaign to block passage by the voters of the constitutional amendment. Nominal leaders of this fight were the California State Chamber of Commerce and the Automobile Associations of the state. Some oil companies were listed as donors and a trucking company also was listed.

The amendment was placed in the eighteenth position on the ballot and thus became popularly known as "Proposition 18". As a billboard slogan, its

foes adopted: "More Taxes? No on 18". It seemed curious sloganizing against a measure that called for no tax increase.

Backers of "Prop. 18" collected and spent but $15,275. The measure was defeated by 700,000 votes and monies that could have aided in salvaging BART were maintained sacrosanct for more road construction.

Later investigation, however, proved that oil monopolists had played a much larger role in the defeat than first had been believed. Standard Oil Company of California, which had declared that it had contributed but $30,000, was forced to confess that it had given an additional $45,000 secretly. The secret contribution, the oil company admitted, had been made in two cashier checks drawn by persons not identified with the company's interests. Among other confessors of secret contributions were Mobil Oil, $30,000; and Gulf, $20,000. The secret donations amounted to $95,000 and it is noteworthy that each individual contribution amounted to more than the pittance $15,275 spent by backers of mass transportation.

In a very real sense the oil monopolists were willing to let BART remain a hole in the ground rather than a threat to their profits.

BART did secure additional financing but by a means many consider bordering on cruelty. A one cent additional sales tax was assessed in the three counties served by the BART system. It needs no stressing here that sales tax increases always cause the most hardships among the poor and elderly.

One aspect of monopoly that I find most distasteful and near unbelievable is the government acting in concert with monopolists. A notable example is the auto emission conspiracy. It started in 1955, when the big four auto monopolists agreed they would collaborate rather than compete in the development of smog control devices. The following year they reduced what had been an oral agreement to writing. The conspiracy continued until 1968 marked only by the industry holding back two likely emission control devices from the market. In 1968 the government filed suit alleging a conspiracy against the anti-trust laws.

The following year, then Attorney General John Mitchell accepted a consent decree from the automobile manufacturers. The decree is one of the strangest on record and anticipated his later selling of anti-trust settlements as though they were articles of merchandise.

Key to the settlement was that if any manufacturer developed a workable smog control device, he would make it available without collections of royalties to his competitors. Thus the incentive to invent a good emission control system was abolished with approval of the attorney general of the United States and what the government sought to prevent in a prior presidential administration was cemented into corporate business practice by John Mitchell in the current administration.

Recommendations to this subcommittee for the remedies to the evils of monopoly should include, I believe, the strongest urging that common ownership of basically competitive resources and products not be allowed.

I believe such principle should be applied not only in the automotive industry but that oil should be separated from its competitors—coal, geothermal, and nuclear. Steel should be separate from concrete and related products. Gas should be separate from electricity and aluminum free from the control of monopolists in other ore production. Let each product and energy be free to seek its own level of acceptance.

Who must be responsible for separation?

My belief is that the means must be provided by the Congress. Courts have not been notably reliable or resolute in enforcement of antitrust laws currently on the books.

With more than a quarter century law practice, specializing in antitrust litigation, I find that courts are the slowest to act. My experience tells me a good number of judges are biased in favor of business. Such a bias is not evil in itself. But it is rare to find a business-biased judge willing to order a monopoly divertiture. I find there is increasing evidence that courts go out of their way to favor antitrust violators and ignore the pleas for redress by those with a legitimate right to pursue a civil suit against the offenders.

There is no doubt that GM and other powerful auto makers have restructured our society to suit their desire for profit. Mans' environment has been fouled to create an environment for the automobile. It has been impossible for any means of ground transportation, other than the auto, to find even a niche in American society.

The time has arrived for Congress to begin restructuring monopoly to benefit a nation in need of a pure environment and many modes of transportation.

It is time the cities were supplied with the types of busses, subways, electric trolley, coaches, and streetcar systems denied them by the highway, oil, and automobile lobbies.

Restructuring monopoly must provide the innovative, separate, producers that will supply these products. It appears extremely unlikely that GM will produce the efficient, smog-free, locomotive that will make obsolete its current diesel model. Nor does it seem likely that a company wedded in concept to the internal combustion engine will suddenly loose its many automotive producing divisions to compete in perfecting emission-free engines of radical design. Monopoly has proved its preference for the plodding and tried ways. In the automotive industry we witness an almost complete absence of price competition.

There has been design competition but it could be termed a negligible factor in genefitting the public. This competition generally is manifested in all manufacturers aping the feature that briefly set one particular model apart from all others. Symptomatic of the trend was the vying by manufacturers in the 1960s to produce the biggest and most useless fender fins.

Indeed, we note models produced by the Buick, Chevrolet, Pontiac, and Oldsmobile Divisions of General Motors exhibit great similarity in styling. In some instances, models have been produced from a common body with cosmetic touches in grilles, bumpers, and headlights to differentiate products of each division. But there is notable absence of price competition in the marketing of vehicles comparable in size, and horsepower rating.

The greatest wisdom certainly calls for divestiture by the auto makers of the subsidiaries in direct competition with the auto. I mean that GM should not be in the business of making busses, railroad locomotives, and trucks that compete with its autos.

I should like to note some other benefits of divestiture in the automobile industry. The industry, because it has not kept pace with changing times that created the energy crisis and demand for small cars, is faced with a surplus of unsold automobiles. The surplus has caused layoffs of at least 100,000 workers. This unemployment may continue. I suggest to members of this subcommittee that a solution would be to use the excess but idle capacity of the automotive industry to return these workers to employment creating the products necessary and in demand in a competitive economy. Freed from monopoly's inertia, the assembly lines could be producing the trains, busses, and new types of transport vehicles this nation need so desperately.

It appears inevitable that Congress must legislate the changes to restructure monopoly. However, to do without consideration of the damages caused by monopoly would be to ignore a major phase of the problem.

The practices of monopoly have damaged the mass transit efforts of my own and other American cities. The cities of this nation are now without the funds to repair that damage. True, the President has recommended that $1.4 billion be made available in the next federal budget for the improvement of mass transportation system. But we mayors of large cities, faced with the largest problems, believe the sum is not half enough to even partially undo the harm caused in the past. For the initial effort in the next budget, the sum of $3 billion would be a more adequate figure. Justice demands payment of reparations for injustices allowed to exist in the past.

Finally, I would like to point out that continuous overpricing by monopoly creates the fund that perpetuates monopoly. It has been reliably estimated that car buyers in 1972 paid $2 billion in unnecessary charges. Such a sum is a logical source of finances for the lobbies which mould opinion, governmental and private, in favor of the automobile to the detriment of mass transit. It is a type of lobby funding this nation neither needs nor can afford.

Exhibit 2.—Statement of Thomas C. Mann Before House Committee on Banking and Currency Subcommittee on Housing, March 12, 1970, Re Federal Assistance for Public Transportation Facilities

STATEMENT OF THOMAS C. MANN, PRESIDENT, AUTOMOBILE MANUFACTURERS ASSOCIATION, BEFORE SUBCOMMITTEE ON HOUSING, HOUSE BANKING AND CURRENCY COMMITTEE, MARCH 12, 1970

Mr. Chairman, members of the Committee; I am appearing here today on behalf of the Automobile Manufacturers Association to express support for

S. 3154 which would provide, from general revenues, $10 billion over a twelve-year period in federal assistance for public transportation facilities in urban areas. This sum is to be supplemented by $5 billion of locally contributed funds.

We believe that the social need for improved public transportation has been clearly demonstrated. Because it has been fully and eloquently covered by testimony already presented to this Committee, I will not take your time to discuss it further.

In testimony before a Senate committee concerning similar legislation, we also covered a number of other issues—including the concept of trust fund financing—which were under consideration at that time. In the interests of brevity, I will not go into these issues in my formal statement today but would like to leave copies of that testimony with the Committee for reference.

The need for federal assisance for mass transportation rests on the premise that fare box revenues will be inadequate to pay for construction costs of mass transportation systems, especially fixed rail facilities, and that cities are not otherwise able to meet these costs.

Thus, we are talking principally about a federal grant or subsidy program to meet a social need. We believe that the kind of federal-local government partnership proposed in S. 3154 is the proper way to cope with the problem.

In addition to supporting federal assistance for the construction of fixed rail systems in selected metropolitan areas which demonstrate a need for them, we welcome the provisions of E. 3154 which would make it possible for help to be extended to the many communities which depend on bus transit. Under the sponsorship of our Association, Wilbur Smith and Associates has recently completed a study entitled *The Potential for Bus Rapid Transit* which will hopefully prove helpful to federal and local officials who must decide on the kinds of urban transit facilities which best meet needs of different localities. I would like to leave copies of this study with the Committee for your information.

We continue to support federal programs to help build adequate highways which serve buses, trucks which move goods, and private vehicles which are preferred by the vast majority of our people as the means to get from one place to another. None of these modes for transporting people and goods should be regarded as a substitute for other modes. All of them are needed if we are to have balanced ground transportation adequate for the needs of our people today and tomorrow.

We also support the concept of contract authority contained in S. 3154.

Experience teaches us that from the time fixed rail systems are first planned until they are operational at least 10 to 12 years will have elapsed. Representatives of local communities are unanimous in stressing the long-term character of the undertaking and, therefore, their need for adquate assurance that federal funds wil be available to cover two-thirds o fthe cost of land acquisition and construction. It seems to us that this is a legitimate need. On the other hand, there is also need for Congress periodically to reassess priorities and to review spending programs in light of changed conditions and availability of funds.

S. 3154 recognizes both these needs and seeks to strike a proper balance between them. On the one hand, the Secretary of Transportation would be authorized to "incur obligations in the form of grant agreements or otherwise not to exceed $3,100,000." This amount shall, the bill states, "become available for obligation upon the effective date of this subsection and shall remain available until obligated." This authority to obligate funds—this contract authority—is essentially the same technique as that which has been used successfully in the highway construction program.

On the other hand, the right of periodic review by Congress is substantially safeguarded by provisions which authorize appropriations (for liquidation of the obligations incurred) according to a schedule covering the period from fiscal year 1971 hrough fiscal year 1976—and by the requirement that the Secretary submit not later than February 1, 1972 requests for authorizations for fiscal years 1976 and 1977. Similar requests must be made by the Secretary for subsequent fiscal years.

It is true, of course, that both the highway program and in the proposed public transportation program Congress must periodically make appropriations for liquidation of federal obligations incurred in the exercise of the Secretary's contract authority. In both the highway program and the proposed public transportation program Congress has the power to reduce or increase the pace

at which expenditures may be made. In both programs Congress also has the power, if it sees fit, to increase or diminish authorizations and appropriations. But we know of no reason to anticipate that the Congress will fail to honor firm contractual obligations made by the Secretary in the exercise of his contract authority. especially when commitments have been made by local transit authorities in reliance on those obligations. We believe, in sum, that the contract authority which the bill under consideration would give the Secretary would permit transit authorities to plan and act with confidence once federal funds have been firmly committed to their particular project.

We also think it is entirely appropriate, and in keeping with established practices, to defray the federal share of the cost of providing for this social need of urban communities out of the general revenues. In this way, the federal share of the burden is distributed evenly and equitably over the entire population rather than imposed, in a discriminatory fashion, on only a part of the population.

In sum, we believe that the program provided under S. 3154 is one which should have the support of everyone interested in meeting the urgent need for improved public transportation.

Thank you for this opportunity to present our views.

Ezhibit 3.—Statement of GM Corp. Before House Committee on Banking and Currency Subcommittee on Housing, March 11, 1970, Re Urban Mass Transportation

A STATEMENT OF GENERAL MOTORS CORP. TO THE SUBCOMMITTEE ON HOUSING OF THE HOUSE COMMITTEE ON BANKING AND CURRENCY ON URBAN MASS TRANSPORTATION, MARCH 11, 1970, PRESENTED BY OSCAR A. LUNDIN, VICE PRESIDENT, FINANCIAL STAFF

Good morning, Mr. Chairman, and Members of the Housing Subcommittee of the House Banking and Currency Committee. My name is Oscar A. Lundin. I am vice president in charge of the Financial Staff of General Motors Corporation. With me is William M. Spreitzer, who is in charge of the General Motors Transportation Research Department.

We are here today to express our support for S. 3154 and H.R. 16261, the Urban Mass Transportation Assistance legislation which would provide long-term federal financing assistance to local communities for expanded urban mass transportation. We believe there clearly is a need for this larger federal government role. The transportation needs and desires of our citizens have exceeded the funds thus far available.

Public transportation is facing difficult challenges today all over this country. Transit operators—both public and private—are caught in a two-way financial squeeze:

On one side, they are being hampered by rising operating costs, a deficiency of component personnel and lack of funds to provide equipment which is operative and adequately maintained.

On the other side, transit patronage has been declining steadily. In 1968, according to American Transit Association data, the number of transit revenue passengers dropped to 6.5 billion, compared to 13.8 billion in 1950. This decline has been evident in both rail and bus transit patronage.

The decline in the quality and frequency of public transportation service has burdened many groups who are unable to use or cannot afford private transportation—particularly the young and the elderly, the physically handicapped and the poor among our inner-city residents.

The legislation recognizes the needs of such groups and takes into account the fact that fare box revenues alone have not supported—and cannot be expected to support—an adequate urban transportation system.

This legislation also recognizes that the need for improved urban transportation is not limited to a few very large cities. All cities would be eligible to participate, and we understand that the 233 urban areas with populations of 50,000 or more have already instituted the comprehensive and continuing planning process contemplated by previous federal legislation.

The provisions for financial assistance in both bills are a necessity for achieving viable urban transit systems. The legislation would achieve two important objectives: First, it would enlarge the total amount of federal finan-

cial assistance; and, second, it would provide local communities guarantees of assistance which are long-term in nature.

Currently, under the 1964 Act, urban areas wishing to improve their services have been limited in obtaining their required one-third share of total project costs in part because there has been no assurance that the supplementing funds from the federal government would be available over the longer term. The legislation currently before this Subcommittee provides the assurance of federal long-term funding required to complete projects once undertaken. Without this, progress in mass transit development would continue to be restricted.

In our opinion, this legislation has the ingredients necessary to do the job. It recognizes (1) the partnership principle that has worked well in other federal-state-local programs, (2) local judgment and control as to the transportation needs of the community, and, (3) most importantly, the principle of long-term commitment.

The needs of the cities are both short-term and long-term in nature. Both are contemplated in the legislation.

As to the short-term, a significant part of today's problem is the aging equipment being used by many local bus and rail transit systems. In some areas, for lack of funds, replacement of obsolete equipment has been impossible, and equipment has been idled for extended periods by repair or major maintenance needs. It is hardly surprising, therefore, that public transit riders have complained about deteriorating service and have sought alternate solutions to their transportation needs. Thus, it appears that with new or overhauled equipment, accompanied by better service, substantial improvement could be achieved on a fairly quick basis.

Equipment is only one area in which short-term improvements in public transportation could be achieved. The quality of the service would also be improved by greater availability of fringe park-and-ride facilities, increased numbers of passenger shelters, two-way radios in the buses and computerized ticketing techniques now being employed in some rail and air passenger service. Traffic control systems designed to expedite bus transit, exclusive bus lanes and better communication with the public would also contribute to improved service.

We are convinced of the value of these approaches to the short-term improvement of public transportation systems. At the same time, we are well aware of the contributions which will flow over the longer term out of the comprehensive transportation planning process provided for in the 1964 Act and now to be continued and expanded if this new legislation is passed.

For example, sound system-wide urban transportation development requires that continuous study be given to questions relating to the factors which influence the choice users make or will make among various transportation modes. Would the services and equipment proposed for a specific community with its individual characteristics and requirements provide an efficient and coordinated mass transit system for the longer term? Or is it a short-term solution which should be considered in the light of future requirements? It is clear that the answers to such questions will change as the technology of urban transportation progresses. Provisions in the legislation for continuous study are, therefore, especially important.

Also, in long-term planning, account must be taken of latent demand—that is, the additional demand that experience has shown we can expect when a new service or facility becomes available for use.

As you may readily understand, we feel particularly close to the many aspects of private and public transportation. We are in the transportation business and are closely involved in transportation of all types. In addition to cars and trucks, we make buses, rail locomotives and are suppliers to the aircraft industry. Because we have worked in there areas for many years, we have acquired some understanding of mass transportation.

Through the years we have maintained the view that each of the various modes of transportation is complementary to the others. While the exact mix will vary from one city to another, effective use of each is essential to a sound and progressive system of transportation.

We recognize that the field of transportation holds out great opportunity for innovative change, both short- and long-term. In the interest of accelerating such change, our General Motors Transportation Research Department seeks to identify transportation problems and find solutions.

One example of the comprehensive character of our Transportation Research Department's work is the "New Systems Implementation Study" performed

under a contract for the U.S. Department of Housing and Urban Development during 1967 and 1968. The study considered technical and economic feasibility, as well as the social and personal considerations, of several possible future transportation systems.

One of the concepts included in that study and on which we have been continuing to do research work is a new approach to rapid transit—a concept which General Motors identifies as "Metro-Mode." It offers both high-speed and convenience.

Buses would operate on public streets in downtown or outlying areas to pick up passengers, then enter an exclusive lane to travel at high rates of speed for the longer distance segment of a trip. The buses would then exit and carry the passengers to destination points. It could provide passenger carrying capacity which exceeds the anticipated future requirements of most travel corridors in American cities. This concept has been favorably recognized by government authorities in a number of cities, and its feasibility is being evaluated.

Other concepts we have been exploring include various rail and bus systems and combinations of both.

General Motors has been a producer of buses since the early 1920's, and our GMC Truck & Coach Division has developed new equipment concepts that would fit into some of these research approaches or would be available to upgrade existing transit coaches. These advanced designs have been demonstrated to Department of Transportation officals and Members of Congress.

One such coach, the RTX—Rapid Transit Experimental—could be readily adapted to the Metro-Mode approach. The coach encompasses designs that meet or exceed the criteria for passenger convenience, vehicle performance, noise and emissions levels, as developed in 1967 by the National Academy of Sciences in a study for the Department of Housing and Urban Development.

These coaches will be powered by either gas turbine or diesel engines and will be available in varying lengths. Prototype units are now being tested, and we estimate that the new equipment will go into production late in 1972.

During December, 1969, we demonstrated in cooperation with the Department of Transportation a modification for buses known as the Environment Improvement Program (E.I.P.). This modification results in substantial reduction in diesel engine smoke, noise and odor. We have given nine of the modifications to DOT for field testing and evaluation, and four of these have been installed in transit coaches in San Francisco. DOT has announced that the five other units will be installed in buses in Washington, D.C. Meanwhile, GMC Truck & Coach is continuing its own research and development evaluation.

Through our Electro-Motive Division, we are engaged in research and development work for improvements in rail mass transit. For example:

A new design of commuter locomotive has been developed incorporating improved operating characteristics and more electrical capacity for greater passenger comfort. Locomotives of this design are under construction at our LaGrange, Illinois, plant.

Looking further into the future, we are developing a train particularly adapted to linking major metropolitan areas within a range of about 300 miles. This train would be diesel-electric powered, high speed and light weight.

We have commented on these examples of General Motors but and rail projects because we believe they are relevant to your considerations here today.

To recapitulate briefly, we are convinced that there is an expanding need for public transportation, including both bus and rail systems. We are anxious to cooperate in all possible ways with federal, state and local officials in their efforts to meet this need. We urge the enactment of the Urban Mass Transportation Assistanc legislation because:

1. It emphasizes the need for essential and expanded federal financial assistance to local transportation agencies.

2. It enables the federal government to provide funds on a long-term basis. Thus, it permits necessary long-range planning by local governments and transportation agencies to meet the needs and desires of the people in their communities.

These principles are fundamental to any program designed to meet the mass transportation needs of our country. Meeting these needs will also contribute to the revitalization of our cities.

Passage of this legislation can be a big step forward.

Thank you for the opportunity to present our views on this important program.

Exhibit 4.—Excerpt Re Headaches of San Francisco BART System

San Francisco: A Brainy System With Big Headaches

One of the few transit operations designed to offer the kind of modern service that might lure riders out of their automobiles is San Francisco's much-touted Bay Area Rapid Transit system. It is also, unfortunately, a sobering experience. Any evaluation of its success or failure must wait until some roadblocks are cleared away.

BART'S cars and stations are comfortable, clean, and attractive. Its trains can achieve high speeds. But even though it started running in September, 1972, it is not yet operating over its entire route. Problems in the automatic train control system have delayed opening of the tunnel under San Francisco Bay, depriving BART of the essential link between its two sections in San Francisco and the outlying counties. The Bay Area, including San Francisco and Oakland, has a population of 3-million. At present, BART carries an average daily patronage of 68,000 riders, although during the Christmas rush the number rose to 110,000. The tunnel is due to open this September and by 1975, it is hoped, the system will carry 200,000 riders a day.

The 75-mi. BART system was built new from the ground up. It has been a long, slow, and expensive process that began in 1953 with the appointment of a commission to make transit recommendations. In 1962, voters in three counties eventually approved by a narrow margin a $792-million system to be financed by local taxes. (Later surveys showed that the margin for passage came from automobilists who did not intend to use the system but hoped that enough other people would to clear up highway congestion.)

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By the time the first section of BART opened 10 years later, inflation had almost doubled the cost of the system, to about $1.4-billion. BART was originally intended to be self-supporting once its capital costs had been met. But as BART's board of directors recognized last month in formally petitioning the state and federal governments for operating aid, experience with actual operations has shown that present fares are inadequate to cover costs, especially wages.

Wages at BART were partly determined by the political decision to take on workers from other area transit lines with high seniority and salaries. "It is not practical and clearly not desirable," the board said, "to raise fares sufficiently to cover all BART costs." To encourage ridership, the board said, "BART fares should not be increased, and if possible should be reduced." Without operating subsidies, the board said, the system would be forced to close in about a year. Specifically, BART anticipates a deficit—based on current fares and no new sources of funds—of $13-million in fiscal 1975, growing to $28-million in fiscal 1978. And these figures will be increased by at least $1.7-million for every month of delay in opening the trans-bay service beyond the scheduled September startup date * * * to 200,000 per day by 1975, it will still only be carrying as many riders as AC Transit, the bus operation that links Alameda and Contra Costa counties and operates over the bay bridge into San Francisco, does now. AC Transit, expects to operate at a deficit of $13-million in fiscal 1974. But the biggest transit operator in the region is the city-owned San Francisco Municipal Ry. (Muni), which carries 550,000 riders every day on its buses, street cars, and 40 cable cars. The city has held Muni fares at 25¢. And Muni estimates it will run up a deficit of $33-million this fiscal year.

Exhibit 5.—Subsequent Response of Mayor Alioto Re Number of Jobs Associated With BART Development

OFFICE OF THE MAYOR,
San Francisco, March 7, 1974.

Senator PHILIP HART,
Senate Subcommittee on Antitrust and Monopoly, New Senate Annex, Washington, D.C.

DEAR SENATOR HART: In response to your query to me during the February 26, 1974, session of the Subcommittee on Antitrust and Monopoly on the number of jobs associated with BART development by the Westinghouse and Rohr Corporations, it has been determined:

Westinghouse—700 positions devoted to BART development as of February, 1974.

Rohr—450 positions as of the September 11, 1973, completion of delivery and first operational use of 16 passenger cars.

Should you, or members of your committee, require further information on this matter, either myself or members of my staff will be most happy to assist your subcommittee in its investigation.

Sincerely,

JOSEPH L. ALIOTO, *Mayor.*

Exhibit 6.—Excerpt From Hearing Before Antitrust and Monopoly Subcommittee Entitled "A Study of the Antitrust Laws," Dec. 8, 1955, Pt. 8

Statement of the Facts From the Court Records Regarding General Motors in the National City Lines Cases

On Tuesday, November 15, testimony was given by a former Government attorney before the Senate Judiciary Antimonopoly Subcommittee regarding the National City Lines cases in which General Motors was involved. This former Government attorney conducted the investigation of the cases but did not try either the criminal case, which resulted in the conviction of General Motors on one count and its dismissal on the other count, or the civil case, which resulted in the dismissal of General Motors. In announcing the testimony, Mr. Burns, after stating that General Motors has in excess of 75 percent of the bus manufacturing business in the country, said (p. 4438):

> This subcommittee is interested in determining what the facts were in this case and what the effect of the practices engaged in by GM and the other defendants were on competition in the bus industry. We are also interested in finding out what the effect of this litigation ultimately was with reference to the economics of the bus industry, and whether General Motors had obtained advantages which could not be dissipated by court action.

"What the facts were in this case" is a matter of court record from the two trials. Unfortunately, what was brought out during the testimony of this former Government attorney was an inaccurate and incomplete picture of the facts shown in the court record—so incomplete and inaccurate that actually no mention was made that the final outcome of the several years of litigation in this case was the denial of the relief requested by the Government and dismissal of the civil action against General Motors. This was in the final order entered by the Federal district court in Chicago, approximately 8 weeks ago, on October 31, 1955.

If the committee is to serve the purpose just stated of bringing out the facts, then the factual misstatements made by the former Government attorney should be corrected and the true facts, supported by citations from the actual trial record,[1] should be presented publicly before this committee.

First, what does the record show about National City Lines? Mr. Dixon said perhaps it was the largest holding company controlling and operating local transit systems in the United States. The record does not indicate if this is true or not, but the record does show that General Motors total sales to National City Lines companies during the years 1949 through the first 10 months of 1954 constituted only 4 percent of General Motors total sales of buses (G. M. Tr. Ex. 11). It is important to have this fact because the implication was left at this hearing that it was by virtue of contracts with National City Lines that General Motors has achieved its present high percentage figure in the bus market. Obviously, with 96 percent of General Motors business from other sources, there must be some other reason for its present success in the bus market.

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[1] Court citations are shown as follows:

CR—Record on appeal to the United States Supreme Court, *National City Lines, Inc., et al.* v. *United States*, criminal No. 47–CR–524.

G. M. Tr. Ex.—General Motors trial exhibit, *United States* v. *National City Lines, Inc., et al.*, civil action No. 49–C–1364.

Tr.—Deposition of Roy Fitzgerald, taken in June 1954.

Tr. App.—Transcript on appeal to United States District Court, Northern District of Illinois, *United States* v. *National City Lines, Inc., et al.*, civil action No. 49–C–1364.

Secondly, it is true that General Motors supplied capital to National City Lines in the form of small investments in nonvoting preferred stock and that it had contracts to supply a portion of the City Lines bus requirements. But statements of the former Government attorney at this hearing gave none of the background for this investment and contracts, which background shows that General Motors had no purpose to prevent or restrict competitors from the opportunity to secure City Lines' business.

Here are the facts from the court records:

From 1923 until September, 1943, when it merged with General Motors, Yellow Truck & Coach Manufacturing Co., referred to as Yellow, was a corporation engaged, among other things, in the manufacture of motor coaches and buses. During that period General Motors owned slightly more than 50 percent of its stock, and the public the remainder (CR 769).

Yellow first entered the business of manufacturing motor coaches in 1923. From then until the early 1930's this business was confined to the making of "large and heavy vehicles" for use in large cities such as New York, Chicago, and St. Louis (CR 771). In the early 1930's, the management of Yellow conceived the idea of motorizing streetcar companies in small cities (CR 771–773). For some years streetcar companies in small urban communities had been losing money, and this, coupled with the depression following 1929, had resulted in depreciation of rolling stock and an inability on the part of streetcar companies adequately to serve the public (CR 171–172).

The Yellow management thought that, if it built a small bus, a market could be created in the smaller communities where a bus could be operated more economically than a streetcar (CR 771). However, great difficulty was encountered in persuading "the power companies to motorize and give up their streetcars in order to give better service and at a profit" (CR 773). Yellow, therefore, decided that the only way this new market for buses could be created was for it to finance the conversion from streetcars to buses in some small cities (CR 773).

On June 29, 1932, the following resolution was adopted by Yellow's executive committee (G. M. Tr. Ex. 1):

> After a general discussion, it was felt that, inasmuch as it is impossible to raise money through public issue of securities or outside sources to develop motorized transportation, our company should initiate a program of this nature and authorize the incorporation of a holding company with a capital of $300,000; however, the capital to be paid in only on approval of the executive committee from time to time.

The holding company was formed and investments were made in companies in Kalamazoo and Saginaw, Mich., and in Springfield, Ohio (CR 775). In each case, Yellow successfully motorized the city and, having demonstrated the feasibility of using small buses, turned the management over to other interests and liquidated its investment. By the end of 1936 Yellow had its money out of all three cities (and at a profit) (CR 773–775; G. M. Tr. Ex. 1).

While these experiments were going on, one Roy Fitzgerald and some associates were conducting similar activities in other small communities and were buying their buses from Yellow (CR 775–776). Fitzgerald had been in the intercity bus transportation business for

several years (CR 431) but it was not until 1933 that he tried his first venture of converting a city streetcar system into a bus operation (CR 442). This resulted from a suggestion by a representative of Yellow that Mr. Fitzgerald purchase the operation at Galesburg, Ill. (CR 442). It was followed by the purchase of traction operations in several small cities. In each case Fitzgerald converted from streetcars to buses; purchased his buses from Yellow on time; reduced fares and made money (CR 445–460).

By 1936, Roy Fitzgerald and his associates were operating local transit systems in several cities, mostly in the Middle West (CR 431–458). The cities were: Galesburg, Joliet, and East St. Louis, Ill.; Tulsa, Okla.; Montgomery, Ala; Kalamazoo and Jackson, Mich. At that time he had an opportunity to acquire seven old electric transit systems from a power company and convert them to modern bus operations (CR 458–459). National City Lines was organized to finance these acquisitions and to take over the operation of the other Fitzgerald properties (CR 461). The financing of National took the form of a public sale of common and preferred stock (CR 461–462). It was expensive financing. The aggregate amount of stock sold was $2,250,000. The financing costs were approximately $350,000 (CR 461–462).

National followed a policy of replacing old streetcars with new buses, of revising routes in order to serve newly developed areas not accessible to the old trolley lines, and of modifying schedules to minimize congestion in the handling of passenger loads. In each instance, National was able substantially to improve service and, in most cases, to reduce the fares in existence at the time of the acquisition (CR 445–469, 585).

Prior to the organization of National in 1936, Fitzgerald had purchased buses from Yellow to the extent of $800,000 or $900,000 (CR 452, 476, 778). Yellow made no investment in National until 1939 (CR 784; Tr. App., Vol. 2, 100–101).

The first investment made by Yellow in the City Lines was in Pacific, which was organized in 1938 (Tr. App., Vol. 2, 100–101, Cr 472), for the purpose of acquiring some streetcar properties owned by the Southern Pacific Railroad Co. on the west coast.

The matter was brought to the attention of Roy Fitzgerald by people from the Pacific coast who first attempted to obtain financing from investment bankers. When this proved impossible, Yellow and some of the other supplier defendants were solicited to supply capital (CR 469,590, 781–782, 846). The $300,000 fund which Yellow's executive committee had set up to test the feasibility of motorizing small city operations was by that time no longer being used, and the committee, therefore, authorized its investment to help organize Pacific (CR 781). At the time this investment was made, nothing was said about Yellow's supplying buses to Pacific. The matter of a requirements contract for buses was first mentioned (and by the management of Pacific) in 1940—2 years after General Motors made its investment—because Pacific wanted, if possible, to obtain an assured supply of buses during wartime conditions. Pacific wanted a contract similar to that which had been entered into with National in 1939, which is discussed below. Such a contract was entered into (CR 820, 826–827, 849–850, 1377).

Yellow's investment in National in 1939 was solicited by Fitzgerald who wished to expand National, but was unable to accomplish it through public financing. Fitzgerald told Yellow that the expansion could be accomplished only if suppliers would advance the money (CR 473, 579, 785). Yellow authorized the investment of $300,000 (CR 785, G. M. Tr. Ex. 2). Yellow was subsequently advised by Fitzgerald that National would need $500,000 from Yellow and hoped to get Mack Truck to supply some capital. He then said he would like a requirements contract for buses by which Yellow would agree to supply 85 percent of the new buses on National's presently owned properties and 42½ percent on properties to be subsequently acquired.

Yellow's president advised Fitzgerald that it was all right to bring in Mack (his exact words were, "the more the better" (CR 788)), and that he would take up the question of the requirements contract with the executive committee (CR 788–789, 601). The investment of $500,000 was made by Yellow and a requirements contract, as suggested by Fitzgerald, entered into. Yellow did not ask for nor want a requirements contract; prior to that time the Fitzgeralds and National, after its organization, had been purchasing practically all of their bus requirements from Yellow (CR 824, 490). The requirements contract covered 85 percent of the requirements of new buses on existing properties and 42½ percent on after-acquired properties. The open 15 percent was to enable National to purchase and try out new models manufactured by others (CR 824). Mack Truck received a contract for the other 42½ percent of the new bus business of after-acquired properties. Mack had assured National it could and would build buses competitive with Yellow's. But it never did and as a result failed to get its percentage of new equipment. Other than making provision for Mack, the purpose of National in asking for a requirements contract with Yellow was to assure a source of supply (CR 517, 601).

In his opinion in the civil suit, the district court stated:

> * * * Before they learned of the Government's investigation into these dealings, the management of General Motors resolved to dispose of the City Lines holdings, and the last of these investments was sold in 1949. All of the requirements contracts between General Motors and the City Lines defendants were canceled in 1949, after the conviction in the criminal case. General Motors now holds no investment in, and has no requirements contract with, any local transit company, either in or out of the City Lines system. * * * (memorandum of decision, September 19, 1955).

This was the nature of these contracts. Yet the statement of the former Government attorney at this hearing was that "these suppliers (referring to the competitors of General Motors) were naturally foreclosed from furnishing any further equipment to such companies after these contracts became effective." In response to another further question by Mr. McHugh, "So in substance would you say the provision concerning the requirements in this percentage obliged them to buy these requirements from General Motors almost irrespective of competitive prices?" Mr. Dixon answered, "Oh, definitely, I would say that was the situation generally with reference to the purchases." He then went on to say that General Motors thus acquired substantially all the bus business of the operating companies of the City Lines by making these investments and "the suppliers who made these so-called investments themselves apparently recognized the obvious fact

that they were buying the stock only as part of a larger deal which gave them the business of the operating companies."

But here is what the record shows was the effect of these contracts on General Motors securing the business of National City.

From the time of the organization of National in 1936 up to and prior to the time of the execution of the requirements contract in 1939, General Motors sold to National and its subsidiaries the following percentages of their purchases of new buses: 1936, 83.3 percent; 1937, 88.3 percent; 1938, 100 percent.

During the 10-year period of the existence of the requirements contracts, General Motors' sales of new buses to National and its subsidiaries was the following percentage of their total purchases of new buses: 1939–49, 75.49 percent.

Subsequent to the termination of the contracts General Motors sold National and its subsidiaries the following percentages of their requirements: 1950, 100 percent; 1951, 95.7 percent. No purchases of new buses were made by National or its subsidiaries from 1952 through 1954 (G. M. Tr. Ex. 12–A).

Since General Motors was already getting all of National City's business prior to the contract, it does not seem a fair statement based on the record to claim that the reason for a 42½-percent contract was to secure the business of these companies.

Again, let me compare what was said at the committee hearing with the true facts from the court record:

Senator O'MAHONEY. * * * You have on pages 7 and 8 told the story of the reported conversation between the president of the National City Lines, Inc., with a competitive bus supplier, and this you put in quotes:

"Well, I don't think there is any point in our operating your buses * * * you know our setup with General Motors and they are probably going to build 50- or 55-passenger buses and if they build them, we will probably have to buy them. I think your bus is as good or better than any other bus, but with this tie-up we have, it is just out of the question. You just might as well take your bus to some other property with whom you can probably do some business."

Was that typical?

Mr. DIXON. I would say without question, Senator, that that is typical, and it could be amplified many times.

Here are the true facts from the record. On the question of whether the contracts between City Lines and General Motors prevented competitors from trying to secure City Lines business, there was only one witness from a competitor bus manufacturer who testified that he tried to solicit bus business from City Lines. He was a representative of the Twin Coach Co. who made the statement quoted above with respect to attempting to sell the Los Angeles Transit Co. after it had been acquired by City Lines. What are the complete and accurate facts? It developed on cross-examination that the bus this witness was trying to sell to Los Angeles was a new model of which at that time he had not been able to sell one throughout the country and that when exhibited in New York City it had been barred by the police department because it was sweeping people off the sidewalk (CR 303–304).

Cross-examination also developed the following facts:

Q. Mr. Morse, at the time Oakland was acquired by Pacific City Lines or National City Lines in 1946, the previous company to Oakland had on order with Twin an order for five of your buses?—A. Right.

Q. Now, after the acquisition by Pacific City Lines or National City Lines, whichever it was, was that order canceled?—A. No.

Q. And you filled it?—A. Right.
Q. Was the order increased?—A. Right.
Q. To how many?—A. Twenty all told.
Q. So that after the Fitzgerald organization had taken over the property, the previous order that Twin had was increased four times?—A. That's right.
Q. What was the experience that Oakland had with those 20 Twin buses? Was it satisfactory?—A. No; definitely not at first.
Q. As a matter of fact at one time there were 18 of them out of commission simultaneously?—A. That's right, backed up against the wall.

Thus, it can be said there was no proof that General Motors relationship with National City Lines companies prevented competitive manufacturers from selling their product. And, if the competitive bus manufacturer's salesman was correct in his recollection, it seems rather obvious that the City Lines president was using the so-called General Motors tieup as a means of getting rid of a salesman whose product he did not want. As a matter of fact, on further cross-examination the witness developed some uncertainty as to just what had been said (CR 308). Yet it was on the basis of the former Government attorney's misleading statements about this incident that Senator O'Mahoney made the following statements (pp. 4477–4478):

Well, it means then, that if it is typical, this transit-line official who made this statement was saying that a better bus could not be purchased by his line because of the illegal contract, the criminally illegal conspiracy, in which General Motors had participated to force the purchase of the General Motors buses.
Mr. DIXON. That is correct.
Senator O'MAHONEY. I think that is a matter to which all who believe in local free enterprise or competitive enterprise had better take notice.

As a matter of fact, the evidence in the record proved without contradiction that the General Motors buses were a better bus and that the sole reason for National City Lines buying General Motors buses, as it had been the reason before the contract and was the reason after the contract, was the superiority of the General Motors equipment.

Not only did Yellow's requirements contract give ample opportunity to City Lines to try out and experiment with any type of bus that came on the market, but City Lines, as would any alert and well-managed company, kept operating records which afforded data for an adequate comparison of the relative merits of the various types of buses on the market. This was true from the beginning of their operations and was still the policy of National at the time of the civil suit in 1954 (CR 1969–1967; Tr. 326–333).

The reason for National's continuing to buy practically all of its buses from General Motors was given by its presents, Roy Fitzgerald, in his deposition taken by plaintiff in June 1954 (Tr. 222). He testified as follows (Tr. 335–336):

Q. Is it your intention, Mr. Fritzgerald, to go on as you have been, buying substantially all of your buses from General Motors?—A. Well, at the present time I can't see our way clear to do anything else from an operating standpoint. *I have no intentions of continuing to buy entirely from General Motors if we can find another type of bus that will operate as cheaply or cheaper, it is certainly not our intention. But at the present time, I know of no place or no other manufacturer to go to that will sell a bus that will operate as cheaply as the General Motors Diesel bus. We never were bound by any more than forty percent*, even in the days of the *contract* of General Motors, *and* at that time *we bought a much larger amount of buses* because we couldn't get a Diesel bus from anybody else; and after a few years of experience with Diesel buses, we found out if we wanted to lower operating costs, we would have to continue to buy Diesel buses.

That the superiority of the General Motors diesel bus is the compelling and, in fact, sole reason for National's purchase of General Motors buses, is confirmed by other data in the record.

According to National's experience, the larger 36-passenger General Motors diesel bus operated more cheaply than a 27-passenger gas bus of any other make (Tr. 326). The only manufacturer of diesels besides General Motors was Mack, and National's experience in St. Louis, trying out 25 new Mack diesels, was bad from an operating cost standpoint (Tr. 326). In addition to the superior diesel engine, the General Motors bus was found by National to have a better automatic transmission, brakes, rear axles, step wells, and stanchions, and overall body design (Tr. 336–337).

National has had a regular procedure over a period of many years of making quarterly operating cost comparisons on each type of equipment in all of its operations. These comparisons show operating costs in cents per mile of maintenance labor, service labor, special maintenance or overhaul, fuel, and depreciation. The studies show that the General Motors buses have operated from 1½ to 2½ cents per mile cheaper than competitors' buses (Tr. 327–334).

The significance to National of these savings in operating costs cannot be ignored. A motor bus travels an average of 60,000 miles per year (CR 690). On the basis of 1½ to 2½ cents per mile saving, this would amount to a total annual saving per bus of $900 to $1,500. Over a 10-year period these savings alone would largely pay for the original cost of the bus. For a company such as National, operating some 2,000 buses (Tr. 360), the difference in net profit accruing from the use of General Motors diesels as compared to competitors' buses, would amount to $1,800,000 to $3 million annually.

The court record, therefore, demonstrates National was and is buying General Motors buses because of their merits, as are all other purchasers, and not because of some insinuated improper relationship as sugested by the former Government attorney.

The former Government attorney also stated, in response to a question from Senator O'Mahoney with reference to the National City Lines-General Motors partial requirements contracts, that "these contracts were obviously illegal." But here are the court's words in his instructions to the jury in the criminal case (CR 1176):

> * * * the making of an investment by each supplier * * * was not in itself unlawful, nor was the execution of the * * * requirements contracts * * *, whether or not made in connection with the investment.

It was further expressly ruled that the making of the requirements contracts was legal (CR 1176) and no obpection was made by the Government to this ruling (CR 1183). Judge Campbell, who tried the criminal case, stated categorically (CR 1176):

> It is not unlawful to make a requirements contract * * *.

And the district judge, in his memorandum of decision, in the civil suit made the following statements:

> * * * The practices which the Government seeks to enjoin are not matters of outright lawlessness or brazen price-fixing. Whether or not these practices are illegal under the antitrust laws turns upon nuances of circumstances which cannot be foreseen or determined in advance of the event. * * * Requirements contracts are not illegal per se, * * * Whether a contract for supplying a local transit company's requirements of motor buses, * * * would be unlawful should not be decided until the circumstances surrounding the agreement are properly before a court. * * *

* * * As requirements contracts are not illegal per se, so it is not necessarily unlawful for a supplier to help a customer financially, whether by extending liberal credit, making a loan, or investing capital. * * *

One final point: Mr. Dixon said he would blush to mention the punishment in the criminal case because the court fined the individual defendants "the magnanimous amount * * * of $1 each" (p. 4471). Then Mr. Dixon attempted to suggest that the court's reason was because he thought it was an economic crime. Senator O'Mahoney offered the suggestion that the court fined them only $1 because the defendants were merely doing what they were told to do by higher executives whom they could not disobey upon the pain of losing their jobs, and Senator O'Mahoney further stated:

Well, until, as a nation, we begin to realize that economic crimes of the magintude described in your testimony this morning are recognized for what they are, as crimes that affect the livelihood of unnumbered persons, families, homes, and communities, it will be very difficult for us to do economic justice in this country and in the world (p. 4472).

Would Senator O'Mahoney have made this statement if he had known that, as stated in the court record, the judge who tried the criminal case said the following on this subject:

I am very frank to admit to counsel that after a very exhaustive review of the entire transcript in this case, and of the exhibits that were offered and received in evidence, that I might not have come to the same conclusion as the jury came to were I trying this case without a jury. * * * My function is not to substitute my judgment on the issues of fact for the judgment of the jury but to determine whether or not as a matter of law there is sufficient evidence in the record to warrant the jury in finding the verdict which they found (CR 1189–1190).

The court then sutained the verdict, adding:

Much as my own conclusions from the same evidence might have been different (CR 1190).

And here is what the judge in his recent opinion of September 19, 1955, in the civil case had to say on this point:

* * * But the failure to cancel these arrangements as soon as they were called into question by the Government is also consistent with a bona fide belief of the defendants that there was nothing unlawful about the arrangements, and the court is not prepared to say that in the state of the law at the time the complaint was filed this belief could not reasonably be entertained. * * *

Mr. HOGAN. We also have had prepared by Mr. Kyes a statement he made in regard to General Motors' contribution to the motor coach industry.

I would like to file that, not to read it, with the understanding that it will be incorporated as though read.

Senator O'MAHONEY. Yes.

(The statement referred to follows:)

STATEMENT BY ROGER M. KYES, VICE PRESIDENT, GENERAL MOTORS CORP.

GENERAL MOTORS CONTRIBUTION TO THE MOTOR COACH INDUSTRY

There can be no question as to the vital role bus transportation has played in the development of the United States.

It is a story of pioneering in every sense of the word. Once a path or trail became reasonably passable, it was not long before a for-hire

service made it appearance. At first, passengers were carried in conventional automobiles. Soon the volume of passengers and baggage required the elongation of the chassis to provide more carrying capacity. As load requirements increased, passenger cars were displaced by large passenger-carrying bodies mounted on truck chassis.

Concurrent with this development, double-deck buses purchased from the London General Omnibus Co., appeared on the streets of New York.

This has all occurred since the turn of the century. The rapid development of bus transportation has taken place in such a short span of years that the industry has been constantly troubled with growing pains. The motor coach has supplanted the interurban systems and has for all practical purposes eliminated the trolley car.

Its highly flexible service has driven new arteries into the remote sections of our cities as well as our countryside. The motor coach has always been found on the horizon of new frontiers of development.

Today, 50 percent of the people who transact their daily business in the downtown areas of metropolitan cities use public transportation. The annual travel on public transit systems in cities during 1954 was in excess of 12 billion passengers of which rubber-tired transit vehicles carried 9 billion or three-fourths.

Our increasing reliance on the motor coach as a means of intercity travel is further verified by its present-day role in carrying passengers. A comparison of class I railroads with class I bus carriers (these figures exclude passengers carried by buses on local schedules and commutation passengers on railroads) shows that buses in 1953 carried 311,701,000 intercity passengers while railroads carried 200,941,000.

The public owes a great debt to the bus operators of this country for their enormous efforts as well as their ingenuity against overwhelming odds. Roads and streets were poor, making for short vehicle life, high maintenance costs, and extreme difficulty in maintaining schedules.

However, operating difficulties have been only a part of their worries. Bus operators are engaged in a business which is regulated by local, State, and Federal authority, both as to operations and fares to be charged. This limitation, particularly with respect to revenues, coupled with the extreme sensitivity of the business to the smallest change in the relationship of fares to expenses, has made it difficult for them to operate at a profit. This condition can be traced in large part to the relatively small capital investment in relation to revenues, especially under the commonly used method of setting fares to provide a prescribed return on investment. A small overestimate in anticipated revenues for a bus company at the time fares are set, or an underestimate of expenses, may have the effect of converting an expected margin of return into an actual loss.

One can realize the acuteness of operators' problems by comparing intercity operating revenues and expenses for 1939 and 1953. With 1939 as the base of 100, operators' fares or revenue per intercity passenger-mile was 132.1 in 1953. This increase is much less than the rise in the consumer price index which on the same basis has moved up to 192.6 and the wholesale price index which has risen to 219.8.

In 1939 wages and salaries took 30 percent of the intercity bus revenue dollar. In 1953 they took 42.6 percent of the revenue dollar. Material and supplies, on the other hand, dropped from 33.1 percent

of revenue dollars to 31.9 percent. Depreciation, which reflects investment in buses, dropped from 8.8 percent of revenues to 6.3 percent. Net revenues dropped from 11.6 percent in 1939 to 4.5 percent in 1953.

It is interesting to note that the increase of 12.6 percent in labor expenses from 1939 to 1953 actually exceeds the total net revenue of 11.6 percent enjoyed in 1939.

Transit bus operations reflect an almost identical picture. These operators suffered a reduction in net revenue from 10.35 percent in 1939 to 2..98 percent in 1953.

These facts have forced the bus operator to be increasingly vigilant in his efforts to reduce his transportation costs. In his search for every possible avenue of cost reduction, the operator naturally turned to those who could furnish the most effective tools of transportation and the best advice toward a solution of his operating problems.

General Motors has fulfilled the requirements of the operator more effectively than its competition. Here is evidence to this effect.

North Star Lines, a small Michigan intercity operator, was experiencing high operating costs with competitive equipment. To meet his need for lower costs and a return sufficient to keep his business going, this operator began standardizing on GM equipment in 1949 and now has 10 GM diesel intercity buses, a new garage and terminal. The owner states:

> * * * The diesel equipment required far less attention, was less subject to road failure, and actually simpler to repair and maintain * * * We now service our fleet with 2 mechanics instead of 4 * * * and with help from the factory we were able to change a bus washer into a good mechanic in less than 3 years.

Now I would like to cite an example of cost saving from the experience of Cincinnati Transit Co. Each year this company makes a careful analysis of bus operating costs to determine the efficiency of its fleets of vehicles. A comparison of combined fuel and maintenance costs for buses of three makes but of like type, age, and capacity, shows General Motors buses to have the best cost record by far. Exhibit I substantiating this statement is attached. This same record holds for many other cities.

The operating economy of General Motors buses is also attested to by Mr. Roy Fitzgerald, president of the National City Lines, a transit operator in 40 cities throughout the United States. In 1954 Mr. Fitzgerald made the following statement with respect to General Motors buses in connection with his deposition in the case of *U. S.* v. *National City Lines, et al.* I quote:

> I know of no place or no other manufacturer to go to that will sell a bus that will operate as cheaply as the General Motors diesel bus.

National City Lines has had a regular procedure over a period of years of making quarterly operating cost comparisons on each type of equipment in all of its operations. These comparisons shows operating costs in cents per mile of maintenance labor, service labor, special maintenance or overhaul, fuel, and depreciation. The studies show that the General Motors buses have operated from 1½ to 2½ cents per mile cheaper than competitor's buses.

Downtime resulting from major component road failures, so costly to operators, is almost a thing of the past. The transit industry has benefited also. A typical transit operator has reported that in 1951

his fleet averaged 234,000 miles of operation before a failure, and in each instance the failure was the result of improper mechanical adjustment of auxiliary equipment. This operator's superintendent of maintenance reports, and I quote:

> May I take this opportunity to say that in 25 years in bus maintenance I have never experienced such a record.

And now let me show you why we were able to make a more effective contribution to the motor bus industry than our competition.

Many years ago it became quite clear to us that the bus business is a highly technical business. It is not merely a matter of making a product and selling it. It is a highly skilled task like that of a production toolmaker for an industry. We determined that our organization should be thoroughly familiar with the ever-changing needs of the coach industry. We concentrated our technical skill toward fulfilling these requirements. Over the years General Motors has made many technical contributions to the industry.

In 1931, the Monocoque body construction was developed by General Motors for coach bodies. This unified, all-metal, stressed-skin design is similar to aircraft-type construction and is an outstanding improvement over older type of construction. Coach bodies were originally composed of steel, wood, and canvas mounted flexibly on steel frames.

With this engineering "first" General Motors provided greatly increased safety and comfort for the passengers. Coach weight per passenger was decreased very substantially while at the same time coach body life was doubled. Monocoque construction in combination with rear engine installation provided for one-third front two-third rear weight distribution, so highly important in steering, safety, and tire life.

In 1938, after 6 years of intensive research and development, General Motors introduced its 2-cycle diesel engine as new motive power for coaches. Its introduction was greeted with skepticism and indifference. In the first year only seven operators were willing to use our new powerplant. Although many makes of diesel engines were available to the industry for use in buses, only General Motors had the courage and foresight to promote this type of power. Other producers failed to see the tremendous potential in lowered operating costs. In 1939, 26 operators bought our diesel buses. Today, more than 700 operators have them in service and the total number in use exceeds 35,000.

General Motors has contributed importantly to the development of improved transmissions. Our customers' experience with earlier types convinced us that development had to be directed toward the elimination of continuous declutching, throttling, and gear shifting in city operations—so detrimental to transmission life and fatiguing to the driver. In 1936 General Motors introduced the first hydraulic transmission for buses. This same basic design remains in use by the rest of the industry to this day. General Motors, however, was determined to provide a transmission design which would result in still greater operating advantages and dependability. Accordingly, research and development work was continued and in 1947 culminated in the General Motors V hydraulic transmission. The important advantages of this transmission are excellent performance, long life,

almost 100 percent accessibility of major working parts, extremely low operating costs, and a reduction in weight of 300 pounds.

In 1951 a revolutionary General Motors development was first shown to the bus transportation industry. It excited outstanding interest. This was air suspension which has since established new high standards for passenger comfort. The first buses equipped with air suspension were delivered in 1953. General Motors air suspension was the result of 12 years of research. Passengers are now riding in unsurpassed comfort, whether the bus is fully loaded or carrying only one passenger. Air suspension eliminated wear and breakage of costly metal leaf spring parts. As a result it is estimated that operators will realize a saving of more than $1,000 per bus over its useful life. Body stress and strain are reduced due to better shock absorption, which further reduces maintenance costs. Passengers board and alight in greater safety due to the constant step height. Air suspension is truly one of the greatest motor coach developments of our time.

I have mentioned only the most outstanding engineering "firsts" which General Motors has contributed to the development of the motor coach.

Our technological contribution to the coach industry has been but a part of our total contribution. An analysis of the industry's problems clearly indicated that, in addition to a superior product, the bus manufacturer could make a contribution to the industry by developing a group of trained specialists who could effectively and efficiently survey the total operation of a particular company and make sound and helpful recommendations to improve its overall efficiency.

Many years ago we selected a group of men whom we thoroughly schooled in transportation engineering. This group has acquired a national reputation in the motor-coach industry as being of professional stature. Their experience, judgment, and recommendations are available to any operator who requests them, and without any obligation or cost on his part. To the best of our knowledge, no other bus manufacturer has an equivalent organization. The contribution this organization is making has been demonstrated in recent years by the experience of the department of street railways of the city of Detroit.

General Motors surveyed the DSR operations in May 1951 and recommended conversion of certain rail operations to bus operation, a modification and rehabilitation of obsolete carbarns to efficient repair shops, an upgrading of the seating capacity of their vehicles, together with revised scheduled services and routings to reduce wasted mileages and costs. As plans were formulated and put into effect, the DSR management converted a loss of $4,776,755 suffered in the 3-year period 1948 through 1950, to a net profit of $4,155,928 for the 3-year period ending June 1955, although operating revenues had dropped almost 4 percent.

After adopting and executing the General Motors survey recommendations, the Twin City Rapid Transit Co., of Minneapolis and St. Paul, increased its profit of $48,739 for the 3-year period 1949 through 1951 to $2,165,372 for the 3-year period 1952 through 1954, despite the fact that revenues were down by more than 6 percent.

Earlier I spoke of our task as being like that of a toolmaker for industry. We recognized that not only was it important to supply

good tools in the first place, but that it was equally essential and also a part of our job, to assure satisfactory performance in their use. To this end, General Motors pioneered preventive maintenance. Thousands of maintenance men have been instructed by our service organization in proper maintenance practices.

It naturally follows that this widespread constructive relationship with bus operators has given General Motors an astute perception of the problems and trends in the entire coach industry. As a result we have been accurate in our evaluation of product requirements. In other words, GMC truck and coach division of General Motors has been ready with the required product at the right time.

As you are aware, there have been changes in the competitive positions of bus manufacturers in recent years. It might be well to explain the reasons for these changes.

Two fundamental factors are involved. First, competition has either failed to anticipate changing trends in transportation requirements, or has been unable to design a product which would meet the requirements of the bus operators with the same effectiveness.

As to vehicle size a complete reversal in requirements for both city and intercity buses occurred between 1946 and 1954.

For example, in transit operations buses carrying 25 to 34 passengers accounted for 51.4 percent of total deliveries in 1946. By 1954 this percentage had shrunk to 8.2 percent. On the other hand, buses carrying over 45 passengers were not even being built in 1946, but by 1954 this capacity accounted for 54.1 percent of total deliveries of city buses. Similarly in the case of intercity buses, only 1.9 percent of total deliveries had 40 seats or more in 1946. By 1954, the deliveries of this capacity bus accounted for 85.1 percent of total deliveries of intercity buses.

In the case of both city and intercity buses, small low-seating capacity buses, which made up the bulk of deliveries just 9 years ago, gave way and were superseded by buses of larger seating capacity. Exhibits II and III, graphically portray the decided reversal that has taken place in this 9-year period. Some companies failed to adjust to the changing trend and never produced large-capacity buses. Failure to keep abreast of the requirements of the times naturally meant that the volume of these producers had to shrink with the decline in the volume of production of small buses as a whole. Companies which persisted in this approach either have a low-volume operation in small buses now, or are out of business entirely.

General Motors foresaw and prepared for this development. In 1948 General Motors pioneered with the volume production of the first acceptable 51-passenger city bus, and in 1953 General Motors led the industry with the introduction and volume production of a 41-passenger intercity coach of advanced styling and equipped with air suspension. This vehicle evolved from the original 41-passenger vehicle first produced in volume in 1948.

The value to the operator of larger capacity coaches is illustrated by the experience of a typical transit operation. In 1954 the operating expense per 10,000 seat-miles of a General Motors 40-passenger diesel bus was $131.38, as compared with $105.07 for a 51-passenger General Motors diesel bus.

The second major reason for the change in the competitive position has grown out of certain basic economic changes that have reduced the number of buses required. These are:

1. The number of passengers has declined due to broadening automobile ownership, tourist-class air travel, the emergence of television and suburban shopping centers.

2. Because of the improved efficiency of present-day vehicles, a smaller number of standby vehicles are required. Also, improvements in transit operations has resulted in reduction of total bus mileage, as unprofitable routes were eliminated.

3. A large number of bus companies have gone out of business, particularly in smaller cities, because of reduced passenger volume and higher operating cost.

Such economic factors affect all businesses and are beyond the control of any one enterprise.

In summary:

We have built an outstanding product.

We have provided a product that has produced substantial economic savings to our customers.

We have contributed significantly to the ability of our customers to manage their properties profitably.

The fact that we hold the position we do is a measure of the faith and confidence our customers have in our products and organization.

Exhibit I

Cincinnati Transit Co. bus-operation cost for month of December 1954 and last 12 months

Make of coach and coach No.	ACF C-44 256-300	Mack C-41 and C-45 865-867, 868, 871, 874, 875, 884, 885-894, 895-934	GMC TDH-4509 50-79	GMC TDH-5103 101-225	GMC TDH-5105 301-318	GMC TDH-4008 501-520
Number of coaches	45	65	30	125	18	20
Number operated	45	46	30	125	18	20
Average age in months	90	90	63	42	18	92
Mileage	40,780.1	93,266.4	147,087.4	502,651.5	81,501.9	72,261.1
Average mileage per coach	906.2	2,027.5	4,902.9	4,021.2	4,527.9	3,613.1
1304:						
Maintenance of bodies:						
Labor	$384.60	$891.29	$670.30	$1,360.86	$124.68	$412.59
Material	22.72	193.29	274.36	264.52	47.76	82.06
Labor and material—Accident	1.92	1,220.52	185.00	1,736.40	27.60	110.49
Total, December	409.24	2,305.10	1,129.66	3,361.78	200.04	605.14
Cost per mile, December	.010035	.024716	.007630	.006687	.002455	.008374
Total last 12 months	7,719.70	14,069.03	8,908.15	26,606.83	3,164.46	5,771.13
Cost per mile, last 12 months	.015404	.013369	.005059	.004653	.003190	.006199
1305:						
Maintenance of chassis:						
Labor	1,498.32	3,246.19	2,347.18	9,080.83	1,254.60	1,721.89
Material	1,194.26	3,505.08	2,131.31	10,937.49	578.88	1,462.34
Labor and material—Accident						
Total, December	2,692.58	6,751.27	4,478.49	20,018.32	1,833.48	3,184.23
Cost per mile, December	.066027	.072387	.030448	.039825	.022496	.044066
Total, last 12 months	36,642.30	71,886.09	51,231.47	189,426.94	16,754.63	33,449.47
Cost per mile, last 12 months	.073119	.068308	.029094	.033133	.016894	.035929
1315:						
Fuel (including taxes)	3,086.90	6,641.54	5,984.60	23,628.52	3,667.17	3,252.56
Cost per mile, December	.075696	.071210	.040687	.047008	.044995	.045011
Total, last 12 months	40,043.79	80,278.04	69,145.35	262,522.89	43,238.39	38,926.85
Cost per mile, last 12 months	.079906	.076282	.039267	.045918	.045598	.041812
1316:						
Lubrication (including tax of 6 cents per gallon on lubricating oil)	117.03	245.14	435.32	1,267.80	145.30	299.10
Cost per mile, December	.002870	.002628	.002960	.002522	.001783	.004139
Total, last 12 months	2,425.85	3,491.11	5,347.95	15,391.00	1,833.18	3,781.10
Cost per mile, last 12 months	.004841	.003317	.003037	.002692	.001848	.004061

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EXHIBIT I—Continued

Cincinnati Transit Co. bus-operation cost for month of December 1954 and last 12 months—Continued

Make of coach and coach No.	ACF C-44 256-300	Mack C-41 and C-45 865-867, 868, 871, 874, 875, 884, 885-894, 895-934	GMC TDH-4509 50-79	GMC TDH-5103 101-225	GMC TDH-5105 301-318	GMC TDH-4008 501-520
1317:						
Garage employee	1, 195. 50	2, 734. 20	4, 312. 01	14, 735. 33	2, 389. 31	2, 118. 41
Cost per mile, December	. 029316	. 029316	. 029316	. 029316	. 029316	. 029316
Total, ast 12 months	13, 621. 32	28, 608. 79	47, 792. 70	155, 407. 08	26, 913. 03	25, 240. 52
Cost per mile, last 12 months	. 027181	. 027185	. 027141	. 027182	. 027137	. 027112
Total maintenance and fuel cost, December	7, 499. 33	17, 456. 73	16, 155. 08	61, 275. 35	8, 207. 70	9, 348. 95
Total maintenance—Accident	1. 92	1, 220. 52	185. 00	1, 736. 40	27. 60	110. 49
Total cost per mile, December	. 183897	. 187171	. 109833	. 121904	. 100706	. 129377
Total cost per mile, December—Accident	. 000047	. 013086	. 001258	. 003454	. 000339	. 001529
Relative standing, December	9	10	3	4	1	6
Total miles, last 12 months	501, 135. 8	1, 052, 382. 1	1, 760, 901. 7	5, 717, 243. 3	991, 762. 5	930, 988. 7
Total cost, last 12 months	$100, 452. 96	$198, 333. 06	$182, 425. 62	$649, 354. 74	$91, 903. 69	$107, 169. 07
Total cost per mile, last 12 months	. 200451	. 188461	. 103598	. 113578	. 092667	. 115113
Relative standing, last 12 months	10	9	2	3	1	4

Make of coach and coach No.	Yellow TDH-4007-4506, 770-775, 777, 778, 780-782, 786, 799	GMC TDH-4507 800-836	C45-DT Mack 951-954	C50-DT Mack 955-964	Total, all coaches
Number of coaches	9	37	4	10	363
Number operated	9	37	4	10	344
Average age in months	112	89	47	41	68
Mileage	27,897.7	137,347.5	12,342.6	14,263.0	1,129,339.2
Average mileage per coach	3,099.7	3,712.1	3,085.7	1,426.3	3,283.1
1304:					
Maintenance of bodies:					
Labor	$495.12	$777.30	$76.74	$40.47	$7,020.48
Material	79.48	191.90	36.01		1,968.27
Labor and material—Accident	144.97	399.77	3.18	10.30	3,322.36
Total, December	719.57	1,368.97	115.93	50.77	12,311.11
Cost per mile, December	.025792	.009967	.009393	.003559	.010900
Total, last 12 months	2,827.90	11,333.83	616.60	1,399.30	106,743.56
Cost per mile, last 12 months	.009503	.006354	.004546	.004993	.007874
1305:					
Maintenance of chassis:					
Labor	1,042.25	4,492.54	115.59	323.47	28,058.10
Material	723.02	4,842.74	88.17	197.19	28,253.91
Labor and material—Accident					
Total, December	1,765.27	9,335.28	203.76	520.66	56,312.01
Cost per mile, December	.063277	.067968	.016509	.036504	.049860
Total, last 12 months	23,509.79	88,200.40	7,091.17	20,009.36	611,846.26
Cost per mile, last 12 months	.079009	.049457	.052280	.071411	.045135
1315:					
Fuel (including taxes)	1,252.50	5,803.84	544.98	792.02	54,654.63
Cost per mile, December	.044896	.042257	.044154	.055530	.048393
Total, last 12 months	12,908.55	71,449.75	5,924.96	14,436.87	643,909.31
Cost per mile, last 12 months	.043381	.040064	.043691	.051524	.047500
1316:					
Lubrication (including tax of 6 cents per gallon on lubricating oil)	134.43	474.26	52.59	39.54	3,210.51
Cost per mile, December	.004819	.003453	.004261	.002772	.002843
Total, last 12 months	1,741.06	6,457.30	602.05	1,165.87	42,812.36
Cost per mile, last 12 months	.005851	.003621	.004440	.004161	.003158

EXHIBIT I—Continued

Cincinnati Transit Co. bus-operation cost for month of December 1954 and last 12 months—Continued

Make of coach and coach No.	Yellow TDH-4007-4506, 770-775, 777, 778, 780-782, 786, 799	GMC TDH-4507 800-836	C45-DT Mack 951-954	C50-DT Mack 955-964	Total, all coaches
1317:					
Garage employees	817.85	4,026.42	361.84	418.13	33,109.00
Cost per mile, December	.029316	.029316	.029316	.029316	.022916
Total, last 12 months	8,061.41	48,429.10	3,691.51	7,556.61	368,163.42
Cost per mile, last 12 miles	.027092	.027156	.027221	.026969	.027159
Total maintenance and fuel cost, December	4,544.65	20,609.00	1,275.92	1,810.82	156,274.90
Total maintenance—Accident	144.97	399.77	3.18	10.30	3,322.35
Total cost per mile, December	.162904	.150050	.103375	.126959	.138370
Total cost per mile, December—Accident	.005196	.002911	.000258	.000722	.002942
Relative standing, December	8	7	2	5	
Total miles, last 12 months	297,560.1	1,783,387.0	135,612.0	280,198.9	13,555,999.5
Total cost, last 12 months	$49,048.71	$225,870.38	$17,926.29	$44,568.01	$1,773,474.91
Total cost per mile, last 12 months	.164836	.126652	.132188	.159058	.130826
Relative standing, last 12 months	8	5	6	7	

Exhibit II

TOTAL OF ALL CITY MOTOR COACH DELIVERIES BY U.S. PLANTS

SOURCE OF DATA- AUTOMOBILE MFRS. ASS'N.

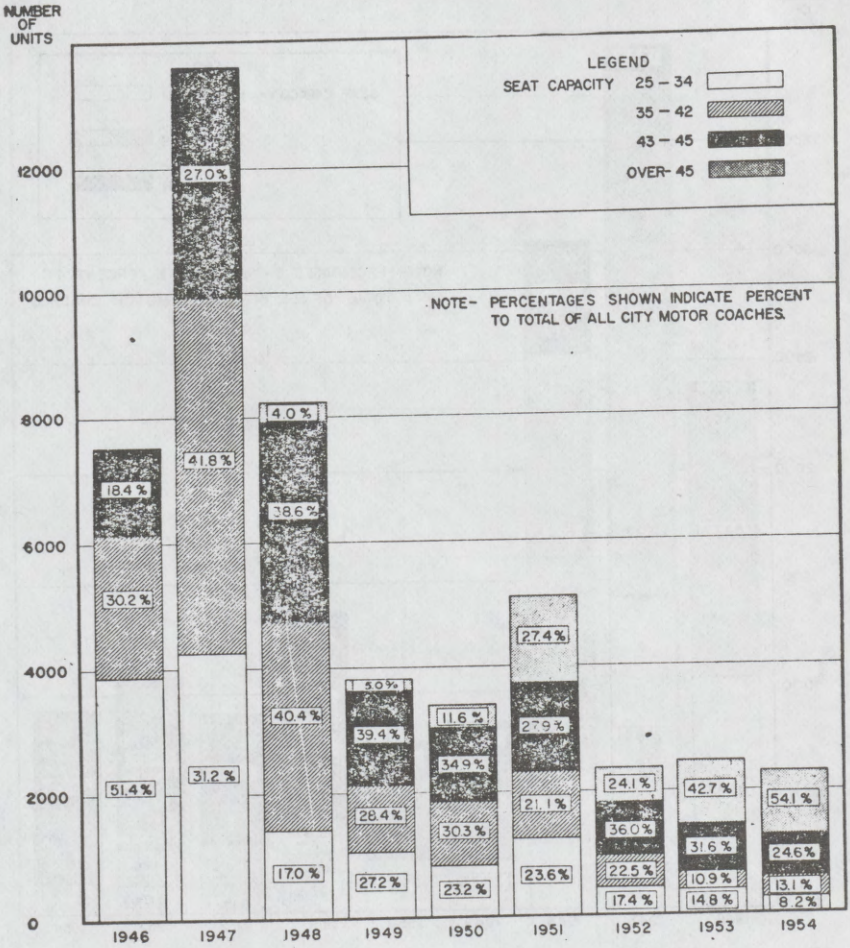
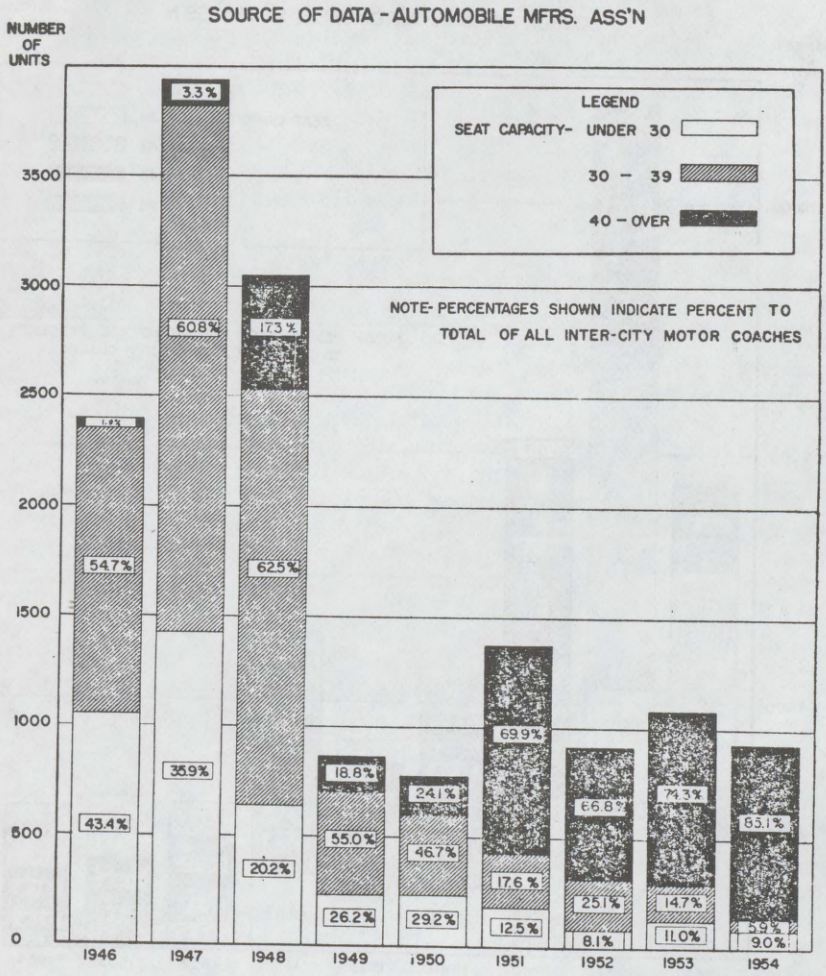


Exhibit III



Senator O'MAHONEY. Is that all, Mr. Hogan?

Mr. HOGAN. Because we thought Frigidaire might be one of the matters you were discussing in a more general way, we have had prepared another statement of Mr. Kyes on Frigidaire. I would like to have that filed. We do not care to read it.

Senator O'MAHONEY. But you want it to appear in the record?

Mr. HOGAN. As though read.

Senator O'MAHONEY. The committee, I think, will reserve the right to make any comments that may seem desirable.

(The statement referred to follows:)

Senator HART. We had not anticipated that we would run this late with the mayor, but all of us are the better for it.

May I suggest that we have at least the direct testimony of our next scheduled witness and, if possible, if the questions are few, we will be able to conclude with him before lunch; otherwise, we will take the lunch recess.

Our next witness, and references were made to him, is Bradford C. Snell.

As Mr. Snell comes up, I would state for the record that he is presently a member of the staff of the subcommittee. His testimony is based on a study he did prior to joining the subcommittee, a study entitled, "American Group Transport," financed by a grant from the Stern Fund of New York.

Both Mr. Snell's study and a study done by Mr. Boyle have been printed by the Government Printing Office in separate volumes to be used by members of the subcommittee and others participating in these hearings.

I think an explanation is in order. Both studies bear the title, "Committee Print" on the first cover page. This is not a committee print in the sense that neither the subcommittee nor any member including the chairman necessarily subscribe to the ideas contained therein.

Quite simply, the staff of the subcommittee was faced with the problem of reproducing these volumes in a number sufficient that we might present them to others, including the industry, who we hope will participate in these hearings. Accordingly, we chose that route.

Before joining the subcommittee, Mr. Snell practiced antitrust law in the firm of Pillsbury, Madison & Sutro in San Francisco. Mr. Snell also was guest scholar at the Brookings Institution during 1972, and we are all grateful for his contributions to the better understanding of this subject.

STATEMENT OF BRADFORD C. SNELL, AUTHOR OF STERN FUND STUDY ENTITLED "AMERICAN GROUND TRANSPORT," AND PRESENTLY ASSISTANT COUNSEL, SENATE ANTITRUST AND MONOPOLY SUBCOMMITTEE

Mr. SNELL. Thank you, Mr. Chairman.

Before I begin my presentation this afternoon, I would like to clear up an earlier misunderstanding that developed in a question put by Senator Hruska to Mayor Alioto concerning the *National City Lines* litigation. The Government brought two separate antitrust suits against the manufacturers which organized and financed National City Lines.

The first case, filed in 1949, was a criminal case. It was brought against General Motors and allied highway interests for their involvement in the destruction of 100 electric rail and electric bus systems in 56 cities throughout the country.

As it was a criminal case; however, the only relief available was that of fines or imprisonment. After conviction, General Motors was compelled to pay $5,000, and its treasurer was fined the magnanimous sum of $1.

In his question to Mayor Alioto, Senator Hruska referred to a second case, a civil action, which he implied absolved GM of any

wrongdoing. This is not accurate. After obtaining a conviction in the criminal suit, the Government attempted to obtain a more effective form of relief than merely a monetary fine. In the mid-1950's, the case was brought before Chicago Federal District Judge Julius Hoffman who noted that in effect motorization of the electric transit systems was virtually complete, that GM and its allied oil/tire manufacturers had already sold their stock holdings in National City Lines, and that further relief was, therefore, unavailable.

Senator Hruska has requested that General Motors' defense in the streetcar litigation be placed in the records. This defense was prepared by Henry Hogan who was the assistant counsel for General Motors. Accordingly, I think it also appropriate to place in the record GM's conviction in the *National City Lines* criminal case, as well as the judgment in the civil suit.

Senator HART. Let us print them both.

[See exhibits 2 and 3 at the end of Mr. Snell's testimony.]

Mr. SNELL. I think it is becoming increasingly clear that for 40 years a war has been raging in this country between automobiles and mass transit, and that this war has, in effect, shaped American society.

It began as an economic struggle between competing methods of transportation. It became a relentless campaign to destroy America's rail and bus systems. And unless Government intervenes, unless this subcommittee takes some sort of corrective action, I submit that this war will end only when public alternatives to private automobiles are no longer attractive.

This is the war General Motors, Ford, and Chrysler have been waging against public transportation. I am here this morning to suggest how it might be concluded, not only in the interest of the traveling public, but also in the interest of the management, the shareholders, and the employees of the Big Three auto makers.

During the past 5 years, I have studied the social consequences of one of the most powerful and enduring monopolies of this century: the American auto trust. My findings, contained in a study entitled "American Ground Transport," are briefly this: The Big Three car companies have used their vast economic power to restructure America into a land of big cars and diesel trucks.

Mr. Chairman, America has become a second-rate nation in ground transportation. Unlike every other industrialized country in the world, we rely on cars and trucks for virtually all of our transport needs.

At the same time, in every city and suburb, our rail and bus services are either dead or dying. American travelers returning from Europe, for example, say that there is a "bus gap." Even in Moscow, they say, the buses and subways look better than anything made in the United States. Travelers back from Japan tell the same story. Having ridden on 150 mile-per-hour bullet trains, they ask, "What ever happened to America's railroads?"

Let me suggest an explanation: The Big Three companies eliminated competition among themselves, secured control over rival bus and rail industries, and then maximized profits by substituting cars and trucks for every other competing method of transportation, in-

cluding trains, streetcars, subways, and buses. In short, they put America on wheels.

But I submit that in lines which stretch around the corner from every gas station in America, these wheels are grinding to a halt.

The highway transport system designed by the Big Three is falling apart. We have committed more than $180 billion a year and one-sixth of our work force to automotive travel. We have consumed much of the Nation's oil supplies, fouled our air with poisonous exhausts, and turned our cities literally into highways and parking lots.

Now we are running out of gas. And there are no public alternatives. No high-speed trains. No rapid rail transit. No decent, fume-free buses. Nothing but 100 million gas-guzzling cars. As a result, we are confronted today with a petroleum shortage which is paralyzing travel, shutting down industries and throwing hundreds of thousands of people out of work.

I contend that the time has come to dismantle the auto trust. I propose that reorganizing General Motors, Ford, and Chrysler into smaller, more competitive companies would provide this country with a wider range of transportation alternatives, including energy-efficient cars, modern buses and high-speed trains.

In essence, what I am suggesting is that if we really are committed to a balanced system of transportation in this country, then an essential prerequisite for that objective is a balanced manufacturing base to provide us with this transportation equipment.

I recommend reorganization for three principal reasons: First, due to their enormous size and concentration, the Big Three auto makers are completely out of touch with reality. They are incapable of building cars the public wants.

Second, General Motors is in effect a sovereign economic state whose interlocking control of auto, truck, bus, and locomotive production is a major factor in the decline of this Nation's rail and bus systems.

And finally, that reorganizing the Big Three into a number of competing ground vehicle firms is an essential step toward reaching our objective of a balanced system of transportation.

Now let me return, just for a moment, to what I would say is the first reason for dismantling the automobile trust: It is wholly incapable of responding to society's needs.

Due to its enormous size and the absence of competitive forces, the Big Three are naturally inclined to build oversized, high-profit cars. To protect their multibillion dollar investments in plant and equipment, they are now forced into an increasingly awkward situation.

They are forced to promote the sale of big cars at a time when petroleum shortages have largely eliminated the demand for them. I think that this dilemma basically follows from two problems in the auto industry. The first is economic concentration, and the second is vertical integration.

The Big Three have concentrated nearly all domestic auto production in their own hands. General Motors alone accounts for more than 50 percent of industry sales. This has effectively insulated the Big Three from competitive forces. It has permitted them, for ex-

ample, to eliminate energy-conserving electric and steam car producers as well as to delay the introduction of smaller automobiles.

In short, it has enabled them to resist changes which threatened their fundamental interest: selling big, high-profit cars powered by conventional internal combustion engines.

The Big Three have also locked themselves into big car production through extensive vertical integration. They are integrated upstream into major parts production and downstream as well, into distribution and repair. They produce their own bodies. They cast their own engine blocks. They manufacture their own transmissions.

In short, and this is, I think, critically important, they have invested billions of dollars in plants geared to the production and distribution of one special type of vehicle: large, gasoline-powered cars.

As a result, they are reluctant to adapt to realities such as the energy shortage which confronts all of us now; realities which would compel them to scrap these very facilities.

In sum, concentration insulates the Big Three from change, while vertical integration locks them into the production of vehicles from a superseded technological age. As a result, the consumer is ill-served. As ex-GM Vice President John DeLorean said recently: "There is no forward response at General Motors to what the public wants today. It's gotten to be a total insulation from the realities of the world. From the standpoint of America it's frightening."

Senator HART. From what source did you take that?

Mr. SNELL. It is taken from a September 1973 interview with Mr. DeLorean by Fortune Magazine.

The public ultimately bears the costs of monopoly. The auto trust results, for example, in higher prices. According to a recent estimate by the Federal Trade Commission, 9 million purchasers of domestic 1972 automobiles paid $2.1 billion, or more than $230 per car, in overcharges to the Big Three auto makers.

Senator HRUSKA. Could you give us any reference on that, the documentation? Was it a decision, or was it a ruling, or was it in a speech?

Mr. SNELL. It was contained in an FTC staff study that was reprinted in part in "The Antitrust Law and Economics Review" of last year. I can provide you with that article.

Senator HRUSKA. Would you please give us the reference in the record and provide copies?

Mr. SNELL. Certainly.

[The document is referenced as 5 Antit. Law & Econ. Rev. 33 (spring 1972).]

Mr. SNELL. The first cost of monopoly, then, is that the consumer pays higher than competitive prices for his car.

The second cost of monopoly is that it retards innovation. This industry's technology has remained basically unchanged since 1940: automatic transmissions, power brakes, power steering, air conditioning, and other major innovations were all developed prior to that time. In addition, recent advances such as gas-conserving engines, collapsible steering columns, crash-absorption bumpers and safety belts have all originated abroad.

But more importantly, monopoly prolongs the sale of outmoded products. Due to their vast economic power, the Big Three have been able to persuade the public to buy obsolete cars. They have maximized monopoly profits by selling Americans millions of 5,000-pound, 6 miles-per-gallon, motorized dinosaurs despite a worldwide trend toward smaller, energy-efficient autos. Not until energy shortages reach crisis proportions did the Big Three reluctantly begin a shift to smaller cars. Their resistance is not illogical. As Henry Ford II has said, "Minicars mean miniprofits." Although their resistance is logical, it has grave implications to society. Their slow-motion reaction to the energy crisis, for example, has resulted in massive unemployment, growing inventories of unsold vehicles, plunging stocks, unfilled demand for small cars, and signs of an auto-induced recession.

This, then, would appear to be reason enough to reorganize these corporations: They are so big that their failure to respond to change can bring down the entire economy.

I think the auto trust should be dismantled, though, for a second reason. General Motors is in effect a sovereign economic state whose interlocking control of auto, truck, bus, and locomotive production has contributed to the decline of America's rail and bus systems.

General Motors is no ordinary corporation. It is the world's largest industrial enterprise and one of the world's most powerful private governments. Its annual sales of $35 billion a year are larger than the revenues of every government in the world except the United States and the Soviet Union. Its 800,000-man worldwide workforce is larger than the standing armies of most nations of the world. It is, in effect, a sovereign economic state unaccountable to the citizens of any country, yet possessing tremendous influence over the course of international as well as national developments.

Let me be more specific on this point. General Motors is a major force in international affairs. During World War II, for instance, it maximized global profits by supplying both the Axis and the Allied powers with armaments. Its auto plants in Germany built thousands of bomber and jet propulsion systems for the Luftwaffe at the very same time that its American plants produced aircraft engines and tanks for the U.S. Army.

General Motors is also a major force in a domestic sense. More specifically, it shapes America's ground transportation policy. It dominates the production not only of autos and trucks, but also of buses and rail locomotives. Last year it manufactured most of the nation's city buses, more than 90 percent of its bus engines, and in addition, it produced more than 80 percent of all rail locomotives. What do these figures really mean? They mean that General Motors has interlocking control of competing methods of travel which, in effect, amounts to a serious conflict of interest.

One bus, for example, can eliminate 35 automobiles; one streetcar, subway, or rail transit vehicle can supplant 50 passenger cars; one train can displace 1,000 cars or a fleet of 150 cargo-laden trucks. Due to the volume of units displaced, General Motors' gross revenues are 10 times greater if it sells cars rather than buses, and 25 to 35 times greater if it sells cars and trucks rather than train locomotives. The result of this calculus was inevitable: a drive by General

Motors to maximize profits by wrecking America's rail and bus systems.

This study, "American Ground Transport," describes that process in considerable detail. I shall not review GM's role in the destruction of the San Francisco-Oakland Key system electric railway, as Mayor Alioto handled that episode so well this morning. But I would like to point out that what happened there was not unique. GM was involved in the ruin of more than 100 electric rail and bus systems in 56 cities, including New York, Philadephia, Baltimore, St. Louis, Oakland, Salt Lake City, Lincoln, Nebr., and Los Angeles.

Let me focus on the impact of this kind of operation on the quality of life in America's cities. For illustration, permit me to cite a second example: the motorization of southern California.

This map depicts the extent of rapid rail transit in southern California in the 1930's. At that time the region was served by an extensive urban electric rail system as well as by the world's largest interurban electric railway network. The Los Angeles Railway Corp. carried more than 200 million passengers a year over 370 miles of electrified urban track. In addition, the Pacific Electric branched out from the heart of downtown Los Angeles for a radius of more than 75 miles, reaching north to San Francisco, east to San Bernardino, and south to Santa Ana.

These two rail systems, which flourished in the 1930's, were destroyed by General Motors and allied highway interests. Thirty-five years ago Los Angeles was a beautiful city of lush palm trees, fragrant orange groves, and ocean-enriched air. It was served, as I indicated, by the Los Angeles Railway and the Pacific Electric. In fact, contrary to popular belief these two rail systems, not the automobile, were responsible for L.A.'s decentralized pattern of development. First constructed in the 1930's, they established traditions of suburban living long before the automobile had arrived. This sharply contradicts those who hold that mass transit is incapable of serving large decentralized American cities.

What happened to this region? General Motors, Standard Oil of California, Firestone Tire, and others, organized holding companies which scrapped the pollution-free electric trains, tore down the power transmission lines, ripped up the tracks, and placed GM motor buses, fueled by Standard Oil and equipped with Firestone tires, on every L.A. street. The noisy, foul-smelling buses turned earlier patrons of the high-speed rail systems away from public transit and, in effect, sold millions of private automobiles.

Today, this city is an ecological wasteland. The palm trees are dying of petrochemical smog; the orange groves have been paved over by 300 miles of freeways; the air is fouled by 4 million cars—close to half of them produced by General Motors—which emit 13,000 tons of pollutants daily. Tomorrow, a shortage of motor vehicle fuel and an absence of adequate public transport could disrupt the entire auto-dependent region.

General Motors' destruction of electric transit systems across the country left millions of urban residents without an attractive alternative to automotive travel. Pollution-free rail networks, such as the Los Angeles Railway and the Pacific Electric, with their private rights-of-way, were vastly superior in terms of speed and comfort

to smoke belching, rattle-bang GM buses which bogged down with cars and trucks in traffic. Likewise, electric buses were faster, quieter, cheaper, and more durable than gas or diesel units. No one knew this better than General Motors.

To prevent the cities it motorized from rebuilding their rail systems or buying electric buses, General Motors and its highway allies prohibited them by contract from purchasing "any new equipment using any fuel or means of propulsion other than gas."

In essence then, what this means is that General Motors realized the capability of electric transportation to compete with automobiles, and it realized that as long as people had adequate mass transportation they wouldn't buy the product that GM was fundamentally interested in selling.

The only way to bring about a situation where it sold more cars was to eliminate rail alternatives and to supplant them with buses which were unattractive.

General Motors was also involved in the decline of America's railroads. Beginning in the mid-1930's, it used its leverage as the Nation's largest shipper of freight to influence railroads into scrapping their equipment, including pollution-free electric locomotives, in favor of more expensive, less durable, and less efficient GM diesel units. The switch to diesels prevented the railroads from competing effectively with the cars and trucks that GM was concerned with selling.

The dieselization of the New Haven Railroad is illustrative. During 50 years of electrified operation this railroad never failed to show an operating profit. Then, in 1956, General Motors persuaded it to scrap an entire fleet of powerful, high-speed electric locomotives and to replace them with GM buses.

By 1959, 3 years after dieselization, the New Haven lost $9.2 million. In 1961, it was declared bankrupt. After a review of these facts, the Interstate Commerce Commission, in an unprecedented move, found that General Motors had contributed to the New Haven's financial ruin.

The most disturbing aspect of GM's dieselization program is that it eliminated a technological alternative—electric trains—which would have helped railroads compete with highway transport. Today, when virtually every other advanced nation has electrified its trains, America and what is left of America's railroads are locked in to GM diesel locomotives.

The motorization of Los Angeles and the dieselization of the New Haven were not the work of malevolent or rapacious GM executives. In fact, my study is based on a contrary premise. It posits that these adverse events were the social consequences of monopoly power. Whether, in fact, GM executives actually intended to construct a society wholly dependent on motor vehicles is unlikely. That such a society developed in part as a result of GM's control of ground transport is relevant and apparent.

I would like to cite briefly some of the social costs of the auto makers' highway transport system. We are moving 90 percent of our people and 80 percent of our freight by cars and cargo trucks. Yet, in terms of energy consumption, pollution, safety, and urban dislo-

cations, motor vehicles are probably the most inefficient means of travel ever devised by industrial man.

More specifically, consider the energy crisis. Cars are the single most important cause of our petroleum shortage. We are pouring more than 40 percent of our oil supplies into automobiles and trucks. If instead we used energy-efficient trains and mass transit for only half of our transport needs we would have saved an estimated billion barrels of oil this year, which is more than enough to heat our homes in winter and provide our industries with all the fuel they require.

Or consider the air pollution crisis. Cars and trucks burn more than 40 billion gallons of petroleum each year within the densely populated 2 percent of the United States classified as urban. The combustion of this enormous quantity of fuel has created a crisis in urban health by dumping more than 60 million tons of poisonous substances annually into the air. In Los Angeles alone, more than 500 persons a year die of ailments attributed to motor vehicle smog. If electric rail transit were substituted for cars, urban air pollution would be reduced substantially. The same reasoning applies to safety and urban problems: a shift to mass transit would save lives and serve cities better.

Mr. Chairman, what America needs today is not what General Motors, Ford, and Chrysler are inclined to provide. We need smaller cars with efficient low-pollution engines. We need high-speed rail systems to move people and goods downtown and between cities. We need attractive, fume-free buses to supplement rail transit and to provide small towns with a practical alternative to automobiles.

The Big Three auto makers economic interests lie elsewhere. They want to sell big, expensive cars and triple-trailer highway trucks powered by 800-horsepower diesel engines. They want to increase their $40 billion annual motor vehicle sales by suppressing bus and rail alternatives. In short, they want to continue their monopoly control of American ground transportation. As long as they get what they want, America will not get what it needs.

My third and final argument, therefore, is that reorganizing the Big Three auto makers into a balanced group of auto, truck, bus, and rail firms is an essential step toward achieving a balanced system of transportation.

The hundreds of plants controlled by the Big Three auto makers could provide us with such a system. They could build smaller, safer, cheaper cars. They could shift some of their production from automobiles to buses and trains. But until they are released from Big Three ownership, they will be held back from making these essential commitments.

I propose reorganizing these hundreds of plants into independent companies. In this regard, I am indebted to the Big Three auto makers own engineers and economists who have determined that the most efficient method of producing ground vehicles is by assigning different tasks to more than 300 plants in 32 States.

The Big Three do not manufacture all of their automobiles in three factories, but in hundreds of factories spread throughout the United States. My proposal assumes the wisdom of this arrangement. It would leave unaltered the number, size, and physical locations of

these many facilities, but it would recommend a change in their ownership.

Each group of plants now separate in fact, and separate in function, would become separate in law as well. They would be cut loose from the chains which have bound them to a superseded technological age of big cars and inadequate public transportation. They would be projected into a more balanced environment where competition and freedom from conflicts of interest would encourage them to produce the smaller cars, cleaner trucks, attractive buses, and electric trains that America needs.

My proposal, as I stated at the outset, would be not only in the interest of the public, but also in the interest of the management, shareholders, and employees of the Big Three.

Managers, for example, would for the first time command their own companies. They would be free to decide what vehicles to make, which innovations to pursue. They could choose, in other words, to build small electric cars or modern buses or high-speed trains.

Shareholders might also benefit. The plunging values of today's auto stocks reflect the decline of what was once a growth industry. Monopoly has blinded the Big Three to the realities of this marketplace. I suggest that reorganization would reverse this process. It would give shareholders an interest in a diversified range of aggressive ground vehicle companies. It would, in short, enable them to participate in a growth industry once again.

Employees would also benefit. The Big Three have failed to respond to a changing market. And as a result, auto production is off by 25 percent and 100,000 auto workers are today unemployed. That's more than at any time since the depression of the 1930's.

Reorganization would change the employment picture. It would create new, dynamic firms to meet the demand for efficient cars and high-speed transit. It would help put these employees back to work.

Reorganization would bring the greatest benefits to the consumer. It would generate a wider range of transportation alternatives. The experience of other advanced nations, such as West Germany, France, and Japan, supports that view. The combined population of these three nations approximates that of the United States. The structure of their ground vehicle industries, however, is strikingly different. It is more evenly balanced among a number of competing motor vehicle and mass transit manufacturers.

In these lands, for example, there are 20 producers of cars, 19 producers of trucks, 26 producers of buses, 23 producers of rail vehicles, and 33 producers of locomotives. These countries have the same population as the United States, and yet we have three major producers of automobiles, essentially one producer of buses, and two producers of locomotives.

Moreover, in these countries, no one firm dominates alternative methods of travel as does General Motors in this country.

What does this difference in industry structure really mean for consumers? That's the important point. If it doesn't mean any change in what the consumer is going to be able to choose from, there is no reason for undertaking it. But there is a difference. The Japanese ride between their cities on vibration-free 150 mile-per-hour bullet trains. The French have access to comfortable turbo-trains

designed for speeds approaching in excess of 125 miles per hour. The Germans and Japanese commute to work on nearly 100 modern rail systems, many of them, as I would point out to Senator Hruska, streetcar lines that now operate modern rail vehicles of recent construction.

And the citizens of all these nations can choose from a wide variety of modern, attractive buses and small, economical automobiles. By contrast, Americans are stuck with slow, rattle-bang GM trains that never arrive on time, buses that nauseate their passengers, and cars that run out of gas waiting in line to be refueled.

At this point, with your permission Mr. Chairman, I'd like to demonstrate visually how this Nation compares in ground transportation. I'd like to compare a 1-minute filmstrip of a General Motors train with an even shorter filmstrip of a Japanese bullet train, just to give you an idea of typical types of transportation.

This train departed from Chicago en route to Florida. It is called "The Floridian." It is hauled by a General Motors diesel locomotive and as I understand it, the top speed on this run is 40 miles per hour. The train arrived in Florida 4 hours and 40 minutes late. Now there are several things that are important about what you're seeing. First of all, obviously, it's slow moving. I think in justice it has to be pointed out that there are two reasons why it is so incredibly slow. First of all, a diesel locomotive is simply not an efficient means of motive power compared with an electric locomotive. It's tractive efficiency is far lower; it can't accelerate and reach as high a level of sustained speed as can an electric locomotive. Second, that track is in terrible shape. This is brought up time and time again. "What's wrong with America's railroads is not only the mode of power, diesel, but that the tracks are deteriorated." I would suggest that the American railroads have been forced to put so much money into buying diesel locomotives that they've ignored track maintenance.

Let's take a look at the Japanese bullet train. This train is moving along at between 125 and 150 miles per hour. It was first developed in 1964. It is manufactured by a competitive rail-building industry. There are, as I indicated, 33 manufacturers of locomotives in the three countries. In Japan five different manufacturers compete for the production and development of this incredibly fast train.

We've been talking about buses and the fact that we're stuck with inferior kinds of buses. I have a slide here of a bus that's now running on the streets of Germany. It is an omnibus electric bus. When it moves through the suburban areas of a community where pollution is not as much a concern, it runs on a normal diesel engine or a gas turbine engine and at the same time charges an on-board battery so that when it enters the pollution-critical areas, the downtown and urban area, it runs completely on pollution-free electricity.

This kind of bus has been developed in many other countries and produced by many other manufacturers. But the important element is that there are at least 15 producers of buses in Germany, all of them competing for a better product. The result of competition is more improved products, innovation, and research, which essentially helps consumers from the standpoint of such socially important concerns as pollution.

I also attempted to get a slide of some modern European streetcars. I have reproduced pictures of these streetcars and they are available in the back of the hearing room. I've also circulated them to members of this subcommittee. The important point here is that when people think of the streetcars that were eliminated by GM, they think of old, rusty vehicles. Well, the rest of the world didn't have General Motors ripping up their streetcars, and in the rest of the world there are 300 streetcar lines, many of them operating new streetcars developed in the past 5 years. Essentially, these streetcars look like a BART vehicle and are of very modernistic design and high-speed.

Mr. Chairman, what I have proposed, of course, is only part of the solution. The long-term process of making America a first-rate nation in ground transport will require a major effort on the part of Government and industry as well as the public.

But I say let us begin that task. The auto makers' war against public transport has gone on too long. It has depleted our resources; it has fouled our air; it has scarred our cities with thousands of miles of concrete pavement.

I say let us bring this insane conflict to an end. Congress has the power to reorganize the Big Three auto makers in a manner which would serve society's need for efficient cars and adequate mass transit. Congress can pass legislation which would be in the best interest not only of consumers, but also of the management, the shareholders and the employees of these faltering giants.

Congress can, in sum, achieve what is good for the country as well as good for General Motors, Ford, and Chrysler.

Senator HART. Mr. Snell, thank you for a useful summary of that much longer study.

On page 4 of your statement, you talk about the control by General Motors of competing modes of travel: cars, buses, locomotives. Now, I am no engineer, but I would assume that there is considerable spillover in the manufacture of cars and buses. Is it your position that GM should be prohibited from making buses. To follow through, is it your position that Ford and Chrysler also should be prohibited from manufacturing buses? And if all three of them wanted to manufacture an electrified mass transit system and cars, would you prohibit that; or would you permit that?

Mr. SNELL. That is a three-part question. I don't think that the answer to each of the parts are necessarily identical. Let's take the first one.

Senator HART. All right, GM and buses.

Mr. SNELL. I haven't found any, but whatever economies—multiplant economies—result from the possible spillover of engineering technology, those advantages would be far outweighed by the adverse social consequences that result from this conflict of interest situation that I've spent this morning describing.

The second question is, what of Ford and Chrysler? That poses a different issue. I'm not sure it requires a different answer. I think Mayor Alioto went into this a little this morning when he stated that you're not dealing with a competitive automobile industry. To a large extent, what General Motors does, so also do Ford and Chrysler.

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I think that the problem there is that given the shared monopoly structure of the automobile industry, Ford and Chrysler both realize that they don't have to worry about a better bus being produced by General Motors. If, in fact, GM is producing buses with an eye to selling cars, then Ford will realize that they can do likewise, and Chrysler likewise.

I would suggest that I see the problems as far less severe when Ford decides to make buses—and even more so with Chrysler—than when I see General Motors essentially having control over these competing industries and deciding, where we put research and development, what type of transportation policy should we shape for America.

Senator HART. Now the last part is if all three of them were willing to go electric?

Mr. SNELL. Like rail transit vehicles? Well, then it becomes, I guess you would say, more advisable. I wouldn't be as concerned then, because although General Motors had control of their automobiles, it wouldn't have complete control over the mass transit production end.

But I would suggest that as long as General Motors, Ford, and Chrysler dominate the auto industry, and as long as they finance the highway lobby through their monopoly overcharges on cars, as long as this situation exists, then I think that that's an insuperable obstacle to improving rail transportation.

Senator HART. As I see it, you are suggesting that the 300-odd plants that now make up the American automobile manufacturers should be spun off into separate departments. Did I overstate that?

Mr. SNELL. I should stress that, as I stated in the study, my reorganization plan is only a first approximation. I'm not stating how many auto firms, or how many bus firms, or how many rail firms would result because that's a point that requires further investigation.

But I am suggesting a calculus that we can use to determine that answer. Each group of firms which economically function as one group—or each firm, or each company, or each facility that can operate viably as one unit—would become an independent company.

Senator HART. Well, I am glad you did. You are not saying that you found no economies of scale in any of the multiplant arrangements of the domestic manufacturers, are you?

Mr. SNELL. I see what you are driving at. I should state that in my review of the literature I have found no evidence of multiplant economies. Theoretically speaking, each of these firms could operate as a separate unit. But I am also suggesting that I may have overlooked something—which I am sure the industry will mention when they come back—which could justify why certain firms would have to be grouped together. I haven't found anything as yet. But I am open——

Senator HART. Well, I guess I have been involved in auto industry problems long enough to inhale as an act-of-faith proposition that each manufacturer must make some of the components that go into the final assembly of a car. But we will welcome their discussion.

Mr. SNELL. Only a quick note there. I see no reason why the separate plants can't buy and sell from one another, rather than being owned by one entity.

Senator HART. This is another question that reflects from whence I come. I have met myself coming around on this many times, and

it goes with the business of styling, and your discussion doesn't treat that explicitly. One thing that the automobile industry contributes which is of critical importance in our region and the country is employment—jobs. And the extent that a styling change persuades the buyer and the consumer to trade in his old one and get a new one, that seems to be socially productive. Now, why is that? Is there anything wrong with that notion?

Mr. SNELL. No; I do not take exception with Detroit's inclusion of styling as an important marketing characteristic in automobiles. But I do take exception to its overemphasis on this attribute of automobile production rather than other attributes such as engineering.

I think that people should be able to choose cars not only on a basis of styling, but also on a basis of engineering; and I think that Detroit has for too long assumed that it could get by with automobiles just by restyling them every year rather than really improving their performance. I think the industry should offer the consumer a full menu of characteristics from which to choose an automobile which would include style, engineering, energy conservation, gas mileage, safety, and things of this nature.

Senator HART. All right. You talked about the fact that the degree of concentration that we have in the domestic automobile manufacturing industry has sort of immunized them from competitive forces and specifically you say it has permitted them to eliminate energy conserving electric- and steam-car producers, as well as to delay the production of small cars. And elsewhere, you tell us about the 20 or more producers of cars in France, West Germany, and Japan. But they haven't produced any electric or steam vehicles either, have they?

Mr. SNELL. Well, in fact, they have. Daihatsu Kogyo, a Japanese manufacturer of automobiles, has produced and sold electric vehicles for the past 3 years. In Britain, a country not of the three I've selected for comparison, there are several manufacturers of electric delivery vans. There is, in fact, a substantial fleet of electric and battery-powered delivery vans operating in the streets of Great Britain.

But I think a second answer is called for here. For a long time the United States led in the development of automobiles. Automotive technology originated in this country, and was exported to other nations. Then America became locked in, as Mr. Knudsen, formerly of General Motors as well as Ford, has indicated, to the internal combustion engine.

For a long time, auto-makers in Europe and Japan followed us in that sense. Only recently have they moved ahead. In fact, they are beyond us and have reached a higher level of automotive technological achievement. For example, the Honda stratified-charge engine, which has the best gas mileage of any car manufactured in the world, came from Japan, as well as the electric cars that they've manufactured. These and other innovations, however, are being developed in the more competitively structured industries of Europe and Japan rather than the United States.

Senator HART. I am uneasy asking the question, but I am equally uneasy letting your statement lie. I am referring to your statement that General Motors was making bombers and tanks for the Germans

during World War II. Isn't that a risk that any firm that makes a decision to locate production facilities overseas runs, that some nut, sometime later, will take control of the country and send it to war?

Mr. SNELL. I would like to respond in three parts. First of all, I am concerned with an industry that is uniquely convertible to war production. And the capacity for an automobile plant, because of its mass production capability, to be switched and become a significant factor in a war economy is tremendous. And for that reason I think that the automobile industry is more sensitive to this kind of conflict of loyalties than other industries.

A second concern of mine is that I'm not sure that—I'm not really sure—General Motors did not know with whom they were dealing. In my study I document a second incident—not the bomber and jet propulsion system production that GM was involved with during the war—as early as 1935 General Motors and Exxon Corp. were visited by representatives of the Nazi Ministry of War and were asked if they could supply the Nazi government with tetraethyl lead patents, and if they would, in fact, construct factories in Germany for the production of synthetic fuel for the Nazis, because of the problem that they were having with trying to contemplate how to wage a war without natural oil resources; Germany does not have any natural oil resources.

I would suggest that in this case General Motors as well as Exxon knew precisely what they were doing.

A third part, I think, to a complete answer, is that it is a difficult question to decide. Consider, for example, the recent report that General Motors is negotiating with the Soviet Union for the construction of the world's largest truck facility in Siberia. It seems to me that you could look at this in two ways. First of all you could say this is a fantastic opportunity to promote detente between two otherwise hostile powers. I think that view certainly has merit.

On the other hand, you could posit that when uprisings such as the Hungarian uprising, and more recently the Czechoslovakian uprising, occur that General Motors technology and, in fact, General Motors designed trucks, would be on their way carrying troops to these countries. A very difficult issue. The reason I raise it in the study is not to offer solutions but rather to suggest that here is a problem of multinational investment in critical war-convertible industries that we must face and deal with before problems like this, and problems like what occurred in Germany, occur once again. And I might add that, in fact, the United Nations is studying this precise point.

Senator HART. I think that is a fair response. It is tough—unless you are Monday morning quarterbacking, as we are now—to decide what is in the best interest, really, of world peace.

In World War II we found out that when we shut off business with Japan we brought on a war. We're on the track both ways.

Mr. SNELL. A footnote, though. I would suggest that these issues might be easier to resolve when you have a situation where one corporation, such as General Motors, is so massive and has such incredible economic power that it inevitably become a dominant force in the war economies of two belligerent nations. That kind of thing I think you can deal with. If you do attempt to reorganize and restore com-

petition to the automobile industry, you'll not have a situation where one company becomes such an incredibly important ingredient in the war efforts of several countries.

Senator HART. Senator Hruska?

Senator HRUSKA. If those General Motors plants in Germany during the war were owned by four or five corporations instead of by one would they have produced any more or less tanks, cannons, airplanes, and so on?

Mr. SNELL. I assume you refer to American corporations, rather than German corporations?

Senator HRUSKA. Sure; that spin off and dissolve into the investing corporations. Other American investors would buy them. Would the result be the same?

Mr. SNELL. I suppose——

Senator HRUSKA. Of course you couldn't blame General Motors for it then. That would be one thing. You would have to revise your paper. But aside from that, would the result be the same?

Mr. SNELL. I think this is a problem of size, of concentrated power—the United States was relying on General Motors to produce airplanes and to supply it with the technology necessary to fight World War II.

At the same time—again, because of its dominant position—General Motors was building war planes in Germany. Now, some people think it's strange that General Motors produced jet planes for Germany and yet never produced them for the United States during World War II. What I'm suggesting—and I'm not suggesting this occurred through any sort of malevolence on the part of the executives—is that the opportunity for the transfer of technology from one country to another—the transfer of technology from the United States to Germany—existed, and should not have existed.

Senator HRUSKA. Well, let's review that situation a little. Why were American investors so anxious to get abroad? Wasn't it a part of our national policy, starting with the end of World War I, that we would encourage foreign trade, that we would encourage foreign investment by American investors, that we passed in the Congress here the Webb-Pomerene Act, which gave certain antitrust exemptions to people who would invest in overseas trade?

And so there they are. And they pay for themselves anyway, because their dividends come back here and they pay income tax on the dividends back here.

Now, there is a definite process, deliberate U.S. foreign trade policy, and here they are being belabored by your statement.

But let me suggest two things. Item 1, that General Motors was not alone. There are literally dozens of corporations abroad and they got caught in the same bind whenever they found themselves in the Nazi Government's sphere of influence. There were some German corporations in America that made war products that American used against Germany, and if we should ever be so unhappy and unfortunate as to get into war with Japan again many of the Japanese investments and Japanese-owned plants have facilities in this country which would manufacture stuff that would be used to defeat Japan. Now, are you against this interchange and exchange of capital all over the world? Is that the position you take, or is it just because General Motors does it? What is your position?

Mr. SNELL. As I believe I indicated in response to Senator Hart's question—I did cover this question in the study—I am not against multinational investment per se—not at all. In fact, in response to Senator Hart's question a moment ago, I stated that I was concerned with one particular industry which has a unique propensity for conversion to war-producing material. We're not talking about toothpick makers, certainly, or lumber companies. We're talking about a very, very important industry.

Senator HRUSKA. Is gasoline a war propensity or a peace propensity? Is a jet plane peace or war? Are shoe manufacturers whose shoes have to be worn by soldiers and civilians, peace or war propensities?

Mr. SNELL. I would just like to conclude by stating I do not think it was the policy of the United States to promote a situation whereby, as I indicated, General Motors manufactured half of the bombers that Hitler used in his attacks on Britain, and 10 percent of all the jet planes.

I don't think that America would condone a situation where the same corporation that is building defense products for America is transferring war-related technology to a potential belligerent.

Senator HRUSKA. Well, you come right back to your original proposition: because General Motors owns it, it's bad. Now, suppose the Singer Sewing Machine was the manufacturer? They have plants over there.

Mr. SNELL. I'm sorry. I would just disagree as to the critical nature of sewing machines as opposed to bombers.

Senator HRUSKA. So, suppose they were manufacturing farm tractors. That's what we were doing in this country. Chalmers was making farm tractors, and John Deere. They converted into tanks and cannon. What if some of those factories were automobile factories, or whatever, and they were converted? I just wonder. Now I come back to my proposition: Is it bad because General Motors did it, and is it all right if anybody else except General Motors invested in plants that happened to be caught in the toils of war?

Mr. SNELL. Again, I would answer in two parts. First of all, I think this probably certainly raises the issue. It is an issue that we haven't confronted before, and I think it's a necessary issue which we should at least spend some time dealing with.

But secondly, I'd state that although there were certainly other companies involved in manufacturing items for the Germans, because of their plants being located there, there was no other corporation in a position of being the essential ingredient to both war efforts. That, I think, is a dangerous development. Singer Sewing Machine, or lumbermakers were not in the position, essentially, of making the decision as to whether or not—and this may have occurred—Hitler could even undertake war.

Senator HRUSKA. What are you saying? That General Motors is the only American corporation that had any plants there?

Mr. SNELL. It was the most significant corporation in the Nazi war effort—overwhelmingly significant.

Senator HRUSKA. Sure. Now, where is it located? Suppose they had $2 billion worth of material and somebody had only a mere million dollars worth of such material. Now, one is significant and the other isn't.

Or there is a company that had six plants of $500 million apiece. Now, is one significant and one not? The principle is there now, and if you inveigh against General Motors for it then you have to inveigh against the system that put them there, and tolerated them, and accepted the returns by way of profits when they came back to America—and you and I benefited by that presumably.

I am glad you came to testify, Mr. Witness. I think you have given me new heart, or am I turning optimistic about our whole American system. I think we have a wonderful future and the solution is simple.

All we have to do is spin off General Motors or split it up into a lot of small pieces and then that octopus will no longer be there.

And without a General Motors as it is now there would be no more pollution, there would be no more traffic jams, there would be no more foul, gas-emitting buses with cling-clangs and noise.

There would be no more big cars; and we would reduce very substantially the gas-guzzling cars; and there would be no massive unemployment.

There would be no unsold cars anymore. Gasoline stocks would return to plentitude and there'd be no more plunging stocks and no more General Motors' wrecked rail and bus and streetcar systems. Those would all be a thing of the past.

No more overcharging for cars, and no more concrete pavement. And some of the suburbs would get palm trees in them again. And fresh ocean breezes would waft into their lungs and into their heart.

All we would have to do is destroy General Motors; because all of those things in your statement have been ascribed to General Motors.

Now, I think that is wonderful.

How do you propose to sort of translate that into reality by the formula which you have given me: splitting up, making small pieces out of big ones? How do you do it?

Mr. SNELL. Senator, I attempted to make it plain in my presentation this morning—and certainly plain in the study—that I'm not suggesting that by reorganizing General Motors we're going to have rail transit in Washington, D.C., tomorrow.

What I am suggesting is that unless you reorganize General Motors that company will remain as an insuperable obstacle to achieving that objective. But there'd be a host of other measures that must be undertaken by Congress and industry.

Senator HRUSKA. I have looked in vain for some others. The only one that's been doing this and the one that brought the country in its horrible state of affairs is General Motors, according to your statement.

I haven't heard anything about any other company, any other industry, or any other influence within civilized America. General Motors did all these things. You have said so.

Now, do you want to retract this statement?

Mr. SNELL. No. All I'm suggesting is that this subcommittee is concerned with monopoly in America and it's concerned with the advisability of reorganizing concentrated corporations.

If I were sitting before the Commerce Committee at this point I'd be suggesting that Congress should be raising billions of dollars to spend on rail transit.

And I would certainly make that point. But I'm sitting before a committee whose jurisdiction and whose ability to solve this massive problem relates only to a portion of it. If it is willing to undertake that task by reorganizing General Motors it will help solve the problem I've described.

Senator HRUSKA. Well then, you are retracting your statement to this extent that there are other factors, there are other things and so on, and General Motors isn't the sole and only malefactor. Will you go that far?

Mr. SNELL. Senator, I stated that what I proposed was only part of the solution. I stated that the long-term process of making America a first-rate nation in ground transport would require a major effort on the part of the government and industry as well as the public.

Senator HRUSKA. All, indeed. All, indeed. That is two sentences, two lines, three lines in a statement which is eight single-spaced, small-typed, typewritten pages, and that is a saving clause to be sure.

But the thrust of this testimony is that General Motors is the big one. I don't care if it's General Motors, or Ford, or Chrysler, or if it's the Goodyear Co., or if it's the Kuykendall Shoe Co., John Deere, or whatever.

We simplify things so greatly by ascribing all of these ills to a single corporation; and then say "if we could only get rid of it."

Let me ask you this. How much longer will General Motors build bigger cars?

Mr. SNELL. Well, it's taken some time for it to decide to build smaller cars. As I recall, in 1949 a national poll was taken which indicated that 60 percent of Americans wished to buy small cars. That was in 1949 and suddenly now, after the rest of the world somehow or other has been able to discern that smaller cars meet consumer demand better, all of a sudden the Big Three say, "I guess it's time to build small cars."

Senator HRUSKA. Well, that's fine. Now, how much longer will General Motors build big cars, these so-called gas-guzzling cars like Cadillacs.

Mr. SNELL. I would suggest that that question would be more appropriately asked the industry when they return.

Senator HRUSKA. As an economist you know how long they're going to build them.

Mr. SNELL. I really have no idea.

Senator HRUSKA. You surely do and principally you know that they can't continue building them if there are not going to be any buyers; you know that, don't you? Doesn't that make common sense, or is that too simple also?

Mr. SNELL. In a competitive market the small car would have been here many years ago, but we're not talking about a competitive market. We're taking about a market that to a large extent is shaped by the Big Three auto makers. And I fear that they will prolong the sale of their big cars as long as is possible in order to maximize profits on them.

And I would submit that for that reason from 1972—for the year 1972 through mid-1973—General Motors, for example, after introducing the Vega, has spent only 5 percent of national TV advertising promoting the Vega.

Now, if GM really wanted to promote smaller cars it would have allocated a larger share of its advertising budget to that objective.

Senator HRUSKA. You amaze me when you say it's not a competitve market. Do you mean that a Chevrolet or a Pinto is not competitive with a Cadillac? They've been in manufacture for a long time.

After Edsel was discarded they started making other kinds of small cars. It is competitive market between cars. You refer to big cars there and the necessity for these companies to hawk these big cars and force them upon the American people.

I don't know of anybody yet that has to buy a Cadillac unless he wanted to. But there were Plymouths, there were Fords, there were Chryslers, there were Dodges, there were imports. It is a competitive market.

The point I'm trying to make is this: Whenever it becomes unprofitable to make big cars and they cannot sell them they're not going to make them anymore.

And isn't that the secret to the streetcar company failure. When nobody would ride them anymore, and couldn't because streetcar tracks didn't reach into suburbs, then no longer did they keep the streetcar companies.

Mr. SNELL. Senator, I'd like to point out that the Pacific Electric not only reached to the suburbs but it connected distant cities and that, in fact, there was no decline in patronage in 1940 when General Motors acquired the rails; they were moving 80 million passengers a year.

Senator HRUSKA. How much of an expanse is covered by that map. What is its easternmost terminal?

Mr. SNELL. Seventy-five miles.

Senator HRUSKA. Seventy-five miles?

Mr. SNELL. That's correct.

Senator HRUSKA. Isn't that wonderful. And yet it wasn't enough. It folded, didn't it?

Mr. SNELL. It didn't fold, Senator; it was acquired by General Motors and its auto-industrial allies and destroyed.

Senator HRUSKA. What?

Mr. SNELL. It did not fold. It was acquired by General Motors and other industrial interests and destroyed.

Senator HRUSKA. And what did they do with it?

Mr. SNELL. They destroyed it.

Senator HRUSKA. They destroyed it?

Mr. SNELL. Yes.

Senator HRUSKA. And what did they put in its place?

Mr. SNELL. The products they manufactured, GM buses using Standard Oil fuel and running on Firestone tires.

Senator HRUSKA. And was that more profitable than the electric system?

Mr. SNELL. To the companies that manufactured General Motors buses and——

Senator HRUSKA. Were the buses able to go where tracks could not go and would never be built?

Mr. SNELL. Quite to the contrary. The buses bogged down in traffic. The people didn't want to ride them anymore.

Senator HRUSKA. The history of the traction system shows that they were not able to build tracks where the people were and where they went.

Mr. SNELL. Senator, they built the system and Los Angeles was formed around it; and Los Angeles is an excellent exhibit of the ability of the rail system to reach into all the suburbs and to all the places where people live.

Senator HRUSKA. Very well, but the fact is the buses are able to go innumerable places that no tracks could ever be built. Isn't that a fact?

Mr. SNELL. Senator, the buses were not an attractive alternative to automobiles, and people didn't want to ride them anymore. That's why they built freeways over these tracks.

Senator HRUSKA. Okay. Now then, of course you're not against cars.

Mr. SNELL. Absolutely not.

Senator HRUSKA. Now, will there be any unsold cars—9 million cars are made by six companies, all of them divorced from General Motors—will there be less trackage; will there be fewer highways demanded; will there be less gasoline that will be required?

Mr. SNELL. Senator, what I'm suggesting is that it's time for us to redirect our transportation priorities away from automobiles.

Senator HRUSKA. Who would do the redirecting? Would you do it?

Mr. SNELL. No, of course not. I assume Congress would because they represent the people; and I think they should be shaping transportation policy rather than manufacturers, such as General Motors.

Senator HRUSKA. Congress is an old hand at the transportation business; the millions, the tens of millions needed every year. In fact it started out with hundreds of millions to finance the deficits of Amtrak. And it is getting to be a sore subject on the Appropriations Committee, let me tell you.

Now, if you want to build on that experience and say, "Let's get into a lot of other things that the Congress is going to do," and in this field you might have a little opposition, political opposition.

Mr. SNELL. Well, I would suggest that unless Congress does something about the problem that I've referred to—that is reorganizing these industries, making them more competitive so that they produce better vehicles—very soon, as the Federal Trade Commission has suggested, we will consider the automobile industry as a public utility and regulate it as such.

I don't want that to happen because I understand that you and I are both believers in free enterprise.

Senator HRUSKA. We need a king who will say, "Do this or do that." Now what becomes of competition when you get into something like that?

Mr. SNELL. No, this refers to an earlier question. I want to straighten this out. You mentioned 9 million cars. Now, if we're making cars, and essentially what we're trying to do is get people away from cars, what would happen to all of these automobiles?

I tried to deal with that problem by suggesting that what we really should do now is, in addition to shifting away from big cars to small cars, we should be trying to get some of the automobile-making facilities that are presently controlled by the Big Three to start producing

the mass transit vehicle and the buses—better buses I would hope—that the public really needs.

And this is what I'm suggesting. Essentially, we've misallocated our resources all into one type of tranportation unlike any other country of the world.

Why can't we then try to achieve a balanced system; and to do that we need a balanced manufacturing base of many companies building many types of vehicles.

There would be no unsold cars if cars are not made that nobody wants. That's really why General Motors has 60,000 cars on hand because people don't want the cars that they're making.

Senator HRUSKA. Well, Mr. Witness, if people don't want the cars what becomes of them? Does General Motors continue making them? Does Ford make them if nobody wants them?

Mr. SNELL. Again, a balanced transportation system would insure that people would have not only access to automobiles for the type of transportation needs which automobiles fill best, but they would also have alternatives of, say, commuting to work on rail transit or of taking buses.

Senator HRUSKA. You say that the travelers back from Japan tell the same story of having ridden in 150-mile-an-hour bullet trains, and ask, "What ever happened to American railroads?"

Wasn't competition one of the diseases that the American railroads had?

Mr. SNELL. A disease?

Senator HRUSKA. Wasn't the competition among the several systems one of the causes? And if not why are these Eastern railroads bankrupt as they are; and why did we have to, in December of this year, bail them out all over again?

We have had on the statute books for years, maybe 25 to 35 years, a law which said there shall be a reorganization of these railroad systems so as to avoid and prevent duplication and make them into economically feasible units of transportation that will be useful and profitable.

And that's been on the books for a long time. It's in the books now, and the Interstate Commerce Commission is charged with that duty.

Now you want another statute on the books that's going to say so many dollars will be put in railroads, so many will be put in buses, so many will be put in small cars, and so on.

Do you think that's going to work?

Mr. SNELL. No. I think though that at least the decision as to where the taxpayers' money is going, as to whether it's going into highways or whether it's going into rail, should be made by Congress rather than by the auto makers and oil interests that have passed legislation requiring that all money that comes from motor vehicles must build highways.

I think that Congress should resurrect its power over that issue. Germany is able to decide that 50 percent of its money will go to rails and 50 percent to highways.

Japan has the same possibility. Why can't we?

Senator HRUSKA. Well, let me remind you that those are dangerous words you are using. The countries you refer to are socialist countries. Now, if you want us to get into that degree of socialism that's something else again.

Mr. SNELL. Senator, I would suggest that in Japan the bullet train is manufactured by a multitude of competing manufacturers. That's competition.

In this country we have private monopoly, the absence of competition. One firm, General Motors, manufactures nearly all the locomotives.

Senator HRUSKA. And you would substitute the Government for General Motors?

Mr. SNELL. I would substitute competition.

Senator HRUSKA. Government is going to allocate funding, and factories, and products; the Government's going to do that?

Mr. SNELL. Of course not, Senator. I'm suggesting that unless this subcommittee reorganizes the industry into a competitive private industry then nationalization is imminent. But I certainly would not welcome that development. Unless we as leaders in the free enterprise system attempt to make the system work and attempt to restore competition to it we will end up a socialist country. But I don't want that any more than you do.

Senator HRUSKA. The railroads are in a bad way and one reason is that they had competition among them. Now how would you cure that?

Mr. SNELL. Well, that may indeed be one factor. I'm not acquainted with it. I would suggest, however, that the railroads suffered greatly from the fact that General Motors forced them to dieselize, forced them to purchase locomotives which had one-half the lifespan, did one-third the work, and cost three times more than the other attractive alternative—electric trains. That brought down America's railroad.

They poured so much money into purchasing an incredibly inefficient type motive power that their ability to survive financially was eroded.

This kind of evidence was presented to the British Parliament in 1960. The British Parliament said, in effect, "We're not going to make the same mistake as America, we're not going to go diesel, we're not going to let General Motors ruin us," and they electrified their railroads.

So did Japan on the basis of the same——

Senator HRUSKA. So the diesel locomotive was forced upon the railroads and they were forced to do away with the steam locomotives——

Mr. SNELL. The electric locomotives.

Senator HRUSKA (continuing). Oil-burning locomotives of this nondiesel type.

What a horrible fate!

Mr. SNELL. Excuse me, Senator——

Senator HRUSKA. It's cheaper, it's easier to maintain, more reliable. What a horrible fate it was to discard those steam locomotives!

Mr. SNELL. Senator, we're not speaking about steam locomotives. In the 1930's, as you may recall, the Pennsylvania Railroad began to electrify its system from Washington to New York. And so also did the New Haven.

At that time railroads throughout the world were considering whether they should electrify their lines or whether they should

go to diesel locomotives. The decision on steam had already been made. Steam locomotives were not efficient and would no longer be used.

At that very critical point in time, General Motors entered the scene and, by using its freight leverage—it was the largest shipper of freight in the country—it preempted the railroads from making a decision to go to electric locomotives, and in fact forced them to buy GM diesel locomotives.

Senator HRUSKA. We have here in America the Great Northern over the big northwest that's had an electrified railroad there for many, many years. Why haven't the other railroad companies adopted it if it was so successful and so efficient and so cheap?

Mr. SNELL. I just suggested, Senator, that the reason why we don't have electric railroads is that General Motors, by using its great influence, was able to force the railroads to purchase GM diesel locomotives.

That was the experience with the New Haven Railroad. The New Haven electrified its operations from New York to New Haven and purchased new electric locomotives. General Motors came in in 1956 and said in effect, that the road should scrap all of that equipment and buy GM diesel locomotives. That is what happened to the electric systems that we had. And as far as any new electric system, the railroads were all dieselized the same way, and there's no way they——

Senator HRUSKA. So the Government would step in and say, "We won't let any diesel locomotives come in," and insist upon electrification. Now, suppose the Government is wrong. Then what recourse have you?

Mr. SNELL. It seems to me the basics here are that we all believe in free enterprise, and that a free-enterprise, competitive system allocates resources better than does the Government. And better than does monopoly. If we can get a competitive system of allocation then we won't have to worry about that problem.

The railroads would be free to choose whatever system of moving their trains they prefer. But right now they don't have that choice as long as General Motors has control of their motive power.

Senator HRUSKA. I'm sure that's right, but it is predicated on so many conjectures—if we do this, if we do that, and if we do the other thing. Now, if the suggestion is made that the Big Three auto makers are out of touch with reality——

Mr. SNELL. Mr. DeLorean, formerly with General Motors has made that suggestion.

Senator HRUSKA. Sir?

Mr. SNELL. Mr. John DeLorean, ex-vice-president of General Motors has made that suggestion.

Senator HRUSKA. Yes, he said the same thing. However, let me ask you what contact have you had with reality in the business world that would make your judgment superior to the judgments that are made by General Motors as to what they have done and what General Motors customers want? What business have you been engaged in, may I ask?

Mr. SNELL. I'm going to take an easy way out and stress that John DeLorean made that statement. Mr. DeLorean was head of the GM passenger car division and was heir apparent of the General Motors

organization. He had extensive experience in engineering as well as in design. He suggested that the automobile industry was out of touch with reality.

I think his credentials are such that we should accept his statements as well-founded.

Senator HRUSKA. So that you would sweep aside the composite judgment of the component parts of General Motors and say, "Well, they really don't know what they're doing. They're out of touch with reality, they don't know what the public wants." That's what you're saying.

Mr. SNELL. They know precisely what they're doing, Senator, but what they're doing is not what the public needs. They're maximizing profits——

Senator HRUSKA. Well, who supports them? Who supports General Motors?

Mr. SNELL. Excuse me. I don't understand what you mean.

Senator HRUSKA. Who buys their products? Who furnishes them with the money, coin of the realm? Isn't it members of the public?

Mr. SNELL. Consumers have no real alternatives. They don't have rail transit or pollution-free electric buses anymore, Senator.

Senator HRUSKA. Well, on that I'll respectfully disagree with you because they have alternatives. I think General Motors makes something like 37 percent of the cars nowadays. I believe that correct in the U.S. market among all manufacturers, and 44 percent of the domestic manufacturers.

Mr. SNELL. More than 50 percent.

Senator HRUSKA. Something in that area. Now there's 63 percent made by others. Have the customers no choice?

Mr. SNELL. Well, first, Senator, I'd suggest that General Motors manufactures more than 50 percent, but, again, these figures——

Senator HRUSKA. Make it 60, if you want, but they still have 40 percent, or 50 percent, or 60 percent. Have they no choice?

Mr. SNELL. But then the question arises as to how these other companies behave? When you only have three companies involved, in this case General Motors, Ford, and Chrysler, then it's quite natural, as I think Thurman Arnold once stated, for Ford and Chrysler to act merely as satellites of General Motors. They realize that if they take any action which really is detrimental to GM's interests, GM could eliminate them immediately.

In fact the auto industry acts not unlike a cohesive monopoly. That means that we have only one selection, one menu of alternatives, which are dictated by a single corporation.

Senator HRUSKA. Well, Counsel Chambris tells me that 37 percent of the cars in America are from General Motors. The rest of them are either imports or other makes.

Mr. SNELL. The 50-percent figure applies if you just consider domestic manufactures. If you consider the imports then you are correct.

I would advise though that at this point I think it's a little dangerous to rely on import competition. As you realize, there is a movement afoot to put quotas on imports right now. In short there is always the possibility that at any time this entire set of alternatives can be foreclosed to the American consumer.

In fact, President Nixon imposed surcharges on imports and took other actions which did make imports less accessible to consumers.

Senator HRUSKA. You've pointed to Europe and its experience. Now they're taking a lesson or two from us and including General Motors and I.T. & T., and A.T. & T., and some of these big oil corporations, and so on.

Are you aware of what is happening within the European Common Market in that area pertaining to the formation of mergers and consolidations by means of cartels which are illegal in America, even when an American corporation goes abroad?

By virtue of consolidations and mergers and by virtue of price-fixing tactics and market divisions among them, they are rapidly reaching a point where they will have bigger multinational, worldwide, corporate entities.

In a short order they will exceed and excel America in that regard. Now here we have a bill that is designed to make small pieces out of a big one, or two. And 5,000 miles off to the east there are capitalists who have been in business for hundreds of years who are going to fill the void which would be created if that happened here in America, which God forbid, in my judgment.

Now, how do you explain that they will come and do that and you want to get out of that kind of a business?

Mr. SNELL. Senator, I've considered the same problem and wondered why there was this so-called "merger-movement" in Europe and Japan. In this regard I visited several manufacturers of automobiles in Europe. Their response was twofold: First, that because General Motors has begun to dominate the manufacturing of automobiles in Europe they feel that in self-defense they must merge to match GM's formidable financial resources. In fact, one high-ranking official suggested to me a reason for why these mergers are coming about and why integration is taking place. He said that since American firms are gigantic and fully integrated the reasoning among some European auto makers is that they should organize themselves in the same fashion.

This, then, is the American challenge which Servan-Schreiber talks about at length. Likewise, the president of the UAW, Leonard Woodcock, has suggested that unless we reorganize and restructure our industries in America then the rest of the world will become similarly monopolized.

Senator HRUSKA. Well, but if they want to emulate America they do it for a reason. They're not doing it just to keep up with the Joneses. I have an idea that they're capitalistic, those companies, they're in business to make money. What do you think? And if they can make more money that way than they can without doing it, that's what they're going to do, whether America is in it or not.

Do you think that's unreasonable?

Mr. SNELL. Well, I certainly——

Senator HRUSKA. Or are they very philosophic sort of people and as soon as America would break up its big corporations, voluntarily, they would break up theirs and they would compete on an ordinary rural sort of a pastoral basis, rather than a highly sophisticated one.

Mr. SNELL. I do not believe that competition is pastoral. As I've indicated, the more competitively structured industries of Europe and Japan are surpassing the United States in ground transportation technology.

I think that the more competitive non-automobile industries in this country provide the consumers with better products.

Senator HRUSKA. Well, we have a bill here, and one of the things to be determined here, and the advocates of that bill are going to be faced with, is to try to explain away that phenomenon that is occurring right now in global commerce—industry and manufacturing—and I have an idea that is going to be a little hard.

Mr. SNELL. Well, it's interesting to note that the most innovative companies are located abroad. For example, the Honda Motor Co.

Senator HRUSKA. Which company?

Mr. SNELL. The Honda Motor Co. has developed one of the most stunning automotive technological achievements of recent years, the development of the stratified-charged engine, which according to the EPA has the best gas mileage of any car operating in the United States. It also meets the 1975–76 emission control standards.

This company is not a gigantic company; it's a very small company in Japan. Sooner or later we find that many of the innovations that I reviewed earlier in my statement as coming from abroad do not come from the largest firms, but they come from the smaller firms.

I would hope that the United States would emulate them in that sense, realizing that innovation comes from your small competing units. I would hope that we might take the lead again in ground transportation as well as take the lead in automobile sales.

Up until 1968 we exported more cars abroad than we imported. Today we find that U.S. auto exports are less than one-tenth of 1 percent of the cars manufactured here.

And at the same time, we are suffering from a balance-of-payments deficit of $3.5 billion a year by importing cars from abroad. Why can't we build those cars here?

Senator HRUSKA. And at the same time, the manufacturers volume rose from 4 and 5 million cars within America, and we are now making in America 9 million cars a year. Why don't the foreign companies make that many cars?

Mr. SNELL. They do. The three countries I was talking about, West Germany, Japan, and France manufacture the same number of cars that we manufacture, although they do it with a competitive industry and we do it with a monopolistic industry.

Senator HRUSKA. Well, I am glad you came, Mr. Snell. The problems tomorrow morning, to me, will appear a lot easier to solve. We are going to get rid of a three-car monopoly and then we are going to have all those detriments and drags on American civilization totally disappear; we are going to be all right once again. That is the picture, that is the thrust, that is the impression I have received from your statement.

I imagine it will be commented upon by subsequent witnesses; don't you think so?

Mr. SNELL. It might.

Senator HRUSKA. Thank you, Mr. Chairman.

Senator HART. I am sure Mr. Snell, I, and Senator Hruska will be right if we join in the prediction that indeed it will be commented on. I think it will be useful, if for no other purpose, than to elicit that kind of response.

Let us recess until about 3:15.

[Whereupon, at 1:45 p.m. the subcommittee recessed, to reconvene at 3:15 p.m. this same day.]

[The following was received for the record. Testimony resumes on p. 1897.]

MATERIAL RELATING TO THE TESTIMONY OF BRADFORD C. SNELL

Exhibit 1.—Prepared Statement

PREPARED STATEMENT OF BRADFORD C. SNELL, AUTHOR OF STERN FUND STUDY AND PRESENTLY ASSISTANT COUNSEL, SUBCOMMITTEE ON ANTITRUST AND MONOPOLY

Mr. Chairman: For forty years, a war has been raging in this country between automobiles and mass transit. It has shaped American society. It began as an economic struggle among competing methods of travel. It became a relentless campaign to destroy America's rail and bus systems. Unless government intervenes, it will end only when public alternatives to private automobiles are no longer attractive.

This is the war General Motors, Ford and Chrysler have been waging against public transport. I am here this morning to suggest how it might be concluded in the interest not only of the traveling public, but also of the management, shareholders, and employees of the Big Three automakers.

During the past five years, I have studied the social consequences of one of the most enduring monopolies of this century: the American auto trust. With the aid of a grant from the Stern Fund, I have evaluated the impact of three powerful automobile companies on the development of this Nation's system of ground transportation. My findings, contained in a study entitled *American Ground Transport*, are briefly this: the Big Three car companies used their vast economic power to restructure America into a land of big cars and diesel trucks.

Mr. Chairman, America has become a second-rate nation in ground transport. Unlike every other industrialized country, we rely on cars and trucks for virtually all of our transport needs. In every city and suburb, our rail and bus services are either dead or dying. American travelers returning from Europe say that there is a "bus gap." Even in Moscow, they say, the buses and subways look better than anything made in the United States. Travelers back from Japan tell the same story. Having ridden on 150 mph bullet-trains, they ask "What ever happened to America's railroads?"

Let me suggest an explanation: The Big Three car companies reshaped ground transportation to serve corporate wants instead of social needs. They eliminated competition among themselves, secured control over rival bus and rail industries, and maximized profits by substituting cars and trucks for every other competing method of ground travel, including trains, streetcars, subways and buses. In short, they put America on wheels.

But along the boulevards of every major American city, these wheels are grinding to a halt. The highway transport system designed by the Big Three is falling apart. We have committed more than $180 billion a year and one-sixth of our work force to automotive travel. We have consumed much of the Nation's oil supplies, fouled our air with poisonous exhausts, and turned our cities into highways and parking lots. Now, we are running out of gas. And there are no public alternatives. No high-speed trains. No rapid rail transit. No decent, fume-free buses. Nothing but 100 million gas-guzzling cars. As a result, we are confronted with a petroleum shortage which is paralyzing travel, shutting down industries and throwing hundreds of thousands of people out of work.

I contend that the time has come to dismantle the auto trust. More specifically, I propose that reorganizing General Motors, Ford, and Chrysler into smaller, more competitive companies would provide this country with a wider range of transportation alternatives, including energy-efficient cars, modern buses and fast trains.

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I recommend reorganization for three principal reasons: First, due to their enormous size and concentration, the Big Three automakers are out of touch with reality. They are incapable of buildings cars the public wants. Secondly, General Motors is in effect a sovereign economic state whose interlocking control of auto, truck, bus and locomotive production is a major factor in the decline of this Nation's rail and bus systems. And, third, reorganizing the Big Three into a number of competing ground vehicle firms is an essential step toward achieving a balanced system of transportation.

The first reason for dismantling the auto thrust, therefore, is that it is incapable of responding to society's needs: It is out of touch with reality. Due to their enormous size and the absence of competitive forces, the Big Three are naturally inclined to build oversized, high-profit cars which are energy-inefficient, unreliable, costly, unsafe and destructive to the environment. Now they are caught in an increasingly awkward situation. To protect huge sunk investments in plant and equipment, they are forced to promote the sale of big cars at a time when petroleum shortages largely have eliminated the demand for them.

The origins of this dilemma are basically two: economic concentration and vertical integration.

The Big Three have concentrated nearly all domestic auto production in their own hands. General Motors alone accounts for more than 50 per cent of industry sales. This high degree of concentration has insulated the Big Three from competitive forces. It has permitted them to eliminate energy-conserving electric and steam car producers as well as to delay the introduction of smaller automobiles. In short, it has enabled them to resist changes which threatened their fundamental interest: selling big, high-profit cars powered by conventional piston engines.

In addition, the Big Three have locked themselves in to big car production through extensive vertical integration. They are integrated upstream into major parts production and downstream into distribution and repair. They produce their own bodies and most of their stampings. They cast their own engine blocks and cylinder heads, manufacture their own automatic transmissions and assemble their own cars. They maintain separate nationwide networks of franchised dealers and repair facilities. In short, they have invested billions of dollars in plants geared to the production and distribution of one special type of vehicle: large, gasoline-powered automobiles. They are reluctant, therefore, to adapt to technological changes or realities such as the energy shortage which would compel them to scrap these facilities.

In sum, concentration insulates the Big Three from change and vertical integration locks them in to the production of vehicles from a superseded technological age. As a result, the consumer is ill-served. As ex-GM vice president John DeLorean said recently: "There is no forward response at General Motors to what the public wants today. It's gotten to be a total insulation from the realities of the world. From the standpoint of America i's frightening.

The public ultimately bears the costs of monopoly. The auto trust results, for instance, in higher prices. According to a recent estimate by the Federal Trade Commission, 9 million purchasers of domestic 1972 automobiles paid $2.1 billion, or more than $230 per car in overcharges to the Big Three automakers.

It also retards innovation. This industry's technology has remained basically unchanged since 1940: automatic transmissions, power brakes, air conditioning and other major innovations were all developed prior to that time. In addition, recent advances such as gas-conserving engines, collapsible steering columns, crash-absorption bumpers and safety belts have all originated abroad.

More importantly, monopoly prolongs the sale of outmoded products. Due to their vast economic power, the Big Three have been able to persuade the public to buy obsolete cars. They have maximized monopoly profits by selling Americans millions of 5,000 pound, 6 miles-per-gallon motorized dinosaurs, despite a worldwide trend towards smaller, energy-efficient autos. Not until energy shortages reached crisis proportions, have they reluctantly begun a

gradual shift to smaller cars. Their resistance is not illogical. As Henry Ford II has said "mini cars mean mini profits." But their persistent resistance to change has grave implications for auto workers, dealers, shareholders, consumers and the economy in general. Their slow-motion reaction to the energy crisis, for example, has resulted in massive unemployment, growing inventories of unsold vehicles, plunging stocks, unfilled demand for small cars and signs of an auto-induced recession. This, then would appear to be reason enough to reorganize these corporations: they are so big that their failures to respond to change can bring down the entire economy.

II

The auto trust should be dismantled for a second reason. General Motors is in effect a sovereign economic state whose interlocking control of auto, truck, bus and locomotive production has contributed to the decline of America's rail and bus systems.

GM is the world's largest industrial enterprise and one of the world's most powerful private governments. Its annual sales of $35 billion dwarf the revenues of every government in the world except the United States and the Soviet Union. Its 800,000-man worldwide work force is larger than the standing armies of most nations. It is, in effect, a sovereign economic state unaccountable to the citizens of any country yet possessing tremendous influence over the course of national as well as international developments.

GM is a major force in international affairs. During World War II, for instance, it maximized global profits by supplying both the Axis and Allied powers with armaments. Its auto plants in Germany built thousands of bomber and jet propulsion systems for the Luftwaffe at the same time that its American plants produced aircraft engines for the U.S. Army Air Corps. Currently, it is negotiating with the Soviet Union for the construction of the world's largest truck facility.

GM is also a major force shaping America's national transportation policy. It dominates the production not only of autos and trucks, but also of buses and rail locomotives. Last year, for example, it manufactured most of the nation's city buses and more than 90 per cent of all bus engines. In addition, it produced more than 80 per cent of all rail locomotives.

General Motor's interlocking control of these competing methods of travel, however, amounts to a serious conflict of interest. The economics are obvious: one bus can eliminate 35 automobiles; one streetcar, subway or rail transit vehicle can supplant 50 passenger cars; one train can displace 1,000 cars or a fleet of 150 cargo-laden trucks. Due to the volume of units displaced, GM's gross revenues are 10 times greater if it sells cars rather than buses, and 25 to 35 times greater if it sells cars and trucks rather than train locomotive. The result was inevitable: a drive by GM to maximize profits by wrecking America's rail and bus systems.

American Ground Transport describes that process in considerable detail. It examines, for instance, GM's role in the destruction and "motorization" of more than 100 electric rail and electric bus systems in 45 cities including New York, Philadelphia, Baltimore, St. Louis, Oakland, Salt Lake City, Lincoln, Nebraska and Los Angeles. More generally, it evaluates the impact of this undertaking on the quality of life in America's cities.

For illustration, the study focuses on Los Angeles. Thirty-five years ago this was a beautiful city of lush palm trees, fragrant orange groves and ocean-enriched air. It was served by the world's largest electric railway network. In the late 1930's General Motors and allied highway interests acquired the local transit companies, scrapped the pollution-free electric trains, tore down the power transmission lines, ripped up the tracks, and placed GM motor buses on already congested L.A. streets. The noisy, foul-smelling buses turned earlier patrons of the high-speed rail system away from public transit and, in effect, sold millions of private automobiles. Today, this city is an ecological waste-

land: the palm trees are dying of petrochemical smog; the orange groves have been paved over by 300 miles of freeways; the air is fouled by 4 million cars, half of them built by General Motors, which emit 13,000 tons of pollutants daily. Tomorrow, a shortage of motor vehicle fuel and an absence of adequate public transport could disrupt the entire auto-dependent region.

GM's destruction of electric transit systems acrss the country left millions of urban residents without an attractive alternative to automotive travel. Pollution-free rail networks, with their private rights-of-way, were vastly superior in terms of speed and comfort to smoke-belching, rattle-bang GM buses which bogged down with cars and trucks in traffic. Likewise, electric buses were faster, quieter, cheaper and more durable than gas or diesel units. No one knew this better than General Motors. To prevent the cities it motorized from rebuilding rail systems or buying electric buses, GM and its highway allies prohibited them by contract from purchasing "any new equipment using any fuel or means of propulsion other than gas." Ultimately, the diesel buses drove away patrons and bankrupt bus operating companies. By the mid-1970's, hundreds of communities throughout the Nation lacked any form of public transportation.

General Motors was also involved in the decline of America's railroads. Beginning in the mid-1930's, it used its leverage as the Nation's largest shipper of freight to influence railroads into scrapping their equipment, including pollution-free electric locomotives, in favor of more expensive, less durable, and less efficient GM diesel units. The switch to diesels prevented the railroads from competing effectively with the cars and trucks GM was fundamentally interested in selling.

The dieselization of the New Haven Railroad is illustrative. During 50 years of electrified operation, this road never failed to show an operating profit. Then, in 1956, GM persuaded it to tear down the electric lines and scrap an entire fleet of powerful, high-speed electric locomotives. By 1959, three year after dieselization, the New Haven lost $9.2 million. In 1961, it was declared bankrupt; by 1968, when it was acquired by the Penn Central, it had accumulated a deficit of nearly $300 million. After a review of these facts, the Interstate Commerce Commission, in an unprecedented move, found that General Motors had contributed to the New Haven's financial ruin.

The most disturbing aspect of GM's dieselization program is that it eliminated a technological alternative, electric trains, which would have helped the railroads compete with highway transport. Today, when virtually every other advanced nation has electrified its trains, America and what is left of America's railroads are locked-in to GM diesel locomotives.

The motorization of Los Angeles and dieselization of the New Haven were not the work of malevolent or rapacious GM executives. Rather, these and other social disorders were the inevitable consequences of monopoly.

Let me cite one more example. In 1932 GM Chairman Alfred P. Sloan, Jr. put together a coalition of highway interests whose concentrated power overwhelmed rail interests and whose legislative proposals bound this country to finance roads instead of rails for nearly half a century. In short, GM translated dominant economic power into dominant political power. The inevitable consequence for society was a transport system composed of too many cars and too few trains. While Europe and Japan have constructed hundreds of modern urban rail systems and high-speed 125 mph electric intercity railways, we have managed since the 1930's to build one new rail system in San Francisco and to electrify one stretch of railroad from Washington to New York City.

The social costs of the automakers' control of American ground transport are staggering. We are moving 90 per cent of our people and 80 per cent of our freight by cars and cargo trucks. Yet, in terms of energy consumption, pollution, safety and urban dislocations, motor vehicles are probably the most inefficient means of travel ever devised by industrial man. We will, of course, always need motor vehicles; their flexibility and convenience make them ideal for certain tasks. But we cannot afford to use them for everything.

Consider, for example, the energy crisis. Cars are the single most important cause of our petroleum shortage. We are pouring more than 40 per cent of our oil supplies into autos and trucks. If, instead, we used energy-efficient trains and mass transit for half our transport needs, we would have saved an estimated billion barrels of oil each year, which is more than enough to heat our homes in winter and provide our industries with all the fuel they require.

Consider our air pollution problems. Cars and trucks burn more than 40 billion gallons of petroleum each year within the densely populated 2 percent of the United States classified as urban. The combustion of this enormous quantity of fuel has created a crisis in urban health by dumping more than 60 million tons of poisonous substances annually into the air. In Los Angeles alone, more than 500 persons a year die of ailments attributed to motor vehicle-generated smog. If electric rail transit were substituted for cars, urban air pollution would be reduced substantially. The same reasoning applies to safety and urban problems: a shift to mass transit would save lives and serve cities better.

What America needs today is not what General Motors, Ford and Chrysler are inclined to provide. We need smaller cars with efficient low-pollution engines. We need high-speed rail systems to move people and goods downtown and between cities. We need attractive, fume-free buses to supplement rail transit and to provide small towns with a practical alternative to automobiles.

The Big Three automakers' economic interests lie elsewhere. They want to sell big, expensive cars and triple-trailer highway trucks powered by 800 horsepower diesel engines. They want to increase their $40 billion annual motor vehicle sales by suppressing bus and rail alternatives. In short, they want to continue their monopoly control of American ground transportation. As long as they get what they want, America will not get what it needs.

III

My third and final argument, therefore, is that reorganizing the Big Three automakers into a balanced group of competing auto, truck, bus and rail firms is an essential step toward achieving a balanced system of transportation.

The hundreds of plants controlled by the Big Three automakers could provide us with such a system. They could build smaller, safer, cheaper cars. They could shift some of their production from automobiles to buses and trains. But until they are released from Big Three ownership, they will be held back from making these essential commitments.

I propose reorganizing these plants into independent companies. In this regard, I am indebted to the Big Three automakers' own engineers and economists, who have determined that the most efficient method of producing ground vehicles is by assigning different tasks to more than 300 plants in 32 States. My proposal assumes the wisdom of this arrangement. It would leave unaltered the number, size and physical location of these many facilities. It would recommend a change only in their ownership.

Each group of plants now separate in fact, would become separate in law as well. They would cut loose from the chains which have bound them to a superseded technological age of big cars and inadequate public transportation. Some would become independent producers of innovative propulsion systems, bodies, and mechanical components. Others would become assemblers of autos, trucks, buses and rail vehicles. All would be projected into a more balanced environment where competition and freedom from conflicts of interest would encourage them to produce the smaller cars, cleaner trucks, attractive buses and electric trains America needs.

Management, shareholders, employees as well as consumers would benefit from this reorganization. For the first time, managers would be able to excel without restraint. They would no longer be controlled by giant corporate bureaucracies which ex-GM vice president DeLorean describes as "totally inconsistent with any thoughtful and creative originality." Rather, they would be

free to decide what vehicles to make, which innovations to pursue. They could choose, for example, to build small electric cars, or steam cars, or fuel-cell cars; or they could decide to build modern buses or high-speed trains. In short, they would command the destiny of their own companies.

Shareholders may benefit. The plunging values of today's auto stocks reflect the decline of what was once a growth industry. Monopoly has blinded the Big Three to the realities of the marketplace. It has led them to promote big cars for which there is little demand and to suppress the production of small cars, buses and rail systems for which there is considerable demand. Reorganization would reverse that process. It would give shareholders an interest in a diversified range of aggressive ground vehicle companies. It would enable them to participate in a growth industry again.

Employees would also benefit. The Big Three have failed to respond to a changing market. As a result, auto production is off by 25 per cent and 100,000 auto workers are unemployed, more than at any time since the Depression of the 1930's. Reorganization would change the employment picture. It would create new, dynamic firms to meet the demand for efficient cars and high-speed transit. It would put these employees back to work.

Consumers would benefit the most. Reorganization of the Big Three in the manner proposed would generate a wider range of transportation alternatives. The experience of other advanced nations, such as West Germany, France and Japan, supports this view. The combined population of these three nations approximates that of the United States. The structure of their ground vehicle industries, however, is strikingly different. It is more evenly balanced among a number of competing motor vehicle and mass transit manufacturers. In these lands, there are 20 producers of cars, 19 producers of trucks, 26 producers of buses, 23 producers of rail vehicles, and 33 producers of locomotives. Moreover, no one firm dominates these alternative methods of travel as does General Motors in this country.

What does this difference in industry structure mean for consumers: The Japanese ride between their cities on vibration-free 150 mph bullet-trains. The French have access to comfortable turbo-trains designed for speeds approaching in excess of 125 mph. The Germans and Japanese commute to work on nearly 100 modern rapid rail systems. And the citizens of all three nations can choose from a wide variety of modern, attractive buses and small, economical automobiles. By contrast, Americans are stuck with slow, rattle-bank GM trains that never arrive on time, buses that nauseate their passengers, and cars that run out of gas waiting in line to be refueled.

Mr. Chairman, what I have proposed, is only part of the solution. The long-term process of making America a first-rate nation in ground transport will require a major effort on the part of government and industry as well as the public. But I say let us begin that task. The automakers' war against public transport has gone on too long. It has depleted our resources; it has fouled our air; it has scarred our cities with thousands of miles of concrete pavement. I say let us bring this insane conflict to an end. Congress has the power to reorganize the Big Three automakers in a manner which would serve society's need for efficient cars and adequate mass transit. It can pass legislation which would be in the best interest not only of consumers, but also of the management, shareholders and employees of these faltering giants. It can, in sum, achieve what is good for the country as well as good for General Motors, Ford and Chrysler.

Exhibit 2.—United States *v.* National City Lines (Criminal Conviction), 186 F.2d 562

UNITED STATES v. NATIONAL CITY LINES, Inc., et al.

Nos. 9943–9953.

United States Court of Appeals
Seventh Circuit.

Jan. 3, 1951.

Rehearing Denied Jan. 31, 1951.

The National City Lines, Inc., and others, were convicted in the United States District Court for the Northern District of Illinois, Eastern Division, William J. Campbell, J., of conspiring to monopolize a certain portion of interstate commerce in violation of the Anti-Trust Act, and they appealed. The Court of Appeals, Lindley, Circuit Judge, held that the evidence sustained the conviction.

Affirmed.

See also 7 F.R.D. 393.

1. Monopolies ⟹31(1)

Where indictment charged city transit line holding companies and their equipment and material suppliers with concerted conspiracy to monopolize that part of interstate commerce consisting of all busses, all tires and tubes, and all gas, oil and grease used by public transportation systems of some 45 cities, indictment sufficiently charged offense against United States under Sherman Act prohibiting monopolization of trade. Sherman Anti-Trust Act, § 2, 15 U.S.C.A. § 2.

2. Monopolies ⟹12(1)

Under Sherman Act making it unlawful to monopolize "any part" of interstate commerce without specifying how large a part must be affected, Act is violated if some appreciable part of interstate commerce is subject of monopoly, restraint or conspiracy. Sherman Anti-Trust Act, § 2, 15 U.S.C.A. § 2.

See publication Words and Phrases, for other judicial constructions and definitions of "Any Part".

3. Monopolies ⟹12(1)

Where violation of Anti-Trust Act is charged, importance of interstate commerce affected in relation to entire amount of that type of commerce in United States is irrelevant. Sherman Anti-Trust Act, § 2, 15 U.S.C.A. § 2.

4. Monopolies ⟹10

The Sherman Act is concerned with more than large, nation-wide obstacles in channels of interstate trade, and is designed to sweep away all appreciable obstructions so that statutory policy of free trade might be effectively achieved. Sherman Anti-Trust Act, § 2, 15 U.S.C.A. § 2.

5. Monopolies ⟹12(1)

Provisions of Sherman Act making combinations in restraint of trade illegal and making it unlawful to monopolize any part of interstate commerce, have both geographical and distributive significance and apply to any part of the United States as distinguished from whole and to any part of classes of things forming part of interstate commerce. Sherman Anti-Trust Act, §§ 1, 2, 15 U.S.C.A. §§ 1, 2.

6. Monopolies ⟹12(1)

Same acts and course of conduct may constitute separate violations of section of the Sherman Act, making combinations in restraint of trade illegal, and section making it unlawful to monopolize trade. Sherman Anti-Trust Act, §§ 1, 2, 15 U.S.C.A. §§ 1, 2.

7. Monopolies ⟹31(3)

In prosecution of city transit lines holding companies and their suppliers of equipment and materials, for violation of anti-trust laws, there was no inconsistency in jury's finding that there was a conspiracy to acquire monopoly of sales to local transportation companies in 45 communities, but that there was no conspiracy to restrain trade by securing control of the transportation systems. Sherman Anti-Trust Act, §§ 1, 2, 15 U.S.C.A. §§ 1, 2.

8. Criminal law ⟹878(4)

Inconsistency in verdicts rendered on separate counts of indictment is not fatal.

9. Criminal law ⟹1159(2)

On appeal by city transit lines holding companies and their suppliers from convictions for violation of anti-trust laws, where sufficiency of evidence was questioned, Court of Appeals was not called upon to try case de novo or to decide whether, as trier of facts, it would have found defendants guilty, but rather its only func-

tion was to determine whether evidence was of such character as to require submission to jury, or whether it was duty of trial court, as matter of law, to direct verdict of not guilty. Sherman Anti-Trust Act, §§ 1, 2, 15 U.S.C.A. §§ 1, 2.

10. Monopolies ⟹31(2)

Convictions for conspiring to monopolize certain portions of interstate commerce in violation of anti-trust laws were sustained by evidence. Sherman Anti-Trust Act, § 2, 15 U.S.C.A. § 2.

11. Monopolies ⟹29

In prosecution of city transit systems holding companies and their suppliers for violation of anti-trust laws by conspiracy to monopolize trade, facts that certain of defendants were interested only in supplying tires and tubes to holding companies and their subsidiaries while another defendant was concerned only with sale of its petroleum products to particular subsidiaries operating in its marketing territory and that certain of supplier-defendants had requirement contracts with one but not both of holding companies, did not absolve those defendants of participation in conspiracy charged. Sherman Anti-Trust Act, § 2, 15 U.S.C.A. § 2.

12. Conspiracy ⟹40

In order that one be found guilty as conspirator, it need only be shown that, with knowledge of conspiracy, he knowingly performed act designed to promote or aid in attainment of object of that known conspiracy. Sherman Anti-Trust Act, § 2, 15 U.S.C.A. § 2.

13. Monopolies ⟹31(2)

Evidence of customs and practices in industry is irrelevant in determining whether there has been attempted monopolization, and fact that others engaged in same practices as defendants would not exonerate defendants or tend to disprove their guilt. Sherman Anti-Trust Act, §§ 1, 2, 15 U.S.C.A. §§ 1, 2.

14. Monopolies ⟹31(2)

When persons conspired to impose direct restraint on interstate commerce, evidence of benevolent motives or good intentions is immaterial. Sherman Anti-Trust Act, §§ 1, 2, 15 U.S.C.A. §§ 1, 2.

15. Monopolies ⟹31(2)

In prosecution for violation of anti-trust act by conspiracy to monopolize trade, defendants were entitled to offer evidence as to their intent and motive. Sherman Anti-Trust Act, § 2, 15 U.S.C.A. § 2.

16. Monopolies ⟹31(2)

In prosecution of city transit systems holding companies and their suppliers for violation of anti-trust act by conspiracy to monopolize trade, record established that trial court had not abused its discretion in limiting amount of collateral evidence as to suppliers' individual reasons for making investments in holding companies. Sherman Anti-Trust Act, § 2, 15 U.S.C.A. § 2.

17. Criminal law ⟹338(1)

Trial court has wide discretion in exclusion of collateral evidence.

18. Criminal law ⟹1182

In prosecution for violation of anti-trust act, where charge was sufficient at law, evidence substantial and adequate, and trial court without error, Court of Appeals, as court of review, could not properly interfere with judgment of conviction. Sherman Anti-Trust Act, §§ 1, 2, 15 U.S.C.A. §§ 1, 2.

Joseph Thomas, Akron, Ohio, for Firestone Tire & Rubber Co. and L. R. Jackson.

Henry M. Hogan, New York City, for General Motors Corp. and H. C. Grossman.

John H. Hershberger, Chicago, Ill., Mayer, Meyer, Austrian & Platt and Poppenhusen, Johnstone, Thompson & Raymond, all of Chicago, Ill., of counsel, for Mack Mfg. Corp.

John T. Chadwell, Chicago, Ill., C. Frank Reavis, New York City, Weymouth Kirkland, A. Leslie Hodson, Charles R. Morrow, Ferris E. Hurd, Edward R. Johnston and John Paul Stevens, all of Chicago, Ill., Rayburn L. Foster, Bartlesville, Okl., Paul

M. Godehn, H. Templeton Brown, Chicago, Ill., for other appellants.

William C. Dixon, Chief, Edwin U. Driscoll and Alex D. Fred, U. S. Department of Justice, all of Los Angeles, Cal., Willis L. Hotchkiss, Ralph M. McCareins, Atty., Dept. of Justice, Chicago, Ill., William Amory Underhill, Acting Asst. Atty. Gen., Richard E. Guggenheim, Sp. Asst. to Atty. Gen., for appellee.

Before DUFFY, FINNEGAN and LINDLEY, Circuit Judges.

LINDLEY, Circuit Judge.

On April 9, 1947, nine corporations and seven individuals, constituting officers and directors of certain of the corporate defendants, were indicted on two counts, the second of which charged them with conspiring to monopolize certain portions of interstate commerce, in violation of Section 2 of the Anti-trust Act, 15 U.S.C.A. § 2. The American City Lines having been dismissed, the remaining corporate and individual defendants were found guilty upon this count. From the judgment upon the verdict, the remaining eight corporate defendants and five of the individuals have perfected this appeal. They contend that the count fails to state an offense, that the evidence is insufficient to support the verdict, that a fatal variance between the proof and the charge exists and that the court erred in excluding certain evidence.

The first count of the indictment, with which, in view of the fact that defendants were acquitted thereon, we are only incidentally concerned, charged defendants with having knowingly and continuously engaged in an unlawful combination and conspiracy to secure control of a substantial number of the companies which provide public transportation service in various cities, towns and counties of the several states, and to eliminate and exclude all competition in the sale of motor busses, petroleum products, tires and tubes to such transportation companies then owned or controlled by National City Lines, Inc., or Pacific City Lines, Inc., or of which said companies should acquire control, in the future, all in violation of Section 1 of the Anti-trust Act, 15 U.S.C.A. § 1.

The second count charged defendants with having conspired to monopolize part of the interstate trade and commerce of the United States, to wit, that part consisting of the sale of busses, petroleum products, tires and tubes used by local transportation systems in those cities in which defendants National, American and Pacific owned, controlled or had a substantial financial interest in, or had acquired, or in the future should acquire ownership, control or a substantial financial interest in such transportation systems, in violation of Section 2 of the Act.

It was averred further that the conspiracy to monopolize had consisted of a continuing agreement and concert of action upon the part of defendants under which the supplier defendants, Firestone, Standard, Phillips, General Motors and Mack, would furnish capital to defendants National, American and Pacific, and the latter companies would purchase and cause their operating companies to purchase from the supplier companies substantially all their requirements of tires, tubes and petroleum products; the capital made available by the supplier defendants would be utilized by National and Pacific, to purchase control of or financial interest in local public transportation systems, located in various states, when the securing of such control and interest would further the sale of and create an additional market for the products of the supplier defendants to the exclusion of products competitive therewith; National and Pacific and their operating companies would not renew or enter into any new contracts for the purchase or use of such products from companies other than the supplier defendants without the consent of the latter; National and Pacific would not dispose of their interest in any operating company without requiring the party acquiring the same to assume the obligation of continuing to purchase its requirements of the commodities mentioned from the supplier defendants, and would not purchase any new equipment making use of products other than those

sold by the supplier defendants; as National and Pacific acquired local transportation systems in the other sections of the country, those markets would be allocated to and preempted by a company selling petroleum products in such sections. The count further charged that the agreements and understandings were carried out and effectuated, thereby completing the offense of monopolization of a part of Interstate Commerce. The jury having acquitted defendants upon the first count and having found them guilty upon the second, we are concerned only with the legality of the judgment entered upon that verdict.

We shall follow the pattern adopted by the parties, who have referred to the National City Lines, Inc., and Pacific City Lines, Inc., as the City Lines defendants and to Firestone, Phillips, General Motors, Mack, Standard Oil of California and Federal Engineering Corporation as supplier defendants.

It is undisputed that on April 1, 1939, defendant National City Lines, Inc., had grown from an humble beginning in 1920, consisting of the ownership and operation of two second-hand busses in Minnesota, to ownership or control of 29 local operating transportation companies located in 27 different cities in 10 states. At the time the indictment was returned, the City Lines defendants had expanded their ownership or control to 46 transportation systems located in 45 cities in 16 states. The supplier defendants are manufacturers and marketers of busses, tires, tubes and petroleum products necessarily used by the local operating companies of the City Lines defendants and others. The value of their products introduced in commerce and sold to the City Lines defendants and their operating companies for the year 1946 was over 11 million dollars and, for the period from 1937 to May 1, 1947, over 37 million dollars.

There is no dispute that the City Lines defendants and the suppliers entered into various oral and written arrangements in accord with which the latter purchased preferred stock from the former, at prices in excess of the prevailing market prices, amounting in total cost to over nine million dollars and that the money received from the sales of such stock was used by City Lines defendants to acquire control of or a substantial financial interest in various local transportation companies throughout the United States. The respective supplier defendants entered into separate ten-year contracts with City Lines under which all of the busses, tires, tubes, and petroleum products requirements of the City Lines operating companies were purchased from the suppliers with an agreement not to buy any part of the same from any party competing with them. They provided, in short, that existing purchase contracts of all operating companies with other competitive suppliers should be terminated at their earliest possible moment; that the operating companies would equip all their units with defendant suppliers' products to the exclusion of any products competitive therewith and that City Lines and their operating companies would not renew or enter into any new contracts with third parties for the purchase of such products or change any then existing type of equipment or purchase any new equipment using any fuel or means of propulsion other than gas.

National City Lines, organized in 1936, as a holding company to acquire and operate local transit companies, had bought, up to the time when the contracts were executed, its necessary equipment and fuel products from different suppliers, with no long-term contract with any of them. Pacific City Lines was organized for the purpose of acquiring local transit companies on the Pacific Coast and commenced doing business in January 1938. American was organized to acquire local transportation systems in the larger metropolitan areas in various parts of the country in 1943. It merged with National in 1946.

Additional facts, while not largely in dispute, are partially controverted, at least in so far as inferences are concerned; however, we think the evidence adequately justified the jury in finding affirmatively that they existed. In 1938, National conceived the idea of purchasing transportation systems in cities where street cars were no longer practicable and supplanting the latter with passenger busses. Its capital was

limited and its earlier experience in public financing convinced it that it could not successfully finance the purchase of an increasing number of operating companies in various parts of the United States by such means. Accordingly it devised the plan of procuring funds from manufacturing companies whose products its operating companies were using constantly in their business. National approached General Motors, which manufactures busses and delivers them to the various sections of the United States. It approached Firestone, whose business of manufacturing and supplying tires extends likewise throughout the nation. In the middle west, where a large part of its operating subsidiaries were to be located, it solicited investment of funds from Phillips, which operates throughout that section but not on the east or west coast. Pacific undertook the procurement of funds from General Motors and Firestone and also from Standard Oil of California, which operates on the Pacific coast. Mack Truck Company was also solicited. Eventually each of the suppliers entered into a contract with City Lines defendants of the character we have described whereby City Lines companies agreed that they would buy their exclusive requirements from the contracting supplier and from no one else. We think the evidence is clear that when any one of these suppliers was approached, its attitude was that it would be interested in helping finance City Lines, provided it should receive a contract for the exclusive use of its products in all of the operating companies of the City Lines, so far as busses and tires were concerned, and, as to the oil companies, in the territory served by the respective petroleum companies. It may be of little importance, but it seems to be the fact, at least we think the jury was justified in inferring it to be the fact, that the proposal for financing came from City Lines but that proposal of exclusive contracts came from the suppliers. At any rate, it is clear that eventually each supplier entered into a written contract of long duration whereby City Lines, in consideration of suppliers' help in financing City Lines, agreed that all of their operating subsidiaries should use only the suppliers' products. These were not joint contracts; each supplier entered into a separate agreement. Whether the action of the suppliers in this connection was so concerted as to justify the jury in finding that defendants conspired to monopolize that segment of interstate commerce reflected by the purchase and shipment in commerce of busses, tires and petroleum products to the operating companies, we shall discuss more fully later. The facts related present only a sketchy outline of the setup as it was presented to the jury.

The Sufficiency of the Indictment.

[1-5] Defendants' first point is stated thus: "Count II alleges as a violation of Section 2 of the Sherman Act no more than a conspiracy to monopolize sales to certain specified customers. That allegation does not charge an offense against the United States, since section 2 of the Sherman Act applies only to the monopolization of a geographic market." We have seen that the charge is that defendants conspired to monopolize the sale of petroleum products, busses and tires, to the subsidiary operating companies of the City Lines defendants with the result that competition was done away with in the sale of those products to those customers. But, say the defendants, there is no averment that the purchases of petroleum products, busses and tires by the City Lines defendants constituted a substantial portion of the total market for such products. Though defendants recognize that Section 2 makes it unlawful to conspire to monopolize trade or commerce among the several states, they insist that sales to the City Lines defendants and their subsidiaries do not constitute a part of interstate trade within the meaning of Section 2, for the reason that they amount only to control of a single customer's business. They admit that, if the statute were to be given literal reading, the Government's position would be supportable, for the words "any part" are broad enough to apply to a single customer. However, relying upon Standard Oil Co. of N. J. v. United States, 221 U.S. 1, 31 S. Ct. 502, 55 L.Ed. 619, they argue that the

commerce referred to by the words "any part" has both a geographical and a distributive significance not present in the indictment. They admit that it is not open to a monopolist to defend his monopoly on the ground that he controls sales in only a limited geographic area, and that monopolization of the sale of any one product in any one city may be unlawful, even though sales throughout the nation are not controlled, but they insist that the indictment does not charge monopolization of the sale of gas, tires or busses in any state, city or region but only of sales to one customer which are beyond the rule of reason established in the Standard Oil case, 221 U.S. 1 at 61, 31 S.Ct. 502 at 516, 55 L.Ed. 619. They also rely upon Patterson v. United States, 6 Cir., 222 F. 599, certiorari denied 238 U.S. 635, 35 S.Ct. 939, 59 L.Ed. 1499, and United States v. Standard Oil Co., C.C., 173 F. 177, 191, where Judge Sanborn said: "If the second section of the act prohibits every attempt to monopolize any part of interstate commerce, it forbids all competition therein, and defeats the only purpose of the law; for there can be no competition, unless each competitor is permitted * * * to draw to himself, and thereby to monopolize, some part of the commerce." They argue that requirement contracts with separate customers do not monopolize any part of interstate trade and that this contention is supported by United States v. Columbia Steel Co., 334 U.S. 495, 68 S.Ct. 1107, 92 L.Ed. 1533. Zealous argument is made in support of their contention that, under the decisions upon which they rely, the charge in the indictment is not sufficient to sustain a conviction under Section 2 of the Act. However, in spite of the ardor of counsel, after mature consideration, we are not persuaded of the soundness of the argument.

The indictment charges a concerted conspiracy by the City Lines defendants and supplier defendants to monopolize that part of interstate commerce which consists of all the busses, all the tires and tubes and all the gas, oil and grease, used by the public transportation systems of some 45 cities owned or controlled by the City Lines companies. That, to our mind, is a very substantial segment of interstate commerce, having "geographic and distribution" significance. It is charged that, under the plan of defendants, competing suppliers may not be patronized; that only the suppliers' products and theirs alone will be accepted. It is perfectly obvious that under such averments, that part of commerce which would be reflected in other suppliers furnishing products would be foreclosed and barred. Their competition is completely eliminated and the business of supplying busses, tubes, tires to the public transportation system of the 45 cities is entirely in the hands of the suppliers,—in other words, monopolized by them. We conclude that, on the face of the indictment, there is a charge of elimination of competition, of monopolization, as to a substantial segment of interstate commerce, within the language of the Act and as limited by the "rule of reason."

We are impelled largely to this conclusion by United States v. Yellow Cab Co., 332 U.S. 218, 67 S.Ct. 1560, 91 L.Ed. 2010. In the course of that opinion, the court employed language, which, to our minds, is well-nigh conclusive upon the issue of sufficiency of this indictment. On pages 226 and 227 of 332 U.S., 67 S.Ct. on page 1565, 91 L.Ed. 2010, is found a paragraph which we adopt, substituting, however, for the words "cab" and "taxi" therein the words "bus and busses." With that change only, it reads as follows: "By excluding all bus manufacturers other than CCM from that part of the market represented by the bus operating companies under their control, the appellees effectively limit the outlets through which busses may be sold in interstate commerce. Limitations of that nature have been condemned time and again as violative of the Act. Associated Press v. United States, 326 U.S. 1, 18, 19, 65 S.Ct. 1416, 1423, 1424, 89 L.Ed. 2013, and cases cited. In addition, by preventing the bus operating companies under their control from purchasing busses from manufacturers other than CCM, the appellees deny those companies the opportunity to purchase busses in a free, competitive market. The Sherman Act has never been thought to sanction such a conspiracy to restrain the free purchase of goods in interstate

commerce." We can conceive of no logical basis upon which we can distinguish this language from the averments of the indictment here.

In the same case, the Supreme Court proceeded, 332 U.S. on pages 225 and 226, 67 S.Ct. on page 1564, 91 L.Ed. 2010, as follows: "And § 2 of the Act makes it unlawful to conspire to monopolize 'any part' of interstate commerce, without specifying how large a part must be affected. Hence it is enough if some appreciable part of interstate commerce is the subject of a monopoly, a restraint or a conspiracy. The complaint in this case deals with interstate purchases of replacements of some 5,000 licensed taxicabs in four cities. That is an appreciable amount of commerce under any standard. See Montague & Co. v. Lowry, 193 U.S. 38, 24 S.Ct. 307, 48 L.Ed. 608." If we again substitute for the word "taxicabs" the word "busses," the language is directly applicable to the case at bar. If, by preventing controlled cab operating companies in four cities from purchasing cabs from manufacturers other than the one favored, opportunity to purchase cabs in a free competitive market is removed and monopolization results, we can see no reason why prevention of 46 controlled bus operating companies in 45 cities from purchasing busses from any manufacturer other than the one favored is not likewise destructive of a free competitive market and an attempt to monopolize that segment of commerce. True, under this indictment, other suppliers may sell to other customers in various cities; but one substantial segment of interstate commerce consisting of supplies to 46 public transportation systems in 45 cities, holding local monopolies, is charged to have been monopolized so far as their purchases of busses, gas, grease, oil and tires are concerned. As the Supreme Court said in the Yellow Cab case: "Likewise irrelevant is the importance of the interstate commerce affected in relation to the entire amount of that type of commerce in the United States. The Sherman Act is concerned with more than the large, nation-wide obstacles in the channels of interstate trade. It is designed to sweep away all appreciable obstructions so that the statutory policy of free trade might be effectively achieved. As this Court stated in Indiana Farmer's Guide Pub. Co. v. Prairie Farmer Pub. Co., 293 U.S. 268, 279, 55 S.Ct. 182, 185, 79 L.Ed. 356, 'The provisions of §§ 1 and 2 have both a geographical and distributive significance and apply to any part of the United States as distinguished from the whole and to any part of the classes of things forming a part of interstate commerce.'" We do not find anything in United States v. Columbia Steel Co., 334 U.S. 495, 68 S.Ct. 1107, 92 L.Ed. 1533, at odds with the announcements of the Yellow Cab case.

The Alleged Inconsistency of the Verdicts.

[6-8] Defendants contend that the charges in the two counts were in substance the same and that, inasmuch as the same evidence was relied upon by the government to support each, the verdict of acquittal on Count 1 is inconsistent with that of guilty on Count 2; that, though we have previously held that an inconsistency in verdicts does not as a matter of law prevent judgment from being entered on the verdict rendered, the inconsistency here strips the verdict of any logic or valid reasoning.

We have seen that the language of the first count is entirely different from that of the second, for it charges, first, a conspiracy to acquire control of a substantial number of the companies which provide local transportation service in various cities of the United States,—conspiracy to restrain trade by obtaining control of companies conducting transportation systems in various cities. This is a far cry from a charge of monopolization of sales of supplies to such transportation companies. True, Count 1 does include a further charge of conspiracy to eliminate and exclude all competition in the sale of motor busses, petroleum products, tires and tubes to the transportation companies. Thus Count 1 undoubtedly meant to the jury that defendants were charged with restraint of trade in obtaining control of transportation systems plus a conspiracy to restrain competition in sales to those companies.

Though it is immaterial, we think it was entirely reasonable for the jury to conclude that the entire charge of the first count had not been sustained. In other words, it seems clear that there is no inconsistency in the verdicts. This thought is fortified by holdings that the same acts and course of conduct may constitute separate violations of Sections 1 and 2 of the Sherman Act. United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 226, 60 S.Ct. 811, 84 L. Ed. 1129; United States v. MacAndrews & Forbes Co., C.C., 149 F. 836, 838; United States v. General Motors Corp., 7 Cir., 121 F.2d 376; United States v. Buchalter, 2 Cir., 88 F.2d 625, 628; Montrose Lumber Co. v. United States, 10 Cir., 124 F.2d 573. At all events, we can see no inconsistency in the jury's finding that there was a conspiracy to acquire a monopoly of the sales to local transportation companies in 45 communities but no conspiracy to restrain trade by securing control of those transportation systems.

However, irrespective of the correctness of our views in this connection, it is clear that inconsistency in verdicts rendered on separate counts of an indictment is not fatal. We so held in United States v. General Motors, 7 Cir., 121 F.2d 376 at page 411, as did the 6th Circuit in American Tobacco Co. v. United States, 147 F.2d 93, 115, where the court said: "But the circumstance that there might be perceived an inconsistency in a possible finding of guilt on the charge of conspiring to monopolize by price-fixing, and a verdict of not guilty on a charge of conspiracy to restrain trade by the same means, would not vitiate the charge or the verdict." To the same effect is the holding in Garrison v. Hunter, 10 Cir., 149 F.2d 844, 845: "Where a defendant is charged by two or more counts in an indictment, consistency between the verdicts on the several counts is not necessary. A verdict of acquittal on one count does not invalidate a verdict of guilty on another count although the same evidence is offered in support of each." The correctness of these decisions, we think, is apparent from such Supreme Court cases as Dunn v. United States, 284 U.S. 390, 393, 52 S.Ct. 189, 76 L.Ed. 356, and Borum v. United States, 284 U.S. 596, 52 S.Ct. 205, 76 L.Ed. 513. We conclude, then, that there was no inconsistency of verdicts and, further, that even if there were an inconsistency, the law recognizes no exception to the rule that such inconsistency is wholly immaterial. We are not persuaded that the verdict of guilty is, by the circumstances of this case, robbed of any presumption ordinarily applied to a jury verdict, for we are concerned not with whether the defendants were rightfully acquitted on Count 1, a wholly irrelevant question, but with whether the evidence is sufficient to sustain a verdict of guilty on Count 2.

Sufficiency of Evidence.

[9-12] Defendants maintain that, even though we hold that Count 2 of the indictment sufficiently charges them with an offense against the United States, their conviction must be set aside for the reason that the evidence does not support the verdict. It is their contention that the evidence fails to establish (1) that there was a conspiracy, (2) that the defendants or any of them acted with an unlawful specific intent, or (3) that they shared such intent in an illegal concerted undertaking, but that it discloses only activities lawful in all respects. The government, on the other hand, asserts that the evidence establishes the existence of all the elements essential to a finding of guilty and that, consequently the verdict may not be disturbed by this court on review. This difference presents the difficult crucial question of this appeal. Of course we are not trying this case *de novo;* nor are we called upon to decide whether as triers of the facts we would have found defendants guilty. Our only function is to determine whether the evidence was of such character as to require submission to the jury, or in other words, whether it was the duty of the trial court, as a matter of law, to direct a verdict of not guilty. The proper discharge of this function has made it necessary for us to scrutinize with care voluminous evidence upon which we can only briefly comment, if this opinion is to be limited to a reasonable length.

The first evidentiary question presented is whether the evidence was sufficient to support a finding that defendants acted in concert, with a common design or purpose. The government's evidence, much of it in documentary form, is that, during the period preceding the execution of the contracts under consideration, representatives of the City Lines defendants on several occasions met and conferred with one or more of the supplier defendants; that each of the latter knew that other supplier defendants had executed or were about to execute investment and requirements contracts with one or more of the City Lines defendants, and that these conferences and proposed contracts were the subject of no inconsiderable amount of correspondence among the several defendants, including correspondence between supplier defendants as well as between supplier defendants and City Lines defendants. Thus on February 6, 1938, National City Lines wrote Palmer of Standard of California in reference to its proposed stock subscription contract, that it "must be sent" also to Yellow Truck (General Motors) and sent copies of the letter to Grossman of General Motors, Fitzgerald and Stevens. On March 5, National City wrote Standard, saying that at a conference it was "understood" that the stock of Pacific would be subscribed by Standard and Yellow Truck (General Motors). Copies of the letter went to Palmer, Grossman, Fitzgerald and Stevens. On November 7, 1939, National advised Mack of Yellow Truck's (General Motors) and Standard's investments in Pacific. Before that, on May 10, 1938, National had addressed a letter to the "subscribers to the capital stock of Pacific City Lines," advising them of the exact commitment of each subscriber. A file memorandum tells of a conference on February 2 and 3, 1939, in which the investments of Phillips and "other prospective investors," in return for exclusive supply contracts, were discussed at length. The "others" included Firestone, Standard and General Motors. Copies of the memorandum went to various individuals. A letter of April 19, 1939, from National to Phillips, refers to the agreement of Phillips and "other purchasers" and states that "You are buying the stock at $50 a share, when the market, which is very thin, is about $40," and advises Phillips that "certain privileges of yours under the oil contract are affected by your holding or failure to hold your stock." A copy was sent to Firestone. A letter to Firestone written February 18, 1939, advises that company that Phillips was then making its investigation. Another of February 25 advised Firestone that the Pacific Lines "deal is closed" and that Phillips was "practically ready for closing" and that "two or three other deals" "were very hot." On March 6, 1939, Firestone wrote Phillips concerning its contract with City Lines. On April 12, 1939, Phillips wrote Firestone expressing its belief that "everything has now been mutually agreed upon" and on July 26, Phillips wrote Firestone that "General Motors and Mack Truck are going in for $500,000 each on the same basis as the rest of us." To this Firestone replied that it understood that General Motors, Mack Truck and Standard "were in" and that "we will probably all benefit by the agreement." Many other letters and documents persuasive of concerted understanding were received in evidence.

Although defendants insist that each supplier merely obtained business from the City Lines defendants through separate negotiations, the documentary evidence referred to above and other circumstances in evidence seem to us clearly sufficient to justify the jury in finding that the contrary was true. It is clear that representatives of two or more supplier defendants were in attendance in Chicago and New York at meetings and conferences, out of which grew the investment and requirements contracts. And the fact that copies of a memorandum of discussions held between one of the supplier defendants and one of the City Lines defendants, as well as copies of many of the letters which passed between the contracting parties prior to the execution of the contracts, were sent to representatives of other supplier defendants, coupled with the fact that the latter corresponded with one another relative to the provisions of the contracts, is hardly reconcilable with defendants' contention that

their several contracts were negotiated independently of one another but is, rather, convincing that each of the contracts was regarded by the parties as but a part of a "larger deal" or "proposition", to use the words of certain of the defendants, in which all of the supplier defendants were involved. At least the evidence submitted to the jury in this respect was clearly adequate to support its verdict. Buttressing this conclusion is the correspondence exchange between Leonard of Firestone and Riggins of Phillips, in the course of which Riggins informed Leonard that "Roy Fitzgerald advised me that General Motors and Mack Truck are going in for $500,000 each on the same basis as the rest of us" and that he understood that "Palmer got into Chicago on Wednesday and immediately *tried to get in on the deal*" (emphasis supplied) and in which Leonard said, "I have been in New York this week hob-nobbing with Roy Fitzgerald and some of the others who are interested in our proposition" and "Everything seems to be going along very nicely and I do think we will probably all benefit by the arrangement." Of the same import is the statement, in the contract of May 15, 1939, between Firestone and National City Lines, that Firestone's agreement to purchase stock is made "on the representation of National that it will secure the balance of the financing necessary for the completion of a one and a half million dollar expansion program."

Concluding, then, that the record contains the substantial evidence necessary to support a finding that defendants acted in concert rather than independently, it is necessary to determine further whether the evidence justified the jury in finding that they did so with the specific intent outlawed by the Sherman Act. In view of our conclusion that the indictment charges defendants with an offense cognizable under Section 2 of the Act, there would seem to be little doubt as to this issue, for the defendants do not deny the execution of the requirements contracts or that it was their intention to execute them, or that the effect of those contracts is to exclude competitors from selling busses, tires, tubes and petroleum products to the City Lines defendants. Of course, it may well be that defendants did not intend affirmatively to violate the law, but it seems quite evident that they did intend, by making their mutually concerted investments in City Lines' stock conditional on the execution of exclusive requirements contracts in their favor, to join forces in making investments in consideration of the several exclusive contracts and thus, by their united and concerted action, to exclude their competitors from a market composed of the City Lines defendants and their operating subsidiaries, present and future, and, thus, that they intentionally performed acts which inevitably led to violation of Section 2 of the statute.

Defendants argue that the government's evidence discloses two separate and distinct lines of activity, one relating to transactions between the supplier defendants and National, the other encompassing the activities of the suppliers and Pacific; such evidence, they say, not only will not suffice to establish the existence of the single conspiracy charged in the indictment but constitutes a prejudicial variance. They also maintain that the evidence does not establish the existence of a common design or purpose shared by all defendants. However, the fact that one of the supplier defendants was interested only in supplying tires and tubes to both the City Lines defendants and their subsidiaries while another was concerned with only the sale of its petroleum products to the particular City Lines' companies operating in its marketing territory does not negative the existence of a common design to promote, through investments in the stock of one or both of the City Lines defendants, the acquisition by them of more and more local transit companies and, thus, to provide each of the supplier defendants with an ever-expanding market to which it would have exclusive rights as to its particular product by virtue of its requirements contracts. Nor does the circumstance that certain of the supplier defendants had requirements contracts with one but not both of the City Lines defendants absolve those defendants of participation in the conspiracy charged in the indictment or

prove that no such conspiracy existed; it was not incumbent on the government to prove that each defendant participated in that conspiracy in all of its ramifications, for, in order that one be found guilty as a conspirator, it need only be shown that, with knowledge of the existence of the conspiracy, he knowingly performed an act designed to promote or aid in the attainment of the object of that known conspiracy. Craig v. U. S., 9 Cir., 81 F.2d 816, 822, certiorari dismissed 298 U.S. 637, 56 S.Ct. 670, 80 L.Ed. 1371, certiorari denied 298 U.S. 690, 56 S.Ct. 959, 80 L.Ed. 1408; Johnson v. U. S., 9 Cir., 62 F.2d 32, 34-35; Marcante v. U. S., 10 Cir., 49 F.2d 156, 157.

Exclusion of Testimony.

Defendants assert error upon the part of the trial court in excluding evidence offered to show (1) the motives and reasons for the actions taken by them and (2) that the business obtained from the supplier defendants for the City Lines was an insignificant portion of the market for tires, tubes and petroleum products. They insist that, though the defendant suppliers were permitted to introduce testimony as to their reasons for making the investments and entering into the supply contracts, they were unduly limited in that they were not permitted to prove customs, background and business practices in general and, that, though the amount of business transacted between suppliers and City Lines was shown, they should have been permitted to prove that it was a small part of the total commerce in such articles. Thus City Lines offered the testimony of a qualified expert to the effect that financing of customers by suppliers had long been a customary and accepted practice in American business. The supplier defendants tendered evidence to the effect that other companies frequently make investments such as they made in the City Lines. Standard offered to show that other buyers had entered into long-term exclusive contracts, that it and the oil industry in general have availed themselves of requirements contracts extensively, that, thereby, they were aided in long range planning for production and refining, and that Standard could have sold the products delivered to City Lines to others at higher prices.

[13, 14] We had thought it well established that evidence of customs and practices in an industry is irrelevant in determining whether there has been an attempted monopolization. This court, in United States v. New York Great Atlantic & Pacific Tea Company, 7 Cir., 173 F.2d 79, 89, said: "That others engaged in the same practices as the defendants certainly would not exonerate the defendants or tend to disprove their guilt. Certainly trade customs and practices not shown to have been practiced in the same manner as the defendants were shown to have practiced them would not be competent to show that the defendants' practices were not illegal." We made earlier announcement of this and related rules in United States v. General Motors, 7 Cir., 121 F.2d 376, 406, where we said: "When persons conspire to impose a direct restraint on interstate commerce, benevolent motives or the activities of third parties do not save them from criminal prosecution for violation of the Sherman law. See United States v. Socony-Vacuum Oil Co., [310 U.S. 150, 60 S.Ct. 811, 84 L.Ed. 1129]. * * * the activities of third parties cannot justify the defendants' violation of law. See Hills Brothers v. Federal Trade Commission, 9 Cir., 9 F.2d 481, 485. * * * evidence of benevolent motives or good intention is immaterial where the operation of the conspiracy, and the specific acts and things done pursuant thereto, necessarily result in a direct restraint of interstate commerce. United States v. Patten, supra, 226 U.S. [525], 543, 33 S.Ct. 141, 57 L.Ed. 333, 44 L.R.A.,N.S., 325." In both of these cases we think we were fully justified in our holdings by the language of the Supreme Court in United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 60 S.Ct. 811, 84 L.Ed. 1129.

[15] Obviously defendants were entitled to offer evidence as to their intent and motives and this they were permitted to do. They supplied testimony at some length as to their reasons, purposes and

motives in entering into the transactions covered by the charge and to prove that the various sales and investment contracts were for the best business interests of City Lines and their operating companies as well as those of the suppliers. Standard was allowed to present evidence as to its policy and the advantages to it of requirements contracts. Indeed, defendants admit that they were permitted to give their individual reasons for making the investment and requirements contracts but insist that they were too narrowly limited in the scope of such testimony. Standard offered evidence which the court received to the effect that it always had other places to sell its products; that it never had more products than it could sell. However, the court refused to permit the testimony to go further, saying that there should be some practical limitation to such collateral evidence.

[16, 17] From an examination of the record, it seems apparent to us that the court, endowed with discretion as to the amount of collateral evidence proper, did not abuse its discretion. This is in line with what the Supreme Court said in United States v. Socony-Vacuum Oil Co., 310 U.S. 150 at 230, 60 S.Ct. 811 at 847, 84 L.Ed. 1129: "While the offer was not wholly irrelevant to the issues, it was clearly collateral. The trial court has a wide range for discretion in the exclusion of such evidence. See Golden Reward Mining Co. v. Buxton Mining Co., 8 Cir., 97 F. 413, 416, 417; Chesterfield Mfg. Co. v. Leota Cotton Mills, 8 Cir., 194 F. 358, 359. Admission of testimony showing the market conditions late in 1934 would have opened an inquiry into causal factors as involved and interrelated as those present during the indictment period. That might have confused rather than enlightened the jury. In any event it would not have eliminated the buying programs as contributory causes to the market rise and stability in 1935 and 1936. And it would have prolonged the inquiry and protracted the trial. As once stated by Mr. Justice Holmes, one objection to the introduction of collateral issues is a 'purely practical one—a concession to the shortness of life.' Reeve v. Dennett, 145 Mass. 23, 28, 11 N.E. 938, 944. And see Union Stock Yard & Transit Co. v. United States, 308 U.S. 213, 223, 224, 60 S.Ct. 193, 197, 198, 84 L.Ed. 198. * * * In conclusion, we do not think that there was an abuse of discretion by the trial court in the exclusion of the proffered evidence." The jury's inquiry was not one as to customs or practices or as to what others had done on other times and occasions. The question before the jury was whether what defendants had done amounted to violation of law as charged. The mere fact, if it be a fact, that other suppliers had followed a similar course of conduct by doing what defendants are charged with doing, would in no wise excuse defendants for their acts if those acts were illegal.

That the evidence offered by defendants comparing their total sales to City Lines and their companies and their total sales in the national market was not erroneously excluded is shown by our earlier quotation from the Yellow Cab case, 332 U.S. 218, 67 S.Ct. 1560, 91 L.Ed. 2010. In other words, it was not incumbent upon the government to show that a certain stated percentage of the total commerce was involved in this particular cause. We think the jury could not properly have found other than that the sales of all tires, busses and petroleum products to 46 operating companies in 45 states, aggregating many millions of dollars, constituted a substantial segment of interstate commerce and that evidence comparing this with the amount involved in the total business of the companies was wholly irrelevant. It was not a question of what percentage of the total commerce in such products was but a question of whether a substantial part of commerce was monopolized.

We have considered carefully all the evidence offered and excluded. We think that the court's rulings were fair, and that, having permitted great latitude in admitting testimony as to intent, purpose and reasons for the making of the contracts, the court, in its discretion, was entirely justified in excluding the additional testimony offered.

[18] We believe that what we have said sufficiently disposes of all contentions

of defendants without further extension of this opinion. Inasmuch as the charge was sufficient at law, the evidence substantial and adequate and the trial without error, as a court of review, we may not properly interfere.

The judgment is affirmed.

Exhibit 3.—United States *v.* National City Lines, Inc., et al. (Civil), 1955 Trade Cases, ¶68, 158

[¶ 68,158] United States v. National City Lines, Inc., et al.

In the United States District Court for the Northern District of Illinois, Eastern Division. No. 49 C 1364. Dated September 19, 1955.

Case No. 890 in the Antitrust Division of the Department of Justice.

Sherman Antitrust Act

Department of Justice Enforcement and Procedure—Civil Suits for Injunctive Relief—Injunctive Decrees—Adjudication of Sherman Act Violations.—In a Government civil antitrust action where the defendants were found to have violated Section 2 of the Sherman Act, which finding was based upon the defendants' conviction in a companion criminal antitrust action, the Government's request that the court adjudge and decree that the defendants violated Sections 1 and 2 of the Sherman Act was denied. The guilt of the defendants under Section 2 already had been adjudicated in the criminal action, and the finality of this determination had been recognized in the instant civil action. The prayer for relief which requested an adjudication that the defendants violated Section 1 of the Sherman Act had been abandoned by the Government.

See Department of Justice Enforcement and Procedure, Vol. 2, ¶ 8233.

Department of Justice Enforcement and Procedure—Civil Suits for Injunctive Relief—Injunctive Decrees—Divestiture of Stock.—Where producers of motor buses, petroleum products, and tires and tubes were found to have violated Section 2 of the Sherman Act when they purchased financial interests in certain local transportation companies in return for the companies' agreements to purchase substantially all of their requirements of supplies from the producers, a Government request that the producers be required to divest themselves of all financial interests in the transportation companies was denied on the ground that all of the producers previously had disposed of their investments in such companies.

See Department of Justice Enforcement and Procedure, Vol. 2, ¶ 8233.700.

Department of Justice Enforcement and Procedure—Civil Suits for Injunctive Relief—Injunctive Decrees—Illegality of Contracts.—Where producers of motor buses, petroleum products, and tires and tubes were found to have violated Section 2 of the Sherman Act when they purchased financial interests in certain local transportation companies in return for the companies' agreements to purchase substantially all of their requirements of supplies from the producers, a Government request that all sales or investment contracts between the producers and the transportation companies be declared void, unenforceable, and of no legal effect was denied on the ground that such contracts had been abandoned or cancelled or had expired. However, with respect to certain contracts which had not expired or been cancelled, the court held that they should be cancelled.

See Department of Justice Enforcement and Procedure, Vol. 2, ¶ 8233.625.

Department of Justice Enforcement and Procedure—Civil Suits for Injunctive Relief—Injunctive Decrees—Scope of Injunctive Relief.—Where producers of motor buses, petroleum products, and tires and tubes were found to have violated Section 2 of the Sherman Act when they purchased financial interests in certain local transportation companies in return for the companies' agreements to purchase substantially all of their requirements of supplies from the producers, a Government request that each of the producers be prohibited from entering into requirements contracts with any transportation company, from financing the operations of any transportation company upon an agreement of the transportation company to purchase its supplies from the producer, and from engaging in related practices was denied on the grounds that the relief sought exceeded the boundaries or scope of the action, that the legality of the arrangements and practices sought to be enjoined had not been determined, and that there was no proven necessity for the requested relief, that is, there was no cognizable danger of recurrent violation. Although the fact that the illegal investments and requirements contracts were not terminated until after the action was commenced may be regarded as suspect, such fact also may be consistent with the defendants' belief that there was nothing unlawful about the arrangements.

See Department of Justice Enforcement and Procedure, Vol. 2, ¶ 8233.100.

For the plaintiff: Earl A. Jinkinson, Special Assistant to the Attorney General; Ralph M. McCareins, Special Assistant to the Attorney General; and Harold E. Baily, Trial Attorney. All of Chicago, Ill.

For the defendants: Howard Ellis, A. Leslie Hodson, Karl F. Nygren, and Joseph Thomas (c/o Kirkland, Fleming, Green, Martin & Ellis) for Firestone Tire & Rubber Company. Ferris E. Hurd and Henry M. Hogan (c/o Pope & Ballard) for General Motors Corporation. Edward R. Johnston (c/o Johnston, Thompson, Raymond & Mayer) for Phillips Petroleum Company. Harlan L. Hackbert (c/o Stevenson, Conaghan, Velde and Hackbert) for Mack Manufacturing Corporation. H. Templeton Brown (c/o Mayer, Friedlich, Spiess, Tierney, Brown & Platt) for Standard Oil Company of California and Federal Engineering Corporation. All of Chicago, Ill.

For a prior consent decree and opinions of the U. S. District Court, Northern District of Illinois, Eastern Division, see 1954 Trade Cases ¶ 67,917, 67,654, and 1950-1951 Trade Cases ¶ 62,875.

Memorandum of Decision

[*Defendants*]

JULIUS J. HOFFMAN, District Judge [*In full text*]: This suit was brought by the United States of America under the provisions of Section 4 of the Sherman Antitrust Act, 15 U. S. C. § 4, 26 Stat. 209, to enjoin violations of that Act. This proceeding is the remaining vestige of a controversy that first entered the courts in 1947, when the Government commenced this suit and a companion criminal action in the District Court for the Southern District of California. Named as defendants in both actions were two groups of corporations. The first group, hereafter called collectively the City Lines defendants, was composed of National City Lines, Inc. (hereafter National), a Delaware corporation and holding company for some forty-six local public transportation companies in sixteen states, Pacific City Lines, Inc. (hereafter Pacific), also a Delaware corporation, since dissolved, and then a subsidiary of National operating or managing certain of the local transportation companies owned or controlled by National in California, Washington, and Utah, and American City Lines, Inc. (hereafter American), a Delaware corporation and a subsidiary of National organized to operate and manage local transportation companies owned or controlled by National in large metropolitan centers. American was, in 1946, merged into National. The second group of corporate defendants, hereafter referred to collectively as the supplier defendants, comprised six corporations which supplied the City Lines defendants and their operating companies with the motor buses, petroleum products, tires and tubes used in their operations. The supplier defendants include: General Motors Corporation, in its own behalf and as successor to Yellow Truck and Coach Manufacturing Company, a former subsidiary; Mack Manufacturing Corporation, a Delaware corporation; Phillips Petroleum Company; Standard Oil Company of California and its wholly-owned subsidiary, Federal Engineering Corporation; and The Firestone Tire & Rubber Company. These suppliers will be called, respectively, General Motors, Mack, Phillips, Standard, Federal, and Firestone. Seven individuals, officers or directors of the defendant corporations, were also joined as defendants in the criminal action but not in the civil case.

[*Offense Charged*]

Briefly summarized, the offense with which these defendants were charged in both actions was a conspiracy, beginning in 1937, to acquire or to control a substantial part of the local transportation companies in the various cities of the United States and to restrain and to monopolize the interstate commerce in motor buses, petroleum products, tires and tubes used by the companies so acquired and by those already controlled or subsequently acquired by the City Lines defendants. This conspiracy, it was charged, was implemented by the supplier defendants' furnishing money and capital to the City Lines defendants, in return for which the City Lines agreed, on behalf of themselves and the operating companies then controlled or subsequently acquired, to purchase substantially all of their requirements of motor buses, petroleum products, tires and tubes from the respective supplier defendants to the exclusion of competitors.

[*Criminal Case as Evidence in Civil Case*]

Both the criminal and the civil actions were, upon motion of the defendants, transferred to this court for trial. The criminal case was tried in 1949, and the jury returned a verdict of guilty on one count of the indictment charging a violation of Sec-

tion 2 of the Sherman Act, and a verdict of acquittal on the other count, which charged a violation of Section 1. The conviction was affirmed upon appeal, in *United States v. National City Lines* [1950-1951 TRADE CASES ¶ 62,757], 186 F. 2d 562 (7 Cir. 1951), and a petition for a writ of certiorari was denied. 341 U. S. 916 (1951).

The United States filed a supplemental complaint in this civil action setting up the criminal conviction, and thereafter moved for summary judgment in its favor on the basis of this prior adjudication. This motion was granted in part upon grounds more fully stated in a reported opinion of this court. *United States v. National City Lines* [1954 TRADE CASES ¶ 67,654], 118 F. Supp. 465 (1953). Summarily stated, we there held that the facts necessary to support a conviction under the count of the indictment upon which the defendants had been found guilty should not be re-litigated. Upon a consideration of the indictment, the evidence, and the opinion of the Court of Appeals in the criminal case, it was decided that a violation of Section 2 of the Sherman Act had been conclusively established for purposes of this case, and that this violation consisted of a conspiracy to monopolize the sale of supplies used by the local transportation companies controlled by the City Lines defendants. An order of partial summary judgment, in the nature of a pre-trial order under Rule 16, Federal Rules of Civil Procedure, was accordingly entered on February 26, 1954. By this order it was established for purposes of the trial of this proceeding that all of the defendants had conspired or combined to monopolize interstate commerce through the contracts, entered into between the City Lines defendants and the individual supplier defendants, by which the City Lines defendants agreed to purchase their requirements of motor buses, petroleum products, tires and tubes from the supplier defendants, and that these acts were committed with the intent required for, and constituted, a violation of Section 2 of the Sherman Act. The plaintiff was thereby relieved of the burden of proving these matters, and the defendants were foreclosed from refuting them.

[*Issue—Equitable Relief*]

As a result of this order, the present controversy was narrowed to first, the question of the need for equitable relief to prevent recurrence of this established violation of Section 2 of the Sherman Act, and second, to the question of whether the defendants had violated Section 1 of the Sherman Act by conspiring to restrain trade by acquiring control of a substantial part of the local transportation companies in the cities of the United States, the offense of which the defendants had been accused but acquitted in the criminal case. The alleged violation of Section 1 and the charge of a conspiracy to acquire control of local transportation companies have since been abandoned by the Government, leaving only the issues of appropriate equitable relief under the established violation of Section 2.

The scope of the controversy has been still further diminished by a consent decree entered by this court upon the agreement of the Government and the existing City Lines defendants on December 14, 1954 [1954 TRADE CASES ¶ 67,917]. This decree directs the defendant National to take all action within its power to cancel certain remaining supply contracts between National, its subsidiaries or affiliates, and some of the supplier defendants, enjoins National from entering into any supply contracts conditioned upon the supplier's financing the operations of the transit company supplied, and establishes a bidding procedure for contracts for the purchase of petroleum products and tires and tubes. Jurisdiction has been retained for carrying out, modifying or enforcing this decree.

With the City Lines defendants eliminated from the controversy by this decree, the only issue remaining for trial was the equitable relief to which the Government might be entitled against the supplier defendants, relating to the violation of Section 2 of the Sherman Act established in the criminal action.

This remaining issue has been tried upon the basis of the record of the criminal case, depositions of various witnesses, interrogatories submitted by the Government and the defendants' answers thereto, additional documentary and oral evidence, and the stipulations of counsel. The court has had the benefit of very helpful and exhaustive briefs presented on behalf of all parties, and the controversy, or this final remnant of it, is now ripe for decision.

The only question to be decided is of the necessity and propriety of injunctive

relief. As the Supreme Court has admonished, "It will simplify consideration of such cases as this to keep in sight the target at which relief is aimed. The sole function of an action for injunction is to forestall future violations." *United States v. Oregon State Medical Society* [1952 TRADE CASES ¶ 67,264], 343 U. S. 326, at 333 (1952). With this purpose in view, the prayers for relief as set forth in the Government's complaint will be considered.

[*Adjudication of Violation*]

The first prayer of the complaint requests that the court adjudge and decree that the defendants have engaged in an unlawful combination and conspiracy in violation of Sections 1 and 2 of the Sherman Antitrust Act. As to the alleged violation of Section 2, this aim has already been achieved by the Government. This court and the Court of Appeals for this Circuit have adjudicated the defendants' guilt in the criminal action, and the finality of this determination has been recognized in this proceeding by the prior ruling upon the motion for summary judgment. Nothing that this court could now decree would add weight or force to those findings. So much of the prayer as requests an adjudication that the defendants violated Section 1 of the Sherman Act has been abandoned by the plaintiff in its briefs. Nothing remains to be granted, therefore, under this prayer.

[*Divestiture of Stock*]

The second prayer for relief is that the supplier defendants be required to divest themselves of all common and preferred stock or other financial interest in the defendants National, American, Pacific, and their operating companies. It is established by the evidence, and it is uncontroverted by the plaintiff, that all of the supplier defendants have disposed of their investments in the City Line companies and their subsidiaries, and that no supplier defendant has, since 1952, held any financial interest in these companies. This requested relief having already been obtained without the compulsion of a decree, no divesting order is required.

[*Illegality of Contracts*]

In the third prayer of the complaint the plaintiff seeks a declaration that all sales or investment contracts, written or oral, between the supplier defendants and the City Lines defendants and their operating companies are void, unenforceable, and of no legal effect. Since the investment contracts have all been abandoned or canceled, any such declaration as to them would be futile. Similarly, most of the sales contracts between the City Lines and the supplier defendants have expired or have been canceled. Those remaining in force at the time of trial are considered with the issues raised by the sixth prayer, below.

[*Relief—Signers of Consent Decree*]

The fourth and fifth prayers for relief relate solely to the City Lines defendants, and request no relief directed against the supplier defendants. In view of the final judgment rendered in the consent decree of December 14, 1954, dropping the City Lines defendants from the case, there is no need to consider these prayers.

[*Future Conduct of Defendants*]

The core of the controversy between these parties is the prayer for orders controlling the future conduct of the supplier defendants as set forth in the sixth prayer of the complaint in this case. That prayer requests:

> "6. That the defendants herein and each of them and their officers, directors and representatives and all persons and corporations acting or claiming to act on behalf of them be perpetually enjoined and restrained from combining and conspiring to monopolize, or to restrain interstate trade and commerce of the United States in the manner and by the means described herein, and be perpetually enjoined from engaging in or participating in agreements, understandings, practices or arrangements having a tendency to revive or continue any of the aforesaid violations of the Sherman Antitrust Act."

[*Principles*]

Several principles of decision are called into play when a court is requested to exercise the injunctive power conferred by Section 4 of the Sherman Antitrust Act. In the first instance it must be kept in mind that the power so conferred is to be exercised in accordance with the general principles which traditionally have obtained in courts of equity and have controlled the granting of equitable relief. *DeBeers Mines v. United States* [1944-1945 TRADE CASES

¶ 57,373], 325 U. S. 212, 218-19 (1945). Heed must be paid to the usual limits of equitable discretion and to the factors ordinarily affecting that discretion.

A major point of conflict between the parties here is the interpretation to be given to the quoted language of the sixth prayer of the complaint—whether the prayer is to be construed, as the Government contends, as requesting a general prohibition against all practices associated with or related to the type of offense established in the criminal case, or whether, as the defendants argue, the request for relief is to be read as praying only for whatever decree may be necessary to prevent a repetition of the same offense already proved. Consideration of the proper breadth of the decree which may be entered requires that a delicate balance be struck. On the one hand, the relief afforded must be adequate to meet the need. An injunction must be broad enough to prevent a repetition of the wrong, and a mere deviation in the method by which the same evil is accomplished cannot be permitted to evade the prohibition. Accordingly, a decree may close all roads to the prohibited goal, and is not confined to the well-worn road. *International Salt Co. v. United States* [1946-1947 TRADE CASES ¶ 57,635], 332 U. S. 392 (1947). The judge, in assuring the public freedom from the illegal conduct, may range broadly through practices connected with acts actually found to be illegal. *United States v. United States Gypsum Co.* [1950-1951 TRADE CASES ¶ 62,729], 340 U. S. 76, 88 (1950).

On the other hand, a finding of an offense under the antitrust laws does not invest a court with a license to embark upon a general program of comprehensive control of the defendants' business. The limits of the controversy must be observed. The court is "bound by the first principles of justice not to sanction a decree so vague as to put the whole conduct of the defendants' business at the peril of a summons for contempt. We cannot issue a general injunction against all possible breaches of the law." *Swift and Company v. United States,* 196 U. S. 375, at 396 (1905). "(T)he mere fact that a court has found that a defendant has committed an act in violation of a statute does not justify an injunction broadly to obey the statute and thus subject the defendant to contempt proceedings if he shall at any time in the future commit some new violation unlike and unrelated to that with which he was originally charged." *N. L. R. B. v. Express Publishing Co.,* 312 U. S. 427, 435-36 (1941). To range far beyond the hard facts of the questions actually tried in the case is to invite the errors of a broad rule which proves unjust in the light of unforeseen circumstances. The court is constrained, then, to steer the narrow course between the hazards of a failure to cure the evil on one side and unwarranted and oppressive control on the other. In its essence, the principle involved is simply that we should not attempt to accomplish in a single suit what should fairly be left to a later action when and if it proves necessary.

In reviewing the language of the plaintiff's prayer for relief in the light of these considerations, the reader must take into account the nature of the offense charged and actually litigated by the parties. Under the liberal provisions of Rule 54(b) of the Federal Rules of Civil Procedure, the plaintiff is not bound to prove all that he alleges, nor is he limited in a judgment in his favor to the relief he has demanded in his complaint. Under that Rule, a litigant is to be awarded whatever relief the facts as litigated entitle him to. But in determining what is fairly within the boundaries of the controversy, the distinction between a civil action brought on behalf of the United States and a civil action brought on behalf of a private person cannot be ignored. "The Government seeks its injunctive remedies on behalf of the general public; the private plaintiff, though his remedy is made available pursuant to public policy as determined by Congress, may be expected to exercise it only when his personal interest will be served." *United States v. Borden Company* [1954 TRADE CASES ¶ 67,754], 347 U. S. 514, 518 (1954). Reasonable limits are set for the private suit by the limits of the plaintiff's interests at stake, and the defendant is put on general notice by the nature of the opposing litigant of the extent of the possible controversy. But when the Government is the civil plaintiff, the scope of the interests to be protected by an injunction is as broad as the national economy. In such cases, principles of elemental fairness demand that the bounds of the issues relating to injunctive relief be

determined with reliable certainty by the pleadings.

A related principle which serves as a guide in a case such as this is the salutary rule that questions of law are to be decided so far as possible only upon the basis of fully litigated and established facts. Basic to this judicial system is the court's duty to refuse to lay down a rule for controlling predicted future conduct upon the shifting foundation of a prophecy as to future conditions. *United States v. Hamburg-American Co.*, 239 U. S. 466 (1916). In so far as the injunctive relief requested by the Government would involve decision of doubtful legal propositions in the abstract, without full presentation of the variable circumstances which might affect the resolution of the question, the court must proceed with caution. The competitive freedom which the Sherman Act was designed to preserve is no better served when a competitor is destroyed by unwarranted injunction than when he is destroyed by unlawful practices.

A third principle called into play in this suit is the rule that the extraordinary remedy of injunction will be afforded only to prevent wrongs reasonably apprehended in the future. A court should not employ its carefully drawn powers for a vain and useless purpose. The function of the injunction is neither vindictive nor punitive. The fact that an offense may have been committed in the past means nothing except in so far as in some cases it may show a likelihood of recurrence of the unlawful conduct; it does not raise any presumption of a general propensity for wrongdoing. "The sole function of an action for injunction is to forestall future violations. It is so unrelated to punishment or reparations for those past that its pendency or decision does not prevent concurrent or later remedy for past violations by indictment or action for damages by those injured. All it takes to make the cause of action for relief by injunction is a real threat of future violation or a contemporary violation of a nature likely to continue or recur." *United States v. Oregon State Medical Society* [1952 TRADE CASES ¶ 67,264], 343 U. S. 326, 333 (1952). On the other hand, protestations of contrition or repentance by a proven offender must, in the light of human experience, be viewed with a grain of suspicion. Injunctive relief is denied in cases where no danger of repeated wrongs has been shown not out of consideration for the adjudicated wrongdoer, but because of the limited purpose of the remedy of injunction.

[*Evidence*]

Against these general principles as a background, the salient facts can be seen more clearly. Since a violation of the Sherman Act by these defendants was conclusively established in the criminal case begun as a companion to this suit, and since the only relevant inquiry at this stage is the prospect of wrongdoing ahead, no extended archeological investigation into the history of the defendants' violation is appropriate. Briefly summarized, the evidence introduced in the criminal proceeding shows that in the middle 'thirties National was engaged in the pursuit of taking over local transportation systems in various cities throughout the country. Most of the companies taken over employed street cars, and it was National's practice to convert these systems to the use of motor buses. The supplies needed for the operation of these local transportation companies were obtained from these supplier defendants and from competing suppliers as well. National was interested in raising additional capital to finance its activities, and after a series of communications among the supplier defendants and the City Lines, General Motors, Mack, Standard, Phillips, and Firestone invested a total amount in excess of nine million dollars in the securities of the City Lines, first in National and Pacific in 1938 and 1939, and, when it was subsequently organized in 1943, in American. In return for these investments, the supplier defendants received supply contracts which obliged the City Lines defendants and their existing and future subsidiary operating companies to obtain substantially all of their requirements of motor buses from General Motors and Mack, their requirements of petroleum products from Phillips and Standard, and their requirements of tires and tubes from Firestone. The offense of which the defendants were convicted in the criminal case consisted in a conspiracy to use this combination of investment and requirements contracts to monopolize interstate commerce in supplies used by the numerous transportation companies owned or controlled by the City Lines defendants. The conviction as sustained on appeal establishes that

these arrangements excluded competitors from a substantial part of a separable market so as to constitute monopolization within the meaning of Section 2 of the Sherman Antitrust Act. The conviction also establishes that the defendants engaged in this concerted action with the requisite intent to monopolize.

Although the past violation was committed by the supplier defendants acting in concert, individual consideration is required for resolution of the question of appropriate equitable relief. A brief resume of the evidence relating to each of the suppliers on this question is therefore pertinent.

General Motors. Until 1943, General Motors engaged in the occurrences here involved through a controlled corporation, Yellow Truck & Coach Company; upon the merger of this company with General Motors in 1943, General Motors succeeded to its former subsidiary's interests in the contracts with the City Lines. As the result of investments made in Pacific in 1938 and in National in 1939, General Motors obtained contracts which bound these corporations and their operating companies to buy from General Motors 85% of their requirements of new buses purchased for transportation companies controlled on the date of the contract, and 42½% of the requirements of new buses purchased for companies to be acquired or organized in the future. Before they learned of the Government's investigation into these dealings, the management of General Motors resolved to dispose of the City Lines holdings, and the last of these investments was sold in 1949. All of the requirements contracts between General Motors and the City Lines defendants were canceled in 1949, after the conviction in the criminal case. General Motors now holds no investment in, and has no requirements contracts with, any local transit company, either in or out of the City Lines system. Evidence was introduced to show that General Motors has no intention of making any investments in the City Lines defendants, and no intention of entering into any requirements contracts with them.

Mack. The evidence relating to this defendant shows that in 1939 Mack purchased certain preferred stock in National and received in return a contract by which National agreed that its subsidiaries subsequently formed or acquired would obtain 42½% of their requirements of new buses from Mack. The term of the contract was ten years; it expired in 1949, and no other requirements contract between Mack and the City Lines defendants were shown. In 1940, Mack also purchased stock of Pacific, which it sold in 1941. The National stock was redeemed for cash in 1944, and since that time Mack has held no investment in any City Lines defendant.

Phillips. As the result of its investments, Phillips was awarded contracts for the sale of the petroleum products required by the operating companies controlled by the City Lines defendants in the central regions of the United States. One of the obligations of these contracts required the City Lines defendants to use the proceeds of the sale of any assets of a company in Phillips' contractual territory for re-investment in that territory. All of the Phillips holdings in the City Lines were disposed of in 1949, and Phillips has no intention to invest in these companies in the future. The last of the requirements contracts between Phillips and any of the City Lines defendants expired in 1953.

Standard. Standard made its investments in the City Lines through its wholly owned subsidiary, Federal Engineering Corporation, named as one of the defendants in this suit. In return for these investments, Standard obtained contracts to supply the petroleum requirements of the City Lines operating companies in the western United States, and particularly in California, Washington, and Utah. Standard disposed of its common stock holdings in the City Lines in 1949, and of its preferred stock in 1952, and has introduced evidence that it has no intention of making future investments in any of the City Lines defendants. At the time of trial, all of Standard's requirements contracts had expired or been canceled except for an agreement with Pacific and agreements with two operating companies, Salt Lake City Lines and Los Angeles Transit Lines. The date of expiration of all three of these contracts is April 30, 1956.

Firestone. Beginning in 1939, Firestone made investments in National, Pacific, and American, and received in return contracts to supply the needs of tires and tubes of the City Lines operating companies. Under the prevailing practice in this trade, local transportation companies ordinarily obtain their required tires and tubes not through purchase but through a rental arrangement

under which the tire supplier leases tires and tubes on a mileage-rate charge, maintaining an available inventory of supplies and providing service and maintenance personnel. Such arrangements tend to be of substantial duration, and Firestone's agreements with the City Lines defendants were tire-mileage contracts of this character. Firestone disposed of its City Lines investments in 1951. All of its requirements contracts with City Lines companies had been canceled or had expired at the time of the trial except for contracts with Long Beach Transit Lines and Los Angeles Transit Lines. Both of these existing contracts were scheduled to expire according to their terms on May 31, 1955, and under the provisions of the consent decree previously entered in this case National was ordered to take all action within its power to cancel these contracts. It is stated in the brief filed on behalf of Firestone that the Long Beach contract has been canceled since the trial, but no evidence of that fact has been introduced and the Government is apparently unwilling to concede the point. Firestone also offered evidence that it did not intend to invest in any of the City Lines defendants in the future.

[*Future Violations*]

The plaintiff has introduced no evidence in support of its allegation in the complaint that "Defendants threaten to and will continue to violate Sections 1 and 2 of the Sherman Antitrust Act unless the relief hereinafter prayed for is granted." There is nothing in the record beyond the implication of the past violation which tends to show any danger of future wrongs. The good faith and genuineness of the defendants' statements that they do not intend to invest in the City Lines defendants are impeached by nothing offered in the case.

In this state of the record, the sixth prayer of the complaint, requesting an injunction against conspiring to monopolize commerce "in the manner and by the means described in the complaint["] and from engaging in practices "having a tendency to revive or continue any of the aforesaid violations," is to be considered.

[*Relief Specifically Requested*]

In its post-trial brief the Government has interpreted and elaborated this prayer to request the following six forms of specific relief: First, enjoining each defendant from entering into a requirements contract with any transit company except a contract for the supply of tires and tubes for a period of five years or less or for the sale of petroleum products for one year or less; second, enjoining each defendant from entering into a contract with any transit company which obliges the transit company to cause its subsidiaries to purchase their needs from the supplier, or which restricts the transit company in the kind of equipment or supplies it may use, or which limits the transit company in the disposition of its assets and equipment; third, enjoining each defendant from financing the operations of any transit company upon an agreement of the transit company to purchase its supplies from the defendant; fourth, enjoining each defendant from combining, conspiring, or agreeing with another supplier defendant or with any other supplier to finance the operation of any transit company upon an agreement of the transit company to purchase its required supplies from the defendant; fifth, enjoining each defendant from acquiring any financial interest in or participating in the management of National or its subsidiaries or affiliates; and sixth, requiring the cancellation of all remaining requirements contracts between the supplier defendants and the City Lines defendants which were made in furtherance of the conspiracy.

[*Relief Exceeds Boundaries of Action*]

Testing these requests against the prayers for relief contained in the complaint and the issues that have been litigated in this proceeding reveals that the relief sought exceeds the boundaries of the controversy in several particulars. The first four of these specifications made for the first time after the trial seek to enjoin each of the defendants from entering into various relationships with *any* transit company or, in the fourth specification, *any* other supplier. To grant such an order could carry the court far toward the general injunction to obey the law condemned in *Swift and Company v. United States*, 196 U. S. 375, 396 (1905), and *N. L. R. B. v. Express Publishing Co.*, 312 U. S. 426, 435-36 (1941). The conspiracy in which the defendants engaged was not national in scope, and did not involve any attempt to monopolize a whole industry. The combination charged in the criminal indictment of a conspiracy to

acquire a substantial part of the local transportation companies throughout the United States was not established, and that charge has here been abandoned. The only offense litigated in this case was a conspiracy limited to the monopolization of sales to a single corporate system, the City Lines defendants and their operating companies. No evidence of the relations of the supplier defendants with any other transit companies has been introduced and the record is bare of any support for the supposition that there is a cognizable danger of future violations with respect to the transit companies. An injunction should be limited by the circumstances involved in the litigation. By way of example of this principle, in *Swift and Company v. United States,* 196 U. S. 375 (1905), the Court, speaking through Mr. Justice Holmes, amended on its own motion an injunction against restrictive practices in any livestock sales to confine the prohibition to sales at the stock yards named in the bill. 196 U. S., at 400. More recently, in *United States v. W. T. Grant Co.* [1953 TRADE CASES ¶ 67,493], 345 U. S. 629 (1953), the Court read a prayer for an injunction against an "aforesaid violation" of the antitrust laws literally, as limited to the violation charged in the complaint, and accordingly sustained the lower court's denial of a requested injunction against similar violations committed with other persons or corporations. Without fair apprisal of these broad claims and without having litigated the questions raised by these specifications, the defendants should not be subjected to the risk of contempt in all their dealings with transit companies and other suppliers. The first four specifications of relief must therefore be regarded as beyond the scope of this case. If relief is to be granted in these particulars, it must be awarded in a suit in which the facts are fairly litigated. The offense here established cannot be made to reach so far.

[*Illegality Not Established*]

A related objection to these first four specifications of the plaintiff's interpretation of the sixth prayer of the complaint is to be found in the fact that the legality of the arrangements and practices sought to be outlawed has not been tried. As previously noted, difficult questions of law are not to be decided in hypothetical cases, but upon the concrete facts of an actual lawsuit. The temptation to resolve all doubtful legal questions against the proven wrongdoer must be put aside; a vindicative temperament has no place in a court dispensing equitable relief. The practices which the Government seeks to enjoin are not matters of outright lawlessness or brazen price-fixing. Whether or not these practices are illegal under the antitrust laws turns upon nuances of circumstance which cannot be foreseen or determined in advance of the event. For example, the first specification of relief of the plaintiff's post-trial brief requests that the defendants, and each of them, be enjoined from entering into any requirements contract with any transit company, with exceptions for tire-supply contracts up to five years in duration and petroleum-supply contracts for one year or less. Such an injunction would of course place the defendants at a competitive disadvantage. Requirements contracts are not illegal *per se,* as the Government concedes by the exceptions to its request in the case of tires and petroleum products, and as it conceded in the consent decree heretofore entered by permitting National and its operating companies to enter into requirements contracts for relatively short terms. Even under the specific prohibitions of Section 3 of the Clayton Act, the legality of a particular requirements contract is a matter of more or less. See, *e. g., Standard Oil Co. v. United States* [1948-1949 TRADE CASES ¶ 62,432], 337 U. S. 293 (1949). What might offend the broader provisions and the tests of reasonableness of the Sherman Act, here involved, has not been articulated by the Supreme Court. Whether a contract for supplying a local transit company's requirements of motor buses, or its requirements of tires for longer than five years, or its requirements of petroleum products for longer than one year, would be unlawful should not be decided until the circumstances surrounding the agreement are properly before a court. In some situations a requirements contract will be no more restrictive of competition than a single sale of a large quantity of supplies. In the criminal action prosecuted as a companion to this case, the trial judge instructed the jury, "it is not unlawful to make a requirements contract," and continued, "nor was the execution of the several supplier requirements contracts in itself unlawful . . ." Assuming that this ruling does not establish the law of the case or raise an

estoppel, it is enough that the controversy here litigated does not fairly present this question of law.

Similar considerations control the legal questions raised by the third specification of the plaintiff's requests for relief, in which the Government requests that each defendant and the defendants collectively be enjoined from making investments in any transit company upon an agreement of the transit company to purchase its requirements from the supplier. As requirements contracts are not illegal *per se*, so it is not necessarily unlawful for a supplier to help a customer financially, whether by extending liberal credit, making a loan, or investing capital. How far the combination may be carried without violation of the Sherman Antitrust Act is difficult to determine prospectively. In some circumstances such an arrangement is no doubt permissible. The trial judge who entered the judgment of guilty in the companion criminal case observed, in his charge, that "the making of an investment by each supplier defendant in the preferred and common stock of National, American and Pacific, was not in itself unlawful; nor was the execution of the several supplier requirements contracts in itself unlawful, whether or not made in connection with the investment." And the Court of Appeals for this Circuit, which sustained the criminal conviction of these defendants, has since found unobjectionable under the Sherman Act an analogous arrangement whereby a purchaser invested in the seller's stock upon the seller's agreement to sell its manufactures exclusively to the purchaser. *Fargo Glass & Paint Co. v. Globe American Corp.* [1953 TRADE CASES ¶ 67,427], 201 F. 2d 534 (7 Cir. 1953). Any commercial dealing necessarily excludes others from making the same sale; only when preclusion reaches a substantial part of the market does it amount to the monopolization condemned by the Sherman Act. *United States v. Columbia Steel Co.* [1948-1949 TRADE CASES ¶ 62,260], 334 U. S. 495 (1948). It has been litigated and decided that it is illegal to foreclose the sale of buses, tires, and petroleum products used by forty-six local transportation systems in forty-five cities and sixteen states. How much less would suffice has not been here tried. It follows that the plaintiff's request to enjoin all such arrangements as unlawful is too broad.

[*Necessity for Relief*]

But the basic objection underlying all the specifications of relief but the sixth, hereafter considered, is the absence of any proven necessity for such relief. Except for the contracts between Standard and Firestone and the City Lines which were still in force at the time of trial, all the requirements contracts of the supplier defendants had been canceled or abandoned or had expired in 1953. All investments of the supplier defendants in the City Lines had been disposed of by 1952. No new investment or requirements arrangements had been entered into for a period of approximately eight years before this trial. All of the defendants have introduced evidence that they have no intention of making investments in the City Lines defendants in the future. No evidence has been offered by the plaintiff to rebut or to contradict this testimony. The plaintiff has argued that only General Motors has declared that it has no intention to enter into requirements contracts with the City Lines, and from this it is inferred that the other suppliers must entertain such an intention. But the Government has conceded that requirements contracts for the supply of tires and petroleum products may be unobjectionable, and an absolute prohibition against exclusive supply contracts has been sought only in the case of motor buses. In view of General Motors' declared intention not to employ such contracts, and in view of the fact that the other bus supplier, Mack, was a party to only one requirements contract, made in 1939, and that in the last seven years of that contract Mack sold only $152,247 worth of buses to the City Lines and their subsidiaries, there appears to be no cognizable probability of a resumption of the requirements relationships in the defendants' sale of buses to the City Lines.

In these circumstances, no useful purpose would be served by enjoining the defendants from doing what there is no reason to believe they will do. Section 4 of the Sherman Act "confers on the Government no absolute right to an injunction upon a showing of past violations of the antitrust laws by defendants." *United States v. Borden Company* [1954 TRADE CASES ¶ 67,754], 347 U. S. 514, 519-20 (1954). "The purpose of an injunction is to prevent future violations, *Swift & Co. v. United States*, 276 U. S. 311, 326 (1928), and, of course, it can be utilized

even without a showing of past wrongs. But the moving party must satisfy the court that relief is needed. The necessary determination is that there exists some cognizable danger of recurrent violation, something more than the mere possibility which serves to keep the case alive." *United States v. W. T. Grant Co.* [1953 TRADE CASES ¶ 67,493], 345 U. S. 629, 633 (1953). See also *United States v. Oregon State Medical Society* [1952 TRADE CASES ¶ 67,264], 343 U. S. 326 (1952); *United States v. United States Steel Corp.*, 251 U. S. 417 (1920); *Walling v. Youngerman-Reynolds Hardwood Co.*, 325 U. S. 419 (1945). To the same effect are several decisions of the Court of Appeals for this Circuit, including *Walling v. T. Buettner & Co.*, 133 F. 2d 306, 308 (7 Cir. 1943), and *Bowles v. Carnegie-Illinois Steel Corp.*, 149 F. 2d 545 (7 Cir. 1945).

The fact that the illegal investments and requirements contracts were not terminated until after the suit was commenced might be regarded as suspect, as an indication that conscious wrongdoing has been ceased only temporarily for purposes of this proceeding. But the failure to cancel these arrangements as soon as they were called into question by the Government is also consistent with a *bona fide* belief of the defendants that there was nothing unlawful about the arrangements, and the court is not prepared to say that in the state of the law at the time the complaint was filed this belief could not reasonably be entertained. Moreover, termination of unlawful activities during the course of litigation need not be disregarded. Indeed, it may be sufficient to render a case moot. *Standard Oil Co. v. United States*, 283 U. S. 163 (1931); *United States v. Hamburg-American Co.*, 239 U. S. 466 (1916). While the action of the defendants in terminating the condemned arrangements during the pendency of this case is not, in the court's opinion, sufficient to deprive this court of its power to decide the question, this circumstance must be taken into account in determining whether equitable relief is needed to prevent future violation.

Much has already been accomplished by the Government. The unlawful investments and requirements contracts have been divested. The court is not persuaded that more is necessary to protect the public from a repetition of these or similar violations.

[*Requirements Contracts*]

There remain, however, the requirements contracts obtained as a result of the unlawful conspiracy which were still in force at the time of trial. Since these agreements constitute part of the scheme of monopolization, they should be canceled. Standard's existing contracts with Pacific, Salt Lake City Lines, and Los Angeles Transit Lines, all expiring April 30, 1956, must accordingly be terminated, and the decree to be entered herein should contain a provision appropriate to that end. Unless it is made to appear before the entry of a decree herein that relief is unnecessary because the contracts have already expired or been canceled, there should be a similar provision to terminate Firestone's contracts, previously described, with Long Beach Transit Lines and Los Angeles Transit Lines. In other respects the issues are found in favor of the defendants, and the requested relief will be denied, without prejudice, of course, to the commencement of a later proceeding should it prove necessary.

Counsel are directed to confer and to present a final decree for the court's signature, in keeping with the views herein expressed, on or after September 30, 1955.

Exhibit 4.—Partial List of Cities "Motorized" by General Motors, 1932–56

HOLDING COMPANY: NATIONAL CITY LINES

Alabama.—Mobile, Montgomery.
California.—Sacramento, Fresno, Stockton, Eureka, Oakland, Los Angeles, Glendale, Pasadena, San Jose, Long Beach.
Florida.—Tampa.
Illinois.—Aurora, Elgin, Bloomington, Normal, Champaign, Urbana, Danville, Decatur, East St. Louis, Joliet, Quincy.
Indiana.—Terre Haute, South Bend, Mishawaka.
Iowa.—Burlington, Cedar Rapids, Ottumwa, Sioux City.
Mississippi.—Jackson.
Michigan.—Jackson, Kalamazoo, Lansing, Pontiac, Saginaw.
Montana.—Butte, Great Falls.
Maryland.—Baltimore.
Missouri.—St. Louis.
Nebraska.—Lincoln.
Ohio.—Canton, Portsmouth, Springfield.
Oklahoma.—Tulsa.
Pennsylvania.—Philadelphia.
Texas.—El Paso, Beaumont, Port Arthur, Wichita.
Utah.—Salt Lake City.
Washington.—Everett, Bellingham, Spokane.

HOLDING COMPANY: OMNIBUS CORPORATION

New York.—New York City.

Total ---------- 56

Exhibit 5.—History of General Motors' Interlocking Control in Rival Transportation Industries

	AUTOMOBILES	TRUCKS	BUSES	RAILROAD	RAIL TRANSIT	AIR	INTERNATIONAL
1908	GM acquires 20 formerly independent auto assemblers, including Buick, Cadillac, Oldsmobile and Pontiac (1908-1920)	GM acquires 3 formerly independent truck assemblers (1908,1909,1918)					
1910							
1920	GM introduces annual style change as a market weapon (1923)	GM acquires Yellow Truck, largest producer of commercial vehicles (1925)	GM acquires nation's largest bus manufacturer, Yellow Coach (1925)	GM and Greyhound engage in conversion of commuter rail to intercity buses (1928-1939)			
	GM acquires more than 40 independent producers of key automotive components (1918-1937)		GM combines with Greyhound; organizes Atlantic Greyhound (1926,1929)			GM acquires controlling interests in TWA, United, Eastern and Western airlines and in several aircraft manufacturing concerns (1929-1934)	GM acquires Opel, Europe's largest automaker (1929)
1930				GM acquires Winton and Electro-Motive, leading manufacturers of diesel locomotives (1930)	GM establishes highway lobby to lock nation into financing roads rather than rails (1932)		GM constructs Brandenburg truck factory (1935)
				GM announces freight leverage policy; dieselization of America's railroads begins (1934)	GM organizes United Cities Motor Transit to acquire/scrap local electric rail systems (1932)	Congress passes McKellar-Black Act forcing GM to divest itself of airline holdings (1934)	GM and Exxon transfer synthetic fuel technology to and construct factories in Germany (1936)
	GM shares monopoly in auto industry with Ford and Chrysler 1935-1974. Combined Big Three market share = 90-97%				GM censured by ATA for UCMT operations (1935)		GM converts auto plant to warplane-bomber production in Russelsheim, Germany (1939)
1940		GM acquires interest in 2 major trucking firms: Associated Transport and Consolidated Freightways (1941)			GM organizes National City Lines to acquire/scrap electric rail systems throughout country. (1936)		Administrator appointed to oversee operations at GM-Russelsheim (1942)
					GM combines with Omnibus Corp. to "motorize" New York City surface transit (1936)		GM Russelsheim begins jet fighter production (1944)
		GM, Ford and Chrysler share monopoly in truck industry 1926-1974. Combined Big 3 market share = 70-84%			GM begins motorization of Los Angeles electric rail network (1940)		
1950	GM conspires with Ford, Chrysler and others to suppress development of auto emission controls (1953-1969)		Ford and Chrysler withdraw from bus production (1950)	GM achieves monopoly in rail locomotive production (1953)			
			GM achieves monopoly in city and intercity bus production; accounts for 90% of all bus engines (1955-1974)	GM de-electrifies New Haven R.R. (1956)	GM destroys electric rail systems in 49 other cities (1936-1956)		
1960				GM censured by ICC for contributing to ruin of New Haven R.R. (1961)			GM receives $33 mil. in reparations for damages by Allied bombing of Axis plants (1967)
1970		GM overtakes Cummins as nation's largest producer of truck diesel engines (1972)	GM begins converting bus plants to motor home production (1972)				GM negotiates with Soviet Union for construction of world's largest truck facility in Siberia (1974)

AFTERNOON SESSION

Senator HART. The committee will be in order.

At the time we took our recess, it had been Senator Hruska's hope that his schedule might permit him to return before we resumed this afternoon, and I hope that it will still permit him to join us. I know that he would want us to proceed now.

So, for the subcommitee, let me welcome a witness who comes from Germany, and I would think the best introduction that could be made of him is to submit for the record a summary biographical sketch of Mr. Matthies.

He is the vice President in charge of marketing of Messerschmitt-Bolkow-Blohm, and Americans my age are familiar with the name, "Messerschmitt," at least.

[The biographical sketch referred to appears as exhibit 1 at the end of Mr. Matthies' oral testimony.]

STATEMENT OF DIETER E. MATTHIES, VICE PRESIDENT, MARKETING, TRANSPORT SYSTEMS DIVISION, MESSERSCHMITT-BOLKOW-BLOHM, DONAUWORTH, WEST GERMANY

Mr. MATTHIES. Thank you, Mr. Chairman, and members of the committee for that introduction.

I want to point out that in the name and on behalf of Messerschmitt-Bolkow-Blohm—that is the right spelling of the MBB—I feel obliged to thank you for giving me the opportunity today to present before this committee our activities and our role as an internationally recognized designer and manufacturer of rail vehicles for passenger transport.

With your permision I would like to give you a very brief overview of MBB and its organization, using some slides as well.

[Slides were shown to supplement the following testimony.]

Mr. MATTHIES. MBB consists of seven operating divisions whose facilities are scattered throughout the Federal Republic of Germany.

MBB employs nearly 20,000 people.

The company is headed by a corporate management with Ludwig Bolkow as president, who in turn is supported by a certain number of corporate staff departments, like development, finances, manufacture, et cetera.

The operating divisions, which are responsible to their own management, are as follows:

Military aircraft division—development, manufacture, and overhaul of fixed wing aircraft weapon systems;

Transport aircraft division—development, manufacture, and overhaul of transport aircraft both civil and military;

Helicopter division—development, manufacture, overhaul, and maintenance of rotary wing aircraft;

Space division—development and manufacture of unmanned satellites and rocket-systems. Also studies, research and system analyses concerning environmental protection;

Dynamics division—development, manufacture, and overhaul of guided-missile weapon systems;

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Ottobrunn support division—a division to provide technical, computer, and administrative support to the other operating divisions located in the Ottobrunn headquarters; and

The transport systems division—whose organization and activities I will describe in greater detail in my presentation.

The activity of this division is directed toward the development, manufacture, maintenance, and repair on the following four main groups of products:

First, the rail vehicles, like main-line passenger coaches, intercity and Trans-European express trains, commuter and suburban train cars, dining cars, sleeping cars, underground train sets, rapid suburban train sets, electric and diesel motor trains, as well as special rail vehicles.

I should point out what we mean by saying a "train set" or "train unit." A train set is an integrated set of vehicles which are not separated from each other. Note, however, that several train sets can be coupled together to form a longer train.

The second activity is in the field of aircraft equipment, like aircraft asemblies, helicopter airframes, air cargo pallets and containers, ground handling equipment, cargo dropping systems for aircraft, radomes, radar antennas, and so on.

The third group, busy with mechanical engineering and general mechanical installations, like electric presses, car body presses, transport installations, special types of containers, and so on.

The fourth and last group covers the activities in the field of plastics and adhesive bonded products like highly specialized load carrying structural assemblies made from glass fiber reinforced and hard foam plastics, and destined for truck superstructures, inside casings and linings for rail vehicles and aircraft, and so on.

All these diversified activities are performed at the Donauworth plant of the MBB by its staff of approximately 3,000 employees.

Let me now give you some explanations on the organization chart of our transport systems division. We can show you a picture of it over there.

The general manager is Peter Schulz.

Dr. Fahlbusch is responsible for development engineering for rail vehicles, and mechanical engineering as well for aircraft assemblies and systems.

The production management is led by Dr. Hesselt. He is in charge of production planning, production engineering, material procurement, production, and value analysis.

The marketing, I am in charge of, for rail vehicles, mechanical engineering, aircraft assemblies, plastics, and adhesive-bonded products.

Economics, covered by Mr. Volkl. He is in charge of corporate accounting, financing, and data processing.

And the next one, of this board, is the personnel and social matters manager, Mr. Treyz.

The leading international part which MBB plays in the field of rail-bound vehicle development and production originates mainly from its historical background.

Following the reconstruction in 1946 of the Maschinenfabrik-Donauworth there was organized a company named Waggon Und

Maschinenfabrik Donauworth, or WMD; and the first production line placed in operation was for the manufacture of rail vehicles.

WMD recruited only top specialists from former rail car factories which had been destroyed in World War II.

In 1956, the company, Siebel-Werke, was founded as a subsidiary company owned outright, 100 percent, by WMD, and Siebel-Werke became exclusively engaged in aircraft production.

Apart from being engaged in coproduction and license programs, like the Noratlas, Transall, Breguet-Atlantic, the F-104 Starfighter, and F-4 projects, Siebel had their own development and production programs for sport and training aircraft.

This one shows some MBB 223 Flamingoes, a sport and training aircraft.

Pretty well known to you, as well, the F–4 Phantom.

This is a new, internationally developed aircraft called MRCA.

Senator HART. Is that plane in production?

Mr. MATTHIES. It is already in production, yes. The prototype will fly within the month of March, this year.

This is the Airbus, A–300B, also an international cooperation between Germany, Spain, England, and France.

This is the first only-for-civil-purposes developed helicopter, called BO–105, the helicopter which we are going to develop further now so that bigger types will be created within a very short time.

The up-to-date technologies of the aircraft production gave valuable impulses also to other fields of production.

The WMD concentrated right from the beginning in rail vehicle products using light steel construction, and in particular on the optimal aluminum lightweight construction.

WMD also continued activities in conventional steel construction.

In the early stages, the enormous advantages of the aluminum lightweight construction were realized which are particularly distinguished by the following characteristics.

The first item, less weight than for the steel construction, and I am going to give you some figures showing the comparative situation of these different constructions.

The conventional steel construction, for instance, results with a weight of 224 pounds per foot; the light steel construction, 184 pounds per foot; and the welded aluminum lightweight construction, only 90 pounds per foot.

The second item: Due to the light weight of the aluminum lightweight construction, energy cost savings from 20 to 25 percent during service operations are obtained. Even greater are the savings when accelerating and braking, which is of major importance, particularly for the underground and commuter train service due to the very short distances from stop to stop, creating less wear of the rail tracks because of the lower weight of the rail cars, and thus less axle load onto the track.

Higher speeds can be obtained on the same rail tracks. Nowadays, speeds up to 125 miles per hour are already reached on intercity services, and the new intercity train generation has been designed for 155 miles per hour.

The maintenance costs for the aluminum vehicles will be much lower because they do not corrode like conventional ones.

I will just show you some more slides of the products developed and built by MBB in Donauworth.

This is a diesel train built in conventional steel construction.

This one is a main-line passenger coach, for long-haul intercity traffic.

A restaurant car, also for long-haul, intercity traffic.

This is the interior view of such a main-line passenger coach restaurant car.

This one is a commuter train set built for England and of aluminum, lightweight construction.

Another commuter train set, also in totally welded aluminum construction, built for Austria.

This is a diesel train set for medium-haul intercity transportation, supplied to Yugoslavia.

The interior view of this diesel train set—very comfortable.

This is the first totally welded aluminum construction, an electric commuter train set for the Cologne Bonn Railway for medium-haul, intercity transportation.

The subway train set for Munich, aluminum built as well.

This is a commuter train set built in Japan under license of Messerschmitt-Bolkow-Blohm.

This one is known to all the people who have been at the Olympic Games at Munich, the electric commuter train set, the so-called S-train, or known as Olympia train.

The interior view of the Olympia train.

The new development of Donauworth facilities is this long-haul intercity train set, ET 403/404, also known as "Donald Duck"; totally welded, aluminum, lightweight construction; a train set consisting of four cars—a front and a rear car, and in the middle, a coach and a bar car in combination with a coach.

The interior view of the restaurant car of the ET 403/404.

A large capacity coach of the same train set.

This is a sleeping car.

This is a restaurant car belonging to a TEE—trans-European express train.

This is an interior of the same car; you see in front the bar and in the rear part a sitting compartment.

This is a view, a look into the facilities in Donauworth. The Munich subway car and its underframe under construction with lightweight aluminum building.

Munich subway, the car body under construction.

This is the metro for Paris, Paris' subway, a car body under construction.

Car bodies for the Munich commuter train set, the Olympia train, under construction, all in aluminum.

This picture just shows you the economics of the aluminum lightweight construction in comparison to conventional steel construction.

You can see that—I have only shown that in kilometers, but that doesn't make any difference—using conventional steel construction, the train makes about 8 kilometers with the same energy consumption as the aluminum lightweight construction built train needs for 10 kilometers.

That means a saving of about 25 percent.

With all this know-how, and the large range of products, WMD increased their business in the years from 1946 to 1971 from an annual sales of 2 million deutsche marks to an annual sales of 132 million deutsche marks.

The 1973 sales volume was 154 million deutsche marks.

Please note that in 1972 WMD was integrated into Messerschmitt-Bolkow-Blohm as the transport systems division.

In Germany, mass transportation of passengers through city internal traffic, and intercity traffic is considered to be the most important factor to resolve environmental problems.

The use of automobiles, particularly in high population areas, is more and more being substituted for by mass transportation means, such as subway, S-bahn, or rapid suburban commuter service, and intercity trains.

All these facts have, of course, been a mighty impulse to switch to steadily faster and more comfortable railway vehicles, which make it so attractive to the passenger that he begins to forget about using his own private car.

A close train sequence, reliable timetable, and an independence of weather conditions like fog, snow, ice, et cetera, complete the attractiveness of the railways.

Cooperation between city internal traffic authorities and intercity traffic authorities on a large scale is, in our opinion, an absolute necessity.

However, these objectives can only be obtained through effective influence from State and municipal authorities.

In Germany, the German Federal Railway Board is responsible for the construction of railway lines, the procurement of rolling stock, operation and maintenance for both intercity and suburban traffic.

However, city authorities are responsible for city internal traffic, like suburban traffic, and so on.

Both of these institutions are our customers for the supply of railway vehicles for the whole Federal Republic of Germany.

This conception, which we regard as the most reasonable solution to solve mass transportation problems, is, according to our knowledge, decisively different from the concept used in the United States.

Railway vehicles are designed, developed, and producd by MBB in large quantities. There are, however, other German manufacturers with whom we must compete, and these others are, for instance, the Waggon Union, Linke Hofmann Busch, Talbot, Orenstein and Koppel, Man—well known as a truck manufacturer, as well—and Wegmann.

We believe that the rolling stock now operating in Germany, and proven to be so satisfactory over so many years, can find its application in the United States as well.

In this connection, it does not matter as to the type of construction; for instance, conventional steel, lightweight steel construction, or cars made entirely of aluminum.

By the way, at this stage we would like to point out that MBB has licensed the optimum lightweight aluminum construction of railway passenger cars to many countries, such as France, Italy, Austria, Japan, and also Switzerland.

Due to the development and manufacture of products not in the field of railway vehicle production, a continuous influence from new technologies is impacting MBB's new developments in mass and individual transportation systems.

These impulses are mainly based on the experiences of aircraft production, space technology, new manufacturing processes, as well as on operation research and system analysis.

In addition to our current production activities in the field of railway vehicles, we have also been working for the past several years on the development and testing of systems for the transport of passengers and goods calling for speeds up to 250 miles per hour and more.

These speeds call for the consideration of an increased use of automation higher than you will find today. The MBB high-speed, ground transportation system, called STS–2000, introduces magnetic suspension together with linear induction motor propulsion.

This is the test and research vehicle, which runs in the Ottobrunn area in our test facility.

Comprehensive studies and tests at MBB and other German companies showed that for speeds exceeding 190 miles per hour magnetic suspension technology has—for economical and environmental reasons—a greater chance of realization than other contact-free systems, such as the air-cushion principle.

In the field of individual passenger transportation for city internal traffic, the MBB fully automated Cabinentaxi system—with cabins carrying two to three persons—is presently being operated on a test track.

Both of these advanced transport systems receive substantial Federal Government funding. On this slide you can see the test track.

So, I would like to show you a movie we have taken just to underline what I said, so that you can see these mass transportation systems in operation.

[At this point the slide presentation ended and a film was shown during the following testimony.]

Mr. MATTHIES. These are the facilities of MBB.

This is the electric commuter train, the first totally welded aluminum construction, of the Cologne-Bonn area, for short- and medium-haul intercity traffic.

The sequence of these trains is dependent on the time. That means in the rush hours we have a sequence of about 3 to 5 minutes, and in the meantime they are between 10 and 15 minutes. The speed goes up to 80 to 85 miles per hour.

This is the suburban train set for Munich, a train set consisting of two vehicles, depending on the daytime and rush hours, and so on. They couple the train sets together so that they have about six to eight vehicles belonging to a train.

This is the commuter train, the Olympia Train, in the Munich area. The same design, the same type of train set is also used in other areas of Germany having a high population.

A train set of three cars, three vehicles, coupled together to six or nine vehicles.

A very precise timetable, and a very short sequence of trains help to obtain a perfect service. You see that the total stop at a station is only between 30 and 45 seconds.

An interior view of the commuter train, the Olympia Train. It is a very high comfort, high standard, and well cleaned, and pretty well maintained.

These trains serving the suburban areas are linked up in a special system to the suburban train sets, the underground in Munich.

This is an intercity train, pulled by a locomotive.

The long-haul intercity trains don't stop at all stations; 8 to 12 coaches belong to such an intercity train.

This is the new ET 403/404.

This train set will be in operation by April 1st on the track between Munich and Bremen.

This is the magnetic suspension test and research vehicle.

The Cabinentaxi system for individual passenger transport, each cabin carrying two to three persons. That is the test track.

[End of film presentation.]

Mr. MATTHIES. Mr. Chairman, and members of the committee, I hope that this presentation has contributed to give you a picture of MBB's Transport Systems Division in Donauworth.

Our division, because of its longstanding experience in the development and manufacture of products in all fields of traffic and transport systems is capable, we believe, of contributing its share in helping you solve your present problems related to passenger rail transportation.

Thank you.

Senator HART. Thank you. And may I add, for those who have only the record, the film and slides were helpful in understanding this.

You listed on page 7 of your prepared statement a number of firms, competitors of yours, in the building of rail cars.

Now, do I understand that there are still other companies that produce rail passenger cars for suburban or intercity use?

Mr. MATTHIES. In the Federal Republic of Germany, these are—including MBB—the ones covering about 90 percent of the market, of the total volume, the total capacity.

Senator HART. Now, you have, in your film and slides, shown construction that you have made for Austria and Yugoslavia, and I think you said France.

Mr. MATTHIES. That is right.

Senator HART. In Europe, then, I take it that there are other firms also engaged in the building of rail cars?

Mr. MATTHIES. This is correct.

Senator HART. About how many?

Mr. MATTHIES. There will be approximately, in Europe, excluding the East Bloc, about 30 companies.

But it is a big difference, if I may point that out, in developing and manufacturing, because most of the companies only manufacture according to drawings and designs made by other companies like, for instance, MBB.

We cover about 70 percent of the total development for the German purposes.

Senator HART. How long has the company been engaged in the building of rail transit vehicles?

Mr. MATTHIES. Since 1946.

Senator HART. Did I understand that the company more recently has been absorbed by MBB?

Mr. MATTHIES. More or less—yes, absorbed, that is right, 1972. It was fully integrated in the MBB group as a division.

Senator HART. As you have sensed from this morning's discussion, we are concerned especially in these hearings with the consequences, the economic consequences, which flow from the control by automobile manufacturers of bus and rail manufacturing businesses.

Is it correct that no German automobile company manufactures rail transit cars or locomotives?

Mr. MATTHIES. This is correct, yes. They just supply, like Man, for instance, diesel engines, or also like AEG, Siemans, BBC, located in Germany, the electrical or diesel engine equipment for the trains.

Senator HART. The suggestion is made in your statement that in German cities mass transit more and more is substituting for the automobile.

Mr. MATTHIES. Right.

Senator HART. Is the actual use of the automobile declining in German cities?

Mr. MATTHIES. In the cities, yes; because regarding the suburban areas there is a well-developed park-and-ride system so that people driving from the areas which are not covered by the network of the railways can reach the next train station within a very short time by using their private cars.

It is more and more declining because you have, in Germany, quite a lot of cities which have already traffic-free areas in the center, so you can't even go inside Munich, for instance, or inside Hamburg with your private car.

Senator HART. Do most German cities have rail service?

Mr. MATTHIES. The big cities, yes, they have, like Hamburg, Dusseldorf, Berlin, Munich, Frankfurt, Stuttgart; and they are developing more and more.

They changed over mainly, also, from the tram, the streetcars, to subway, and suburban trains.

Senator HART. But the bus, the automobile bus, as a principal carrier of passenger traffic in the German cities has never been an important factor; is that correct?

Mr. MATTHIES. Not so important, no. In some city areas, like in Berlin, buses are still important because West Berlin does not want to depend on the commuter trains which are operated by the Deutsche Reichsbahn, the East German railways. Buses are also used for short-haul passenger transportation between communities which have no railway service.

Senator HART. I think your earlier response to my question covered this, but does MBB sell its railroad equipment to some of these other countries that you identified?

Mr. MATTHIES. Yes, we do.

Senator HART. And in addition to building your own car bodies, do you build some or all of the electrical equipment and propulsion systems?

Mr. MATTHIES. No; that is what we don't do.

Senator HART. You buy that entirely from the outside?

Mr. MATTHIES. Exactly, yes.

Senator HART. I don't know where the center of automobile production is in Germany, but whoever it is that represents that city would want to know what is happening to automobile sales in Germany.

As you are improving constantly the quality of mass transit, are the sales of automobiles going up in Germany, or going down, or do you know?

Mr. MATTHIES. For the time being it is a so-called stagnation, but in general it was increasing tremendously. And you see, that is a thing we really should consider, all these transport systems can exist beside each other.

You have the long-haul intercity traffic, the medium haul, the suburban and commuter train service, and you can use your private car as well. So, there is no need just to substitute 100 percent and say, you know, we don't use our own cars anymore, private cars anymore, but only use the suburban or the commuter train. No necessity in saying that.

And even the aircraft, and the air transportation, it is still a big deal in Germany, and in Europe as well, but this will decline, certainly, especially for inside-Germany traffic; say there is a necessity to go, for instance, from Munich to Frankfurt, which is a distance of about 300 miles. It takes about 3 hours by intercity train. That is the maximum going from downtown to downtown. It takes much more time to go out to the suburban area to an airport, fly to Frankfurt, and get out of the suburban area to downtown again.

So, this will certainly decline; the air transportation, passenger transportation, within the Federal Republic of Germany.

For long distance, you know, there is no other possibility, like going to the United States, or something like going even from capital to capital, from Hamburg to Paris, for instance.

Senator HART. You tell us that you build your car bodies, but you buy your power systems on the outside. Now, I am trying to get some idea of what the total number of jobs are that may be involved. Now, your company, MBB, I believe you said, employs about 20,000?

Mr. MATTHIES. 20,000 in total, yes.

Senator HART. Now, not all of them are engaged in this division, the transit and operations. How many are involved in the construction and sale of the——

Mr. MATTHIES. In the Donauworth facilities, close to a thousand people are engaged with this business.

Senator HART. And it——

Mr. MATTHIES. I am sorry, may I continue this. It is very hard to say, you know, how many people are engaged with the rail vehicle business, because there are so many things we don't manufacture, for instance, the windows, or all the electric units.

But it is widely spread all over in a lot of industries.

Senator HART. That I understand, but to the extent that we can develop it in the record, I hope we shall. But in your company, do you estimate about a thousand people engaged in this aspect?

Mr. MATTHIES. That is correct, yes.

Senator HART. Now, you named four, five, or six competitors within Germany. How many do you believe they employ in the rail car construction?

Mr. MATTHIES. In total? Oh, I would give back that question because I don't actually know. There are so many other parts they have as a sideline, so I absolutely cannot verify how many people are really in that railway business.

Senator HART. Well, there is a thousand that you have, and there are five or six competitors engaged in the construction of these vehicles, and in addition to that, there are those men and women engaged in producing the power units, you say, the glass and the frames, and so on.

Mr. MATTHIES. Right.

Senator HART. Then, somebody has got to lay the track and build those tunnels that we saw.

Mr. MATTHIES. Exactly.

Senator HART. Do you want to make any estimate as to how many jobs the industry as a whole generates?

Mr. MATTHIES. This will be hard for me to say, but maybe Mr. Woelker, the representative of the Federal Government, of the Ministry of Transport, can answer this question better than I can, because he will be in the hearing, I believe, by Thursday.

Senator HART. Yes, he will be in the hearing before this week is out.

Mr. MATTHIES. I hope that he will answer this question.

Senator HART. We will try and get that.

What we are really seeking is not so much the information as it relates to Germany, but to try and lay it on what a comparable industry, given a market, might produce in the way of jobs here in the United States. That is what we are really trying to find out.

Mr. MATTHIES. Well, you can see that just the rail car manufacture, this is the smallest volume of labor that is involved with all that stuff, because the tunnel section—to build a tunnel section for subways, or like the tracks for the intercity traffic involves much more people than in the car building business.

Senator HART. I am sure it does.

Do you sell any of your rail cars in the United States?

Mr. MATTHIES. Not one, up to now; unfortunately not.

Senator HART. And why not?

Mr. MATTHIES. Because there was no need, for the time being, as far as I am informed. As you will see by my biographical sketch I spent about 2 years in that business already. But even in former times there was no single wagon supplied to the United States. We absolutely cannot answer why.

I think this has something to do with the construction of the railway organizations here. They are privately owned and dropped probably down the passenger carrying business, passenger transportation business, so there was absolutely no need to develop this further as we did in the European countries or Japan.

Senator HART. Do you have any opinion as to whether the subject we discussed this morning—namely, the fact that one company in this country makes most of our buses and most of our locomotives, and most of our cars—would have any bearing on your willingness to enter the American market?

Mr. MATTHIES. Oh, I think it wouldn't break us to try to get into the American market.

Senator HART. Mr. O'Leary?

Mr. O'LEARY. I have no questions, Mr. Chairman.

Senator HART. Mr. Chumbris?

Mr. CHUMBRIS. Just briefly. Do you sell in other cities, in other countries?

Mr. MATTHIES. Yes, we do.

Mr. CHUMBRIS. And how many countries would you say you cover in Europe?

Mr. MATTHIES. In Europe what we had done is quite a lot, about six or seven countries; but for the time being we switched over from supplying hardware, but giving them licenses, because they have a very strong rail car manufacturing industry as well.

Mr. CHUMBRIS. And the situation that you have in Germany, is that comparable to the situation that they would have in the other countries that you serve? I mean as far as population, distances, speed to get from one place to another?

Mr. MATTHIES. That is correct, yes. But, by the way, we have a rather larger population than the other countries in Europe, so we have more mass transport systems and mass transportation problems in areas where we have a very high population.

Mr. CHUMBRIS. And what would be the population of the cities that you mentioned, Dusseldorf and a few of the others?

Mr. MATTHIES. The population of the FRG is about 61 million now. We have a lot of big cities, which means Hamburg with 2½ million people, and Berlin with about 2 million, Munich with 1½ million, and then this high population area of Cologne, Bonn, Dortmund, and so on, where about 18 to 20 million people are living.

Mr. CHUMBRIS. There are probably a lot of other questions that we would ask of you, but the chairman has a vote in a matter of a few minutes.

Thank you very much for coming.

Thank you, Mr. Chairman.

Senator HART. Well, again, thank you very much for the overview you have given us of how you, in Germany, have managed to have a very healthy, and from the pictures, very attractive, collection of equipment, as well as facilities.

I note in your biography that for 4 or 5 years you were a representative in Hamburg, was it, of an American company.

Mr. MATTHIES. Yes.

Senator HART. Was your English as good then as it is now?

Mr. MATTHIES. I always tried.

Senator HART. It is excellent.

Mr. MATTHIES. Thank you so much.

Senator HART. Thank you very, very much.

We are adjourned. We will resume in this room at 9:30 tomorrow morning.

[Whereupon, at 4:10 p.m., the subcommittee adjourned, to reconvene at 9:30 a.m., Wednesday, February 27, 1974, in room 2228, Dirksen Senate Office Building.]

[The following was received for the record. Testimony resumes on p. 1913.]

MATERIAL RELATING TO THE TESTIMONY OF DIETER E. MATTHIES

Exhibit 1.—Biographical Sketch

BIOGRAPHICAL SKETCH OF DIETER E. MATTHIES

Dieter E. Matthies, vice president marketing of MBB–UV, Donauworth (Transport Systems Division of Messerschmitt-Bolkow-Blohm), born on April 6, 1937 in Berlin, Germany.

He took his preparatory education at Askanische Oberschule (high school) in Berlin, FRG, graduating with honors in 1952.

Apprenticeship in the mechanical and chemical engineering departments of Messrs. Borsig in Berlin, graduating with magna cum laude.

1955–57—Professional activity in the chemical plants and apparatus construction of dept. of Messrs. Borsig, Berlin.

1957–60—Studies in chemical engineering at the state-registered Technical College Beuth in Berlin and graduation from this school with magna cum laude, as chemical engineer grad.

1960–65—Activities as engineer in the field of films and foils for technical and packaging purposes, with Messrs. Kalle AG, Wiesbaden, FRG, Europe's most important manufacturer of film and foil materials. Emphasis during this activity was laid upon development of new products, opening up of new markets and advisory activities for the firm's branch offices as to the practical applications of the product.

Parallel to the above professional activity went that of private lecturing on mechanical engineering, apparatus construction and production processes at a technical college.

1966–67—Head of the technical sales department in the field of packaging machinery at Messrs. Haensel, Hannover.

1967–71—Acting as Product and Sales Manager at Messrs. Doboy International, Hamburg, a wholly-owned subsidiary of Messrs. Doughboy Ind. Inc., New Richmond, Wisconsin, USA.

MAIN ACTIVITIES

World-wide marketing in the field of packaging machinery, development of new products, setting up and supporting the international marketing organization in Europe, USA, Japan, Australia, East Block countries, Africa and the Middle East.

1971—Management intensive seminar at the academy for top executives at Bad Harzburg, FRG, graduating with summa cum laude.

Since 1972—Vice President Marketing at the Transport Systems Division of MBB at Donauworth being responsible for all marketing activities with regard to the wide range of products of this division: 1. Rail vehicles; 2. Aircraft equipment; 3. Mech. Engineering and general mech. installations; 4. Plastic and adhesive bonded products.

Dieter E. Matthies and his wife, the former Karin L. Holzmuller are living at Donauworth, FRG.

Exhibit 2.—Prepared Statement of Dieter E. Matthies

PREPARED STATEMENT OF DIETER E. MATTHIES, MESSERSCHMITT-BOLKOW-BLOHM, TRANSPORT SYSTEMS DIVISION, DONAUWORTH, WEST GERMANY

Mr. Chairman and members of the committee.

My name is Dieter E. Matthies, my function within the Transport Systems Division of MBB in Donauworth is Vice President Marketing.

In the name and on behalf of Messerschmitt-Bolkow-Blohm, I feel obliged to thank you for giving me the opportunity today, to present before this committee our activities and our role as an internationally recognized designer and manufacturer of rail vehicles for passenger transport.

With your permission I would like to give you a brief overview of MBB and its organization.

MBB consists of 7 operating divisions whose facilities are scattered throughout the Federal Republic of Germany. MBB employs nearly 20,000 people. The Company is headed by a corporate management with Ludwig Bolkow as presi-

dent who in turn is supported by a certain number of corporate staff departments, e.g. development, finances, manufacture etc. The operating divisions, which are responsible to their own management, are as follows:

UF—Development, manufacture, maintenance and repair of aircraft weapon systems.

UH—Development, manufacture as well as maintenance and repair work on civil aircraft.

UD—Development, manufacture, maintenance and repair of rotary wing aircraft.

UR—Development and manufacture of satellites, rocket-systems as well as studies, research work and system analyses concerning environmental protection.

UA—Development, manufacture, maintenance and repair of guided missile systems.

BB—A division covering the technical and administrative support to be extended to those other divisions located in the Ottobrun headquarters.

UV—Transport systems division whose organization and activities I'll describe in greater detail in my presentation. The activity of this division is directed towards the development, manufacture, maintenance and repair on the following four main groups of products:

1. RAIL VEHICLES

Main-line passenger coaches, intercity and TEE express trains (-transeuropean express trains), commuter and suburban train cars, dining cars, sleeping cars, underground train sets, rapid suburban train sets, electric and diesel-motor trains as well as special rail vehicles.

2. AIRCRAFT EQUIPMENT

Aircraft assemblies, helicopter airframes, air cargo pallets and air cargo containers, ground handling equipment, cargo dropping systems, radomes, radar-antennas etc.

3. MECHANICAL ENGINEERING AND GENERAL MECHANICAL INSTALLATIONS

Eccentric presses, car body presses, transport installations, special types of containers etc.

4. PLASTICS AND ADHESIVE BONDED PRODUCTS

Highly specialized load carrying structural assemblies made from glass-fiber reinforced and hard foam plastics and destined for truck superstructures, inside casings and linings for rail vehicles and aircraft, etc.

All these diversified activities are performed at the Donauworth plant of MBB by a staff of approx. 3,000 employees.

Let me now give you some explanations on the organization chart of our Transport systems division:

The leading international part which MBB–UV plays in the field of rail bound vehicle development and production originates mainly from its historical background. Following the reconstruction in 1946 of the Maschinenfabrik-Donauworth, there was organized a company named Waggon Und Maschinenfabrik Donauworth (WMD) and the first production line placed in operation was for the manufacture of rail vehicles. WMD recruited only top specialists from former rail car factories which had been destroyed in World War II.

In 1956 the company "Siebel-Werke" was founded as a subsidiary company owned outright (100%) by WMD and Siebel-Werke became exclusively engaged in aircraft production. Apart from being engaged in co-production and license programs, like the Noratlas, Transall, Breguet-Atlantic, F–104 and F–4 projetcs, Siebel had their own development and production programs for sport and training aircraft.

The up-to-date technologies of the aircraft production gave valuable impulses also to other fields of production.

The WMD concentrated right from the beginning in rail vehicle product on the light steel construction and in particular on the optimal aluminum light weight construction. WMD also continued activities in conventional steel construction. In the early stages the enormous advantages of the aluminum light weight construction were realized which are particularly distinguished by the following characteristics:

1. Less weight than for the steel construction; below are shown comparative figures: Conventional steel construction, 224 lbs/ft.; Light steel construction, 184 lbs/ft.; Welded aluminum light weight construction, 90 lbs/ft.

2. Due to the light weight of the aluminum light weight construction, energy cost savings from 20 to 25 percent during service operations are obtained; even greater are the savings when accelerating and braking, which is of major importance particularly for the underground and commuter train service due to the very short distances from stop to stop.

3. Less wear of the rail-track because of the lower weight of the rail cars and thus less axle load onto the track.

4. Higher speeds can be obtained on the same rail tracks; nowadays speeds up to 125 mph are already reached on Intercity services, and the new intercity train generation has been designed for 155 mph.

5. The maintenance costs for the aluminum vehicles will be much lower because they do not corrode.

With all this "know how" and the large range of products WMD increased their business in the years from 1946 to 1971 from an annual sales of 2 million DM to an annual sales of 132 million DM. The 1973 sales volume was 154 million DM. Please note that in 1972, WMD was integrated into Messerschmitt-Bolkow-Blohm as the "Transport Systems Divisions".

In Germany, mass-transportation of passengers through city-internal traffic and intercity traffic is considered to be the most important factor to resolve environmental problems. The use of automobiles, particularly in high population areas, is more and more being substituted for by mass-transportation means, such as subway, "S-Bahn" (rapid suburban commuter service) and Intercity trains. All these facts have, of course, been a mighty impulse to switch to steadily faster and more comfortable railway vehicles, which made it so attractive to the passenger that he began to forget about using his own private car. A close train sequence, reliable time-table and an independence of weather conditions (fog, snow, ice etc.) complete the attractiveness of the railways. Cooperation between city-internal traffic authorities and intercity traffic authorities on a large scale, is in our opinion an absolute necessity. However, these objectives can only be obtained through effective influence from State and municipal authorities.

In Germany, the German Federal Railway Board is responsible for the construction of railway lines, the procurement of rolling stock, operation and maintenance for both intercity and suburban traffic. However, city authorities are responsible for city-internal traffic. Both of these institutions are our customers for the supply of railway vehicles for the whole Federal Republic of Germany.

This conception, which we regard as the most reasonable solution to solve mass-transportation problems, is, according to our knowledge decisively different from the concept used in the United States.

Railway vehicles are designed, developed and produced by MBB in large quantities. There are however other German manufacturers with whom we must compete. Other FRG companies are: Waggon Union; Linke Hofmann Busch; Talbot; Orenstein & Koppel; Man; Wegmann.

We believe that the rolling stock now operating in Germany and proven to be so satisfactory over so many years, can find its application in the United States. In this connection, it does not matter as to the type of construction i.e. conventional steel, light-weight steel construcion or cars made entirely of aluminum.

By the way, we would like to point out that MBB has licensed the optimum aluminum light weight construction of railway passenger cars to many countries, such as France, Italy, Austria, Japan and Switzerland.

Due to the development and manufacture of products not in the field of railway vehicle production, a continuous influence from new technologies is impacting MBB's new developments in mass and individual transportation systems. These impulses are mainly based on the experiences of aircraft production, pace technology, new manufacturing processes, as well as on operation research and system analysis.

In addition to our current production activities in the field of railway vehicles, we have also been working for the past several years on the development and testing of systems for the transport of passengers and goods calling for peed up to 250 mph and more. These speeds call for the consideration of an increased use of automation higher than you will find today. The MBB high-

speed ground transportation system called STS 2000 introduces magnetic suspension together with linear induction motor propulsion.

Comprehensive studies and tests at MBB and other German companies showed that for speeds exceeding 190 mph magnetic suspension technology has—for economical and environmental reasons—a greater chance of realization than other contact-free systems such as the aircushion principle.

In the field of individual passenger transportation for city internal traffic, the MBB fully automatic Cabinentaxi system (with cabins carrying 2–3 persons) is presently being operated on a test track. Both of these Advanced Transport Systems receive substantial Federal Government funding.

I hope that this presentation has contributed to give you a picture of MBB's Transport Systems Division in Donauworth. Our division, because of its long standing experience in the development and manufacture of products in all fields of traffic and transport systems is capable we believe of contributing its share in helping you solve your present problems related to passenger rail transportation.

THE INDUSTRIAL REORGANIZATION ACT (S. 1167)

(Ground Transportation Industries)

WEDNESDAY, FEBRUARY 27, 1974

U.S. SENATE,
SUBCOMMITTEE ON ANTITRUST AND MONOPOLY
OF THE COMMITTEE ON THE JUDICIARY,
Washington, D.C.

The subcommittee met at 10 a.m., in room 2228, Dirksen Senate Office Building, Hon. Philip A. Hart, chairman of the subcommittee.

Present: Senators John V. Tunney (presiding), Edward M. Kennedy, Philip A. Hart, and Roman L. Hruska.

Staff present: Howard E. O'Leary, Jr., chief counsel; Patricia Y. Bario, editorial director; Janice C. Williams, chief clerk; Peter N. Chumbris, minority chief counsel; and Charles E. Kern II, minority counsel.

Senator TUNNEY. The committee will come to order.

On this second day of hearings dealing with monopoly power in the automobile and mass transit industries we were scheduled to have as our first witness the Honorable Thomas Bradley, Mayor of Los Angeles.

Mayor Bradley's participation in this hearing would have been particularly appropriate; for no other city in the United States has become more a symbol of the pervasive influence of the automobile in our lives than has Los Angeles.

And no other city in our country has suffered as much from the suffocating effects of pollution and the attendant problems of highway construction as has Los Angeles.

Los Angeles is indeed the archetypal American city—lacking a viable means of mass transit.

Mayor Bradley is unable to be with us this morning because Los Angeles is contemplating the institution of a mandatory gasoline rationing program.

It is indeed ironic that the critical factor which has kept Mayor Bradley from testifying before us today has been caused more by the subject of these hearings than by any other factor.

I speak of course of the gasoline shortage brought on by the Big Three's monopolistic reluctance to promote the sale of smaller cars.

In 1972, for example, motorists consumed 70 billion gallons of gasoline at a cost of $28 billion.

The average car that year obtained 14 miles per gallon. Had the auto makers built and actively promoted the sale of smaller cars, instead of the prehistoric gargantuans now on the road, the cost savings to the consumer would have been substantial.

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The $28 million in savings tells only part of the story; for one can only imagine the savings both in gasoline and in dollars if our country had had a truly balanced ground transit system.

I'd like to take this opportunity to summarize Mayor Bradley's most eloquent and forceful statement. I should emphasize that any summary can give one only a partial insight into the problems of Los Angeles.

The mayor first describes Los Angeles' experience with the automobile. He presents a picture of Southern California crisscrossed with concrete and covered with gas guzzling dinosaurs.

Twenty-two percent of Los Angeles' land use is devoted to the auto—65 percent in the central city.

Quoting from the mayor's testimony:

> Freeways to accommodate our autos have "divided and conquered" our city with ribbons of concrete—separating people from their jobs and from each other, destroying the integrity of neighborhoods and encouraging urban spread and the destruction of needed open space.

One can only speculate as to the exacerbation of racial tensions brought on by a proliferation of highways, freeways and throughways; all to accomodate the omnipresent car.

Further, "those without automobiles and those who cannot drive in Los Angeles find their mobility and access to jobs—the doctor, shopping, schooling—seriously impaired."

Demonstrating the harsh reality of an auto commuter based region, the mayor lays out the hard facts as to what a gasoline shortage and rationing would do to Los Angeles:

> In the Los Angeles area over 40 percent of the 2.9 million commuters travel over 8 miles to and from work during a five-day workweek.
>
> Based on commuter trip figures and the average gallons per mile during peak driving hours, rationing would have the following impact on Los Angeles:
>
> If the monthly ration amount was approximately 41 gallons per month, over 950,000 commuters would be unable to get to work without purchasing more ration coupons, or joining a carpool or purchasing a smaller auto.
>
> If 49 gallons were provided as the ration, 28 percent of the commuters, or over 800,000 would be unable to commute without securing other means of travel or obtaining additional ration coupons.
>
> And, in Los Angeles, there are clearly other essential trips—that is, doctor, food purchases, emergencies, et cetera—that the average driver must take.

The mayor next sketches the history and effects of dismantling the Pacific Electric System:

> Thirty-five years ago Los Angeles was served by the world's largest interurban electric railway system.
>
> The Pacific Electric System branched out from Los Angeles for more than 75 miles, reaching north to San Fernando, east to San Bernardino and south to Santa Ana.
>
> The "big Red cars," so-called to distinguish them from the narrow-gage street railway, ran literally all over the Los Angeles area.
>
> At its point of greatest extension, it operated 1,164 miles of track in 50-odd communities, which pretty well defines Los Angeles as it is today.

The mayor continues:

> In 1938, General Motors and Standard Oil of California organized Pacific City Lines as an affiliate to the National City Lines to "motorize" West Coast electric railways.
>
> In 1940, PCL began to acquire and "scrap" portions of the $100 million Pacific Electric System including rail lines from Los Angeles to Burbank, Glendale, Pasadena, and San Bernardino.

Subsequently, in December 1944, another NCL affiliate—American City Lines—was financed by GM and Standard Oil to "motorize downtown Los Angeles."

American City Lines purchased the downtown electric system—"scrapped" its electric cars, tore down its power transmission lines, up-rooted the tracks, and placed GM diesel buses, fueled by Standard Oil, on Los Angeles City Streets.

By this time, Los Angeles' 3,000 quiet, pollution free, electric train system was totally destroyed.

The effects of dieselization were disastrous for the city of Los Angeles. Quoting again from the text of the mayor's statement:

Since 1952, when the bus was limited to practically one manufacturer, city motor bus ridership had declined to 4.5 billion and intercity motor bus ridership had fallen to 125 million, or a combined los of 3.8 billion pasengers.

Consequently bus production and sales have declined from 8,480 in 1951 to only 3,700 in 1972 or about 56 percent.

And yet, even as the Pacific Electric Lines were being phased out and the southern California freeway system phased in, hope still sprang eternal for a mass transit system.

Over the last score of years numerous attempts have been made to design a rational mass transit system for Los Angeles. Reading again from the mayor's statement:

As recent as 1968 the people of Los Angeles turned down a $2 billion mass rapid transit system. The oil and auto lobby launched a major campaign in opposition to construction of such a system.

It is agreed by most that the system was somewhat ill conceived, but it did not warrant the type of opposition the special interests were able to stir up.

I should add also that 2 years later, in 1970, there was a statewide vote to release State gas tax funds for mass transit use.

Again, the same auto-oil coalition launched a multimillion-dollar campaign to defeat the statewide initiative. It lost.

Indeed, absent a powerful and unequivocal rail transit lobby, those interested in balanced transportation are no match for the organized highway interests.

Legislators, including yesterday's distinguished guest, Mayor Alioto, and numerous others have failed repeatedly to shift anything other than token amounts of State and Federal gas tax revenues from highways to rail transit.

As an apparent consequence, national transportation policy principally reflects the legislative objective of the auto makers: Building more highways which sell more cars and trucks.

The mayor vividly details the reasons for the industry's sluggishness in responding to new technological innovations.

The mayor states:

It would appear that the level of interindustry diversification in West Germany, France, and Japan for example, is sufficiently low so as to preclude auto makers from restraining competition with nonautomotive forms of mass transit.

The large number of firms involved, 82 all totaled, enhance competition, and in turn, produces more buses and rail systems.

Largely as a consequence Europe and Japan have achieved a more balanced system of ground transportation, particularly in urban areas.

The mayor continues:

In the United States, General Motors dominates bus production as well as the production of autos. While there are two other assemblers, they rely on G.M. for diesel propulsion systems and major engine components.

It should be noted that the U.S. Justice Department filed a criminal antitrust suit in 1956 against G.M. for alleged monopolization.

In 1965, the Government accepted a consent decree which permitted G.M. to retain its monopoly, but requiring it to supply parts to other bus assemblers.

The question remains though, how long these firms will be able to survive, since the decree expires in 1975.

The mayor concludes with a look toward the future and a balanced ground transportation system:

In the long-term, the country must have a "national urban transportation plan and policy" to set forward a framework for a balanced national transit system.

It is essential that immediate and continuing planning complement and reinforce long-range transportation programs.

The nation demands a highly efficient and responsive system. The people of this country deserve and require the best that technology can create, not total submission to one phase.

We will have a much better opportunity to make the balanced system a reality if we have a competitive structure, which promotes technological competition to provide energy-conserving, economical, safer and nonpolluting, single- and high-occupancy vehicles.

Your actions to bring about such a competitive structure will truly benefit all Americans.

The oil crisis we are now facing should serve as the impetus for taking new and innovative steps in dealing with the quagmire which is our present ground transportation system.

It is an opportunity we dare not pass up for without major overhaul the future of American transit is bleak indeed.

Mayor Bradley's full statement plus his answers to questions submitted to him will be printed at this point in the record.

[The following was received for the record. Testimony resumes on p. 1926.]

PREPARED STATEMENT OF HON. TOM BRADLEY, MAYOR, CITY OF LOS ANGELES

Mr. Chairman and Members: This is another period in our history when we may be able to convert a severe crisis—namely the shortage of fuel—into an opportunity to develop a more effective transportation system. Nowhere is such action needed more than in the way we transport ourselves.

From the early part of the century to the present day, the automobile has become one of the most dominant influences on the lives of the American people. The nation's economy is almost totally dependent on the automobile. Auto use, and concrete ribbons of streets and highways, have pre-determined the physical development of many urban areas. In major urban regions air quality has deteriorated significantly because of the pollutants blowing out of exhaust pipes. Recently, an excessive reliance on energy-inefficient motor vehicles has contributed to a crisis—in the form of a fuel shortage, which now threatens to affect industries, air transportation, and deprive our houses of sufficient heating oil for winter.

Why has the automobile played such a dominant role in transportation sectors as compared to the existence of a more balanced transportation system found in Europe and Japan? Many have suggested that such a predominant role was brought about by the concentration of this nation's production of ground transportation in a few corporations. In turn, this concentration has promoted an anti-competitive arrangement which has stifled attempts to maintain or expand mass transit systems in this country. While the needs of the country demand a more efficient means of transportation, such anti-competitive structures offer little hope that we will be able to meet these transit needs.

The anti-competition arrangement, which today totally inhibits the implementation of a balanced transportation system, played an important role in the destruction of many of the inter-urban rail systems thtt existed in the country over the past 50 years. Some of these inter-urban rail systems could have comprised the nucleus of highly efficient rapid transit systems.

Among the questions to which I expect to address myself in my testimony today are the following:

1. Would effective regulation and control of the ground transportation sector reduce the chance that giant corporations would eliminate transit competition and destroy many of the nation's inter-urban rail systems, which historically has happened.

2. Can the institution of increased regulatory controls, fostering competitive opportunities, help avoid the unfortunate history of the last several decades?

3. How can we help assure that the people's transportation needs will be considered ahead of other interests, foreign or domestic?

4. What immediate actions are required by the Congress to foster a national balanced transportation program?

In 1974, the imbalance of this country's ground transportation sector in favor of the unlimited production of the auto, has almost totally eliminated or severely impaired five forms of non-automotive transportation: electric streetcars, trolley coaches, inter-urban electric railway, buses and trains. Not only has this arrangement impaired these efficient modes of transportation, but has also contributed to the inability of America's ground transportation sector to rebuild a technologically advanced system of transportation for this country. Can the cities of the nation tolerate the inability of perfecting and implementing a truly balanced transportation system because certain companies hold common control on competing ground transportation, and place corporate concerns before the public interest? My answer is no. If certain corporations are prohibiting development of transportation modes which will improve the quality of urban life, the Congress should respond now and take appropriate steps to prevent this from occuring. Congress should also respond and take action to provide the country with the competitive manufacturing capability necessary for the production of modern and the most advanced transportation systems.

Problems associated with the decline of non-automotive means of transportation present grave public concerns: poor mobility, poor air quality, lack of adequate fuel, a high rate of fatal accidents, and inefficient land use. Nowhere has the impact of the auto, and resultant problems, been more pronounced than in Los Angeles.

LOS ANGELES' EXPERIENCE WITH THE AUTOMOBILE

Southern California, particularly Los Angeles, has been known as the automobile capital of the country. The South Coast Air Basin, of which Los Angeles is the dominant part, contains over 10 million people and nearly 6 million motor vehicles. The Basin is still growing at about a 1.7 percent increase per year. However, the automobile population has grown more rapidly, at 3 percent to 4 percent per year, and gasoline consumption has grown even more quickly.

Recent Transportation Control Plans, proposed by the Environmental Protection Agency for Los Angeles underline the severe impact the automobile has on our air quality. Twenty-two percent of the City's land use is devoted to the auto—65% in the Central City. Freeways to accommodate our autos have "divided and conquered" our City with ribbons of concrete—separating people from their jobs and from each other, destroying the integrity of neighborhoods and encouraging urban spread and the destruction of needed open space. Those without cars and those who cannot drive in Los Angeles find their mobility and access to jobs, the doctor, shopping, schooling, seriously impaired.

I think you can graphically see what over-dependence on the auto has done to Los Angeles by examining the impact of severe fuel shortages and the prospect of gas rationing. In the Los Angeles area over 40% of the 2.9 million commuters travel over 8 miles to and from work during a five day work week. Based on commuter trip figures and the average gallons per mile during peak driving hours, rationing would have the following impact on Los Angeles: If the monthly ration amount was approximately 41 gallon per month ration, over 950,000 commuters would be unable to get to work without purchasing more ration coupons, or joining a carpool or purchasing a smaller auto. If 49 gallons were provided as the ration, 28% of the commuters, or over 800,000 would be unable to commute without securing other means of travel or obtaining additional ration coupons. And, in Los Angeles, there are clearly other essential trips, i.e. doctor, food purchases, emergencies, etc., that the average driver must take.

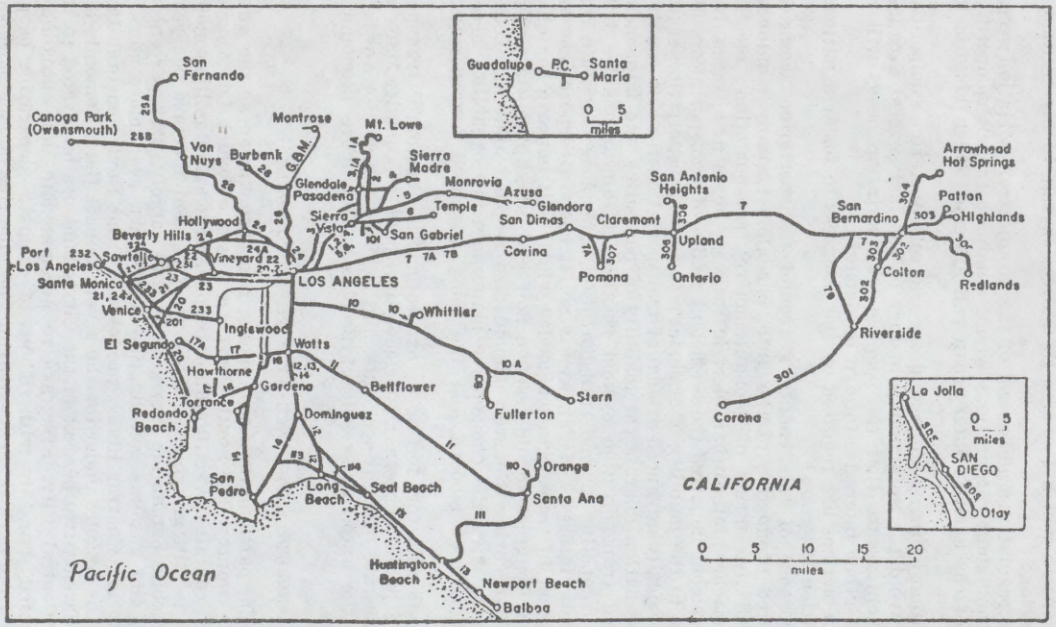
PACIFIC ELECTRIC LINES -- 1930

PACIFIC ELECTRIC RY.

1. Pasadena Short Line
1A. Mount Lowe
2. Pasadena-Oak Knoll
3. South Pasadena
4. Sierra Madre
5. Monrovia-Glendora
6. Alhambra-San Gabriel-Temple
7. San Bernardino
7A. Pomona
7B. Riverside

10. Whittier
10A. La Habra
10B. Fullerton
11. Santa Ana
12. Long Beach
13. Newport
14. San Pedro via Dominguez
15. San Pedro via Gardena and Torrance
16. Redondo via Gardena
17. Redondo via Hawthorne
17A. Hawthorne-El Segundo

20. Redondo via Playa del Rey
21. Venice Short Line
22. West 16th-Sawtelle
22A. Westgate
23. Santa Monica Air Line
24. Hollywood-Santa Monica-Venice
24A. West Hollywood (Colegrove)
25. San Fernando Valley
25A. San Fernando
25B. Owensmouth (Canoga Park)
26. Glendale-Burbank



101. Shorb
110. Santa Ana-Orange
111. Santa Ana-Huntington Beach
113. Long Beach-San Pedro
114. Long Beach-Seal Beach

201. Lagoon
231. Soldiers Home
232. Port Los Angeles
233. Inglewood

300. Redlands
301. Riverside-Corona

302. San Bernardino-Riverside
303. Colton
304. Arrowhead Springs
305. Patton-Highlands
306. Ontario-San Antonio Heights
307. Pomona-Claremont

P.C.: Pacific Coast Ry.
G.&M.: Glendale & Montrose Ry.

SAN DIEGO AREA LINES

SDE: San Diego Elec. Ry.
SDS: San Diego Southern Ry.

Source: "The Electric Interurban Railways in America"

1918

I believe that it would be reasonable to say, that many of these undesirable conditions could have been lessened or avoided, if there was an alternative to the auto. One question which ought to be answered is why did Los Angeles grow so dependent on the auto over the last 30 years. Answers are complex and interrelated to the regions social and economic fabric. But it may be instructive to view the history and the fate of a mass transit system, which served the City for many years and apparently served it well.

THE DISMANTLEMENT OF THE PACIFIC ELECTRIC SYSTEM

In 1970, the Automotive Manufactures Association stated that, "converted urban transit lost its market to the automobile, because it lacked the speed, convenience, and flexibility of the car." What the Association neglected to add was that the auto and allied interests played an important role in assuring that mass transit would lack that speed, convenience and flexibility.

Thirty-five years ago Los Angeles was served by the world's largest inter-urban electric railway system. The Pacific Electric System branched out from Los Angeles for more than 75 miles, reaching north to San Fernando, east to San Bernardino and south to Santa Ana. The "big Red cars", so-called to distinguish them from the narrow-gauge street railway, ran literally all over the Los Angeles area. At its point of greatest extension, it operated 1,164 miles of track in fifty-odd communities, which pretty well defines Los Angeles as it is today. (See attached map) Not only did the P.E. outline the present form of Los Angeles, it also filled in much of its internal topography.

In 1938, General Motors and Standard Oil of California organized Pacific City Lines (PCL) as an affiliate to the National City Lines (NCL, a national firm) to "motorize" West Coast electric railways. The following year PCL acquired, and substituted bus lines for three northern California electric rail systems in Fresno, San Jose, and Stockton. In 1940, G.M., Standard Oil and Firestone, took the reins of management of Pacific City Lines, in order to supervise its California operations more directly. That same year, PCL began to acquire and "scrap" portions of the $100 million Pacific Electric System including rail lines from Los Angeles to Burbank, Glendale, Pasadena, and San Bernardino. Subsequently, in December 1944, another NCL affiliate—American City Lines—was financed by G.M. and Standard Oil to "motorize downtown Los Angeles." At the time, the Pacific Electric shared downtown Los Angeles trackage with a local electric street car company, the Los Angeles Railway. American City Lines purchased the local system, "scrapped" its electric cars, tore down its power transmission lines, up-rooted the tracks, and placed G.M. diesel buses fueled by Standard Oil on Los Angeles city streets. By this time, Los Angeles' 3,000 quiet, pollution free, electric train system was totally destroyed. With the destruction of the Pacific Electric System, one historian has stated, Los Angeles may have lost its best hope for mass rapid transit. "The Pacific Electric," he remarked, "could have comprised the nucleus of a highly effective rapid transit system, which would have contributed greatly to lessening the tremendous traffic and smoke problem that developed from the population growth." The substitution of G.M. diesel buses, which were put on the streets, apparently benefited G.M., Standard Oil, and Firestone considerably more than the riding public. The Pacific Electric System, with its extensive private right of ways, provided a more efficient system than buses on crowded streets.

By 1949, General Motors had been involved in the replacement of more than 100 electric transit systems with G.M. buses in 45 cities including New York, Chicago, Philadelphia, Detroit, St. Louis, and Baltimore, besides Los Angeles. In April of that year, a Chicago federal jury convicted G.M. of having criminally conspired with Standard Oil of California, Firestone Tire, and others to replace electric transportation with gas or diesel-powered buses to monopolize the sale of buses and related products to local transportation companies throughout the country. The court imposed a sanction of $5,000 on G.M. In addition, the jury convicted H.C. Grossman, who was the treasurer of General Motors. Grossman had played a key role in the "motorization" campaign and had served as a director of the Pacific City Lines, when the Company undertook the dismantlement of the $100 million Pacific Electric System. The court fined Grossman the sum of one dollar.

But despite its criminal conviction, General Motors contrived to acquire and dieselize electric transit systems through September 1955. By that time, 88 percent of the nation's electric street car systems had been eliminated.

In 1936, when G.M. organized National City Lines, 40,000 street cars were operating in the country, at the end of 1955, only 5,000 remained. In 1961 the last train ran on the Pacific Electric Lines, through Watts to Long Beach. In December 1955, Mr. Roger Kyes of G.M. observed before your Committee: "The motor coach has supplanted the inter-urban system and has for all practical purposes eliminated the trolley (streetcar)."

All of these actions took place without evaluation of the merits of the electric street railway and electric trolley bus as an effective mode of mass transportation. Rather than interrelating the rail system with diesel buses, the rail systems were all but totally eliminated. This left the public with little alternative but to use what G.M. and the oil companies produced.

Since these activities we have seen the displacement of bus transportation by the automobile. By 1952, there remained only one major company which produced buses and one concerned with operating buses in the intercity market. Since 1925 more than 50 firms have withdrawn from city bus manufacturing including Ford, International Harvester, Studebaker Twin Coach, and Chrysler (Dodge). Since 1952, when the bus market was limited to practically one manufacturer, city motor bus ridership had declined to 4.5 billion and intercity motor bus ridership had fallen to 125 million, or a combined loss of 3.8 billion passengers. Consequently bus production and sales have declined from 8,480 in 1951 to only 3,700 in 1972 or about 56 percent.

As you can see from these series of historical events, the destruction of a system in Los Angeles with over 1,000 miles of tracks took place in a very calculated fashion. The fact that a handful of giant corporations determined the form of ground transportation for the country's three largest cities—and for a hundred other cities—should not be easily forgotten. It may be both relevant and highly significant to our contemporary situation.

LOS ANGELES PLANS FOR MASS TRANSPORTATION

In Southern California, even as the Pacific Electric Lines were being phased out, and our extensive freeway system phased in, hope still sprang eternal for a mass rapid transit system. The California State Public Utilities Commission, in a report dated June 16, 1947, remarked:

"The most important conclusion one can draw is that, unless provision is made for rail rapid transit lines in these freeways, where they are needed badly, Los Angeles, will, in all probability never have a rapid transit system. It is estimated that rail rapid transit in a freeway can be provided at approximately 15% to 20% additional to the cost of the freeway alone * * *. In other words, Los Angeles can today obtain a rapid transit system for a fractional part of what one will cost in the future. Any delay or procrastination will be fatal and plans must be made now to build the rapid transit system * * *.

Over the last 20 years there have been numerous attempts to design a system of mass rapid transit for Los Angeles. For one reason or another, the proposals have not yet gained acceptance. As recent as 1968 the people of Los Angeles turned down a 2 billion dollar mass rapid transit system. The oil and auto lobby launched a major campaign in opposition to construction of such a system. It is agreed by most that the system was somewhat ill conceived, but it did not warrant the type of opposition the special interests were able to stir up. I should add also that two years later, in 1970, there was a statewide vote to release state gas tax funds for mass transit use. Again, the same auto-oil coalition launched a multi million dollar campaign to defeat the statewide initiative. *It lost.*

During the last two years we have been developing mass transit plans to meet the transportation needs of the people of Los Angeles. In July of 1973 the Rapid Transit District's team of consultants recommended a 116 mile rail system, which had a price tag of more than $6.6 billion. Many concluded that this system as designed would not serve the transit needs of all people, soon enough to meet air pollution and gasoline shortage problems. Thus we are in the final process of developing a truly balanced transit system which will address all levels of transportation services. The system is anticipated to be divided into two interrelated and compatable components. The first is a system of near-term transit improvements to address our immediate needs to improve our existing mass transit system. Such improvement would include: a substantial increase of our existing bus fleet; mini-buses; demand response systems, such as: dial-a-ride, subscription bus, jitney cabs, and carpooling. These

improvements would be completed with a series of preferential bus and carpool lanes on freeways and surface streets, as well as park-and-ride facilities to provide parking for those who desire to ride the bus (for part of the trip) or participate in a car pool. We are also exploring the utilization of existing railroad facilities currently handling freight movements and a small amount of intercity passenger traffic.

To supplement the short term bus improvement, we will be substantially improving bus information, routing, and scheduling. Another factor is eliminating bus fare zones and stablizing the fare at 25 cents. Recently the Rapid Transit District reduced Sunday fares to 10 cents and it resulted in an unprecedented 168.2% increase in ridership.

In the long-term it is anticipated we will be planning a fixed guideway system, implemented in an incremental-phased fashion. I have voiced concern that the planned system should not preempt technological improvements. Viewing other recently implemented mass rapid transit systems, one can observe technological problems, which are not insurmountable, but must be addressed. It is my intention that we learn from the mistakes of other systems, as well as monitor the development of more advanced systems, such as personal rapid transit—P.R.T.

ABILITY OF THE GROUND TRANSPORTATION SECTOR TO RESPOND TO MASS TRANSPORTATION NEEDS

The transportation needs of Los Angeles and other major cities in the country, demand strong commitments from the federal government and the ground transportation industry to meet these transit needs. It is obvious that a massive national program for improving and expanding public transportation facilities must be met with a strong commitment in increased federal capital and operating funds. The Congress should assure that our urban areas have adequate resources to develop balanced transportation systems which improve energy efficiency, air quality and mobility. This federal commitment must be complemented by massive actions from the ground transportation sector.

It is unclear if the existing structure of the ground transportation sector has the motivation or ability to adequately respond to the nation's mass transit needs. Inter-industry diversification and a low degree of competition have seriously limited the auto industry's willingness to respond, unlike Europe and Japan, where competition within the bus and rail industries is enhanced by the large number of firms involved. The existing mass transportation technology and production arrangement in other technologically advanced countries clearly demonstrates more progress than is shown in the United States. In West Germany, France, and Japan there are 26 builders of buses, 23 producers of rail transit and 33 manufacturers of locomotives. By contrast, in America, three firms assemble buses made with General Motors components, only three firms still produce rail transit cars, and two firms manufacture locomotives. Competition between these industries and the motor vehicle industries is vigorous overseas due to the lower level of interindustry diversification. A case in point is a recent purchase by the Southern California Rapid Transit District of two German built double decker buses to run on an exclusive busway, because no American manufacturer had the capability to build them. Although a few automobile manufacturers such as Daimler-Benz, Toyota and Nissan also produced buses, none of this accounts for more than 30 percent of these three countries' total bus output.

It would appear that the level of inter-industry diversification in West Germany, France and Japan for example, is sufficiently low so preclude automakers from restraining competition with non-automotive forms of mass transit. The large number of firms involved, 82 all totaled, enhance competition, and in turn, produces more buses and rail systems. Largely as a consequence Europe and Japan have achieved a more balanced system of ground transportation, particularly in urban areas.

In the United States, General Motors dominates bus production as well as the production of autos. While there are two other assemblers, the Flexible Company (a subsidiary of Rohr Industries), and A.M. General Corporation (a branch of American Motors), they rely on G.M. for diesel propulsion systems and major engine components. It should be noted that the U.S. Justice Department filed a circuit anti-trust suit in 1956 against G.M. for alleged monopolization. In 1965, the government accepted a consent decree which permitted G.M. to retain its monopoly, but requiring it to supply parts to other

bus assemblers. The question remains though, how long these firms will be able to survive, since the decree expires in 1975. As I noted previously, there are only 3,700 buses produced and sold in the country today. According to recent reports G.M. is currently producing nine buses a day, Flexible about six, and A.M. General about seven a day. It is clear that, at this pace, they will be unable to meet demands which could goas high as 26,000 a year, according to the American Transit Association. Just to meet the requirements of the E.P.A. transportation control plans, the Southern California Rapid Transit District has estimated the need for another 1,400 buses immediately. While the bus manufacturers state that the ATA's projections are high, a recent study by the Library of Congress supports the figure. If the country is faced with major gas shortages with the subsequent desire to produce alternatives to the auto, there is a big question if the industry has the ability or inclination to meet the demand. It is reported that G.M. has on order a backlog of 18 months. In a January 1974 letter to the Administrator of U.M.T.A., the Southern California Rapid Transit District (SCRTD), after its own investigation of bus production concluded:

"As a result of our investigation and discussion with the industry, as well as other transit operations, we must conclude that the efforts being made by the industry fall far short of those which this critical situation demands."

Our transit needs should be met with responsiveness no less than that which our auto industry demonstrated, when it tooled up its foreign factories to make warplanes and trucks for Germany during World War II. According to recently declassified documents, General Motors and Ford became an integral part of the Nazi war effort. G.M.'s plants in Germany built thousands of bomber and jet fighter propulsion systems for the Luftwaffe at the same time that its American plants produced aircraft engines for the U.S. Army Air Corps.

From 1939 through 1945, the G.M. owned Russelsheim facility alone assembled 50 percent of all the propulsion systems produced for the German JU-88 medium range bombers. On the ground, G.M. and Ford subsidiaries built nearly 90 percent of the armored 3-ton trucks and more than 70 percent of Germany's medium and heavy-duty trucks. Presumably if G.M. and Ford had not cooperated their plants would have been confiscated. But even though the Reich did appoint an administrator to the G.M. plant, G.M.-appointed board of directors were still left in control. By 1967, G.M. had collected more than $33 million in reparation and federal tax benefits from the United States Government from damage mostly by Allied military operations to its warplane and motor vehicle properties in formerly Axis territories. Likewise, Ford had received a little less than $1 million, primarily as a result of damage sustained by its military truck complex at Cologne.

That $34 million today could purchase about 3,000 new buses.

The distribution of economic power in the mass transit sector is fundamentally a function of concentration and size. In terms of concentration, the mass transit development in the United States is virtually controlled by the Big Three auto companies. General Motors, Ford, and Chrysler account for 97 percent of automobile and 84 percent of truck productions, while G.M. alone dominates the bus and rail locomotive industries.

In terms of size, there is an enormous divergence between the competing automotive and non-automotive industries. Moreover, General Motor's diversification program has left only a small portion of the bus and rail industries in the hands of independent producers. As measured by aggregate sales, employment, and financial resources, therefore, the independent bus and rail firms are no match for the automaker. The Big Three aggregate sales of motor vehicles and parts amount to about $52 billion each year, or more than 25 times the combined sales of trains, buses, subway and rapid transit cars by the four largest firms other than G.M. which produce bus and rail vehicles (in the United States). The Big Three automakers employ nearly one and a half million workers, or more than 3 times as many as their four principal transportation rivals. These three auto manufacturers also excel in their ability to finance lobbying and related political activities. G.M., Ford and Chrysler contributed virtually all of the estimated $12.6 million expended in 1973 by the Motor Vehicle Manufacturers Association, an organization which represents the interests of the auto industry. They also contributed $1.5 million last year to the pro-highway Highway Users Federation, a leader last session in opposing attempts to open the Highway Trust Fund. By con-

trast, their four leading rivals contributed not more than $1 million, or less than one-tenth this amount to rail transit lobbies, such as the American Transit Association and the Institute for Rapid Transit. The magnitude of their sales, employment and financial resources, therefore, affords the major automakers overwhelming political influence.

While we have lacked a national commitment to prohibit our transit systems from decaying, European systems have been expanding and improving and preparing for the inevitable competition with private automobiles. A recent report issued by the Organization for Economic Co-Operation and Development (OECD), headquartered in Paris, has chronicled innovations and operations in Europe and Canada. It is reported that eight rapid rail systems are currently under construction in West Germany alone, including: Frankfurt, Cologne, Munich, Essen, Dortmund, Stuttgart, Hanover, and Nuremberg.

Studies by OECD and others have shown that the more competitively structured ground transportation sectors of Europe and Japan perform appreciably better in terms of efficiency and progressiveness than their American counterpart. As compared with America overall transportation efficiency in West Germany, France and Japan, for instance, is enhanced by a more balanced and workable allocation of passenger and freight traffic between highways and rails. In metropolitan areas such as Paris and Tokyo, where travel by auto is least efficient, technologically attractive bus and rail vehicles transport 80 and 90 percent, respectively, of the commuting work force. By comparison, non-automobile transportation accounts for but a mere 5% in the Los Angeles area. In short, due to their extensive use of energy-efficient, cost-saving bus/rail systems, these foreign nations have achieved balanced systems of mass transportation far superior to anything available in this country.

Performance is also a function of progressiveness, or the rate of technological innovation. Transportation technology in Japan and most of Europe is flourishing. Daimler-Benz, for example, has developed noiseless, pollution-free electric buses which are already on the streets of sveral German cities. Likewise, Japanese and French producers are producing modern electric-powered buses and trolley coaches.

Rail technology in these countries is equally impressive. European and Japanese firms have manufactured inter-city trains designed for speeds of 125 to 150 mph. Germany's Grauss Maffei and Messerschmitt, acknowledged leader in the development of high-speed trains powered by 250–350 mph electric linear induction motors, will soon construct operational systems in Germany and Canada. German companies are producing light rail vehicles, while other European companies have been building rubber-tired cars for the Paris, Montreal and Mexico City metros. It would be safe to say that there are, moveover, manufacturers abroad of a whole range of transportation alternatives including street cars and trolley coaches and inter-urban electric trains, which were displaced years ago by automobiles in our own country, as I have shown.

The question that can no longer remain unanswered is what action must be taken to improve America's second rate standing in the world in mass transit? What actions are necessary to encourage the entry of new ground transportation firms? Does the competitive structure and performance of this sector in Japan and most of Europe provide some positive insights

ACTIONS FOR A MORE BALANCED TRANSPORTATION SYSTEM

As we in Los Angeles embark on the expansion of an existing mass transit system, and initiate construction of a new mass rapid transit system, there must be assurances that we will have the most technologically advanced and competitive mass transit industry, so that our actions will not be futile. Activities and actions that started thirty years ago, with the dieselization of Pacific Electric, and the subsequent development of a non-competitive ground transportation industry, are unacceptable to today's transportation needs and demands. A competitive structure must be reinstituted to promote a balanced transit system comprising non-polluting autos, buses of every variety as well as high speed rail transport.

For nearly sixty years the policy of Congress has been to maintain competition among operation of competing modes of transportation, such as air transit, by prohibiting their common control. This was the rationale underlying section of the Interstate Commerce Act, the Motor Carrier Act of 1935,

the Civil Aeronautics Act of 1938, and the Transportation Act of 1940. Such a strong legislative mandate restoring competition must now be developed for ground transportation.

We have seen the successful attempts to restore competition in other major sectors of economy including oil-breaking up of Standard Oil; tobacco—divesting American Tobacco of its major holdings, and aluminum—breaking of ALCOA's trust.

I believe it would be in the country's best interest, for this Subcommittee to examine a legislative program which would accomplish the following: First, reorganization of G.M.'s bus and rail division to enable each of these divisions to operate free from the conflict of interest which may have seriously hampered their development under G.M. ownership. Secondly, facilitate the entry by a number of new bus and rail enterprises to provide the country with the competitive manufacturing capability necessary for the production of modern passenger and freight transport systems. As I have noted, the technologically advanced countries of West Germany, France and Japan contain more than 82 competing manufacturers of bus and rail vehicles, or more than 10 times as many as in the U.S.

Congress has a responsibility to examine the auto industry which may be going through a major transitional stage, affording the nation an opportunity to redirect the priorities of the three major corporations which have such an enormous impact on the nation. If the Congress is reluctant to act, we may be faced with massive unemployment and economic stagnation, and subsequent calls for the spending of billions of dollars to bail out the auto industry, as was the case recently with aerospace companies.

The nation's energy problems, particularly more associated with apparent gasoline shortages, can be significantly relieved by bringing about more energy-efficient modes of transportation. Therefore, I urge the Congress to require appropriate actions by industry to provide such modes, and to promulgate appropriate initiatives, incentives and controls to motivate the private sector so that true competition may be restored for the benefit of all of us.

In the near-term, a major national transportation program for improving and expanding public transportation is needed. Such a program must include massive federal funds to the cities to meet both capital and operating expenditures. An investigation must be made of the existing federal contract and grant procedures, so that Department of Transportation approved procedures can be expedited.

In the long-term, the country must have a "National Urban Transportation Plan and Policy" to set forward a framework for a balanced national transit system. It is essential that immediate and continuing planning, complement and reinforce long-range transportation programs.

The nation demands a highly efficient and responsive balanced transportation system. The people of this country deserve and require the best that technology can create, not total submission to one phase. We will have a much better opportunity to make the balanced system a reality if we have a competitive structure, which promotes technological competition to provide energy-conserving, economical, safer and non-polluting, single and high-occupancy vehicles. Your actions to bring about such a competitive structure will truly benefit all Americans.

Thank you.

[The following letter was subsequently received from Mayor Bradley:]

CITY OF LOS ANGELES,
OFFICE OF THE MAYOR,
March 1, 1974.

Hon. PHILIP A. HART,
Chairman, Subcommittee on Antitrust and Monopoly, Senate Judiciary Committee, Senate Office Building, Washington, D.C.

DEAR SENATOR HART: As you requested, I am forwarding to you my response to the questions submitted by the Committee.

If you are in need of any additional information related to my testimony, please don't hesitate to contact me.

Sincerely,

TOM BRADLEY, *Mayor.*

Attachment.

1. The Southern California Rapid Transit District operates 1,648 standard buses over 169 lines in 180 communities in the counties of Los Angeles (primar-

ily), Orange, Riverside and San Bernardino. The increased figure would be for this service area. It should be emphasized that this increase is only to meet the needs promoted by implementation of EPA transportation control plans. Recent gasoline shortages have heightened the demand for additional buses.

2. A principal point of my testimony is the clear dominance for General Motors in both the production and assemblage of buses. While there are two other assemblers, the Flexible Company and A.M. General, they must *rely* on G.M. for diesel propulsion systems and major engine components. In 1965, the government accepted a consent decree which permitted G.M. to retain its monopoly, but requiring it to supply parts to other bus assemblers. The question remains though, how long these firms will be able to survive, since the decree expires in 1975. So no matter who enters into the bus market, even Ford and Chrysler, would have to buy its engines from G.M. or tool up one of its own plants to make bus components.

Additionally, the RTD recently purchased two double decker buses from Germany, because no American manufacturer had the capability to build them.

3. Because of certain restrictions of use of federal funding for the purchase of buses, the Rapid Transit District has been inhibited from considering the purchase of foreign made buses on a large scale. But as mentioned in the answer to Question Two, the RTD, with use of federal funds, recently purchased two German made buses. It is clear though, if the American bus manufacturing capability is unwilling or unable to respond to the increased need, bus operators and undoubtedly the federal government, will have to turn to foreign firms for increased supply.

4. We are making serious attempts to implement a major region-wide carpooling effort to meet problems created by fuel shortages. But the fact remains the Rapid Transit District has placed an order for 300 additional buses, which will not be available for 12–14 months. The reason is the assembler is unable to secure adequate bus components.

In the long-term, we are in the processes of finalizing plans for a rapid transit system to serve the Los Angeles area. It is anticipated that the first stage will be a fixed guideway system. We are designing a system so as not to preempt forthcoming technology.

5. As recent studies by the California State Legislative Analyst, have shown, the BART system has encountered significant technological problems. It is our intention to learn from these problems and benefit from their resolution.

Because of the spread out development patterns in the Los Angeles area, we are challenged with the task of meeting both low density commuter and high activity urban transit needs. Mass Transit technology in the United States is clearly behind other technologically advanced countries. This places a major city in the potential position of having to plan and develop a mass transit program lacking the most technologically advanced solutions. As I stated in my testimony, a healthy competitive mass transit production capability can foster increased transit technology, as has been the case in Japan, France, and West Germany.

6. The basic issue is the transit needs of the country demand a competitive manufacturing arrangement that will meet these needs. There are many proposals suggesting ways to increase such competition. I believe Congress must take a close examination of these suggestions, so that it can judge the most productive arrangement. The Congress must seek to increase, not decrease, the number of bus and rail entrepreneurs.

Historically, General Motors' activities provides us with an insight into the results of allowing a company to dominate both auto and bus production. This should never be allowed to be duplicated although a few automobile manufacturers such as Daimler-Benz, Toyota and Nissan also produce buses, none of this accounts for more than 30 percent of these three countries' total bus output.

7. General Motors along with the other major auto manufacturers have the ability to exert significant political pressure and foster effective lobbying efforts. G.M., Ford and Chrysler contributed virtually all of the estimated $12.6 million expended in 1973 by the Motor Vehicle Manufacturers Association, an organization which represents the interests of the auto industry, and opposes the interests of mass transit. They also contributed $1.5 million last year to the pro-highway Highway Users Federation, a leader last session in opposing attempts to open the Highway Trust Fund, for mass transit purposes.

These activities, coupled with other obstructing tactics to prevent the improvement of mass transit, placed G.M. in a position to control and manipulate the mass transit market.

8. There are unfortunately very few Pacific Electric Line rights of way remaining. As I mentioned in my testimony we are attempting to use existing rights of way where possible, as well as utilization of existing railroad facilities.

Mr. TUNNEY. Our next witness is Prof. Lawrence J. White of the department of economics at Princeton University. Professor White is the author of the book entitled "The Automobile Industry Since 1945" which was published by the Harvard University Press in 1971.

In February 1973, Professor White was retained by the subcommittee as a consultant and asked to formulate a proposal for restructuring the automobile industry.

Professor White.

STATEMENT OF LAWRENCE J. WHITE, PROFESSOR, DEPARTMENT OF ECONOMICS, PRINCETON UNIVERSITY,

Professor WHITE. Thank you. I would like to present a summary of my detailed proposal. The details themselves are in my report, and what I would like to offer today is a summary of the major points of the proposal, if that is all right with you.

Senator TUNNEY. That would be fine.

[Professor White's proposal may be found at the end of his testimony.]

Professor WHITE. Do you have the summary?

Senator TUNNEY. Fine, I have a copy of the summary. Please proceed.

Professor WHITE. The American automobile industry is a classic example of a close-knit oligopoly. Three large firms dominate the industry, accounting for 80 to 85 percent of the market. A smaller fourth firm accounts for 3 percent. Imports, in recent years, have accounted for 15 percent. Despite the automobile companies' claims as to fierce competition, the industry has displayed the behavioral characteristics of recognized interdependence in the areas of pricing, product strategies, and new product development. Their performance in these areas has been a good deal worse than that which a more competitive industry would have yielded.

Extensive market power, like that found in the automobile industry, which is unsupported by economies of scale but which also has not been supported by predatory practices or other explicit anticompetitive behavior, has not been subject to legal attack under the current interpretations of the antitrust laws. There are a considerable number of industries in which oligopolists, acting jointly, possess considerable degrees of market power, which they exercise without engaging in conduct which would violate the Sherman Act.

But new antitrust laws may be passed or judicial interpretations may change, and it is worth considering the structural alternatives that would be possible for the automobile industry if the market power in the industry could be attacked directly. After a review of the salient features of the structure, behavior, and performance of the present industry, I will present the outlines of a feasible proposal to restrucure the automobile industry.

The table shows the recent sales structure of the U.S. automobile industry. I have used the averages of the calendar years 1969 to 1971 to wash out the strikes and other temporary irregularities in the industry. General Motors is clearly the dominant firm in the indus-

try, with 44 percent of retail sales in recent years. This figure is down somewhat from the 50 percent level that General Motors enjoyed in the middle 1960's. Ford is the second largest firm and has held that position since 1952. Chrysler is the third largest company. And American Motors, the sole remaining firm from the so-called independents, is fourth.

[Table 1 may be found in Professor White's proposal at the end of his testimony.]

Professor WHITE. A major source of variability in the industry has been the share of import sales. From below 1 percent in 1955, import sales rose to 10 percent in 1959, fell to 5 percent by 1962, and rose again in the 1960's, reaching 15.5 percent in 1971.

All of the automobile companies are conglomerate and multinational firms, in the sense that they do more than just manufacture and sell automobiles in the United States. They all have Canadian manufacturing facilities, which are fully integrated with their American operations. They all produce trucks—American Motors produces jeeps—and they produce parts for cars and trucks. All have Defense sales. General Motors produces buses, diesel engines, and locomotives. Ford and Chrysler produce tractors. General Motors and Ford produce large home appliances, through their Frigidaire and Philco divisions. Chrysler produces marine engines, boats, outboard engines, and air conditioning and heating equipment. All but American Motors have substantial automobile manufacturing facilities in Europe, Australia, and Latin America.

The significant economies of scale in automobile production do not seem to extend beyond 400,000 units. In other words, an automobile company which produced around 400,000 units a year would be large enough to achieve roughly the minimum production costs available from the existing manufacturing technology.

There are, however, considerable demand uncertainties facing automobile producers. Though brand loyalty is strong, consumer tastes can and do change with respect to styles, sizes, and shapes. If the producer could instantaneously change his product to meet these changes, these uncertainties would be of little importance. But there are substantial leadtimes required for the production and sale of automobiles. A particular model automobile is designed 2 to 3 years before it first appears in the dealers' showrooms.

If a company, having guessed wrong once with respect to consumer tastes and having endured poor sales, were to guess wrong a second consecutive time, it would find itself in serious straits. Financial losses would start mounting up, new financing from banks or the capital markets would become difficult to arrange, management morale would decline, retail dealers would become discouraged and might try to acquire other franchises or emphasize their repair businesses. The company could well go into a financial and psychological tailspin from which it could not recover.

Accordingly, a company's chances of survival would be greatly enhanced by producing and selling more than one brand or make, each with a separate identity in consumers' minds. The postwar experience in the automobile industry has indicated that two makes would probably be sufficient to weather the uncertainties in the market. Since the efficient scale for each make would be 400,000 units, the effi-

cient scale for a firm that would have a high probability of weathering the vagaries of consumer tastes would be 800,000 units. A firm this large would have assets of over $1 billion and sales of over $2 billion. It would be large enough to achieve efficient distribution of its products and to maintain an effective research and development capability.

With minimum efficient viable size at 800,000 units, the barriers to entry in the automobile industry are quite high. This scale is slightly less than 9 percent of the current market. A new entrant could not expect to slip into the industry unnoticed by the present producers; the latter would be most reluctant to yield their market shares. Further, the new entrant would face strongly established brand loyalties and reputations. He would have to build up a retail dealer organization. And finally, and perhaps most seriously, he would have to attract a large amount of capital to finance this venture, which would appear to be fairly risky.

In the late 1960's the costs of the manufacturing facilities, initial engineering and tooling expenses, and working capital required for a firm producing 800,000 units would have been around $1 billion. By now, inflation has probably carried this figure to at least $1.2 billion or $1.3 billion. The Fortune list of the largest 500 manufacturing corporations in 1972 contains only 94 corporations with assets of $1.2 billion or above, and three of these are automobile companies. It would be virtually impossible to establish a new company of this size, and established giants in other industries would be unlikely to be willing to invest the sums required in a venture that would be as risky as a new automobile company.

With only a few dominant firms in the industry and with very high entry barriers, we would expect to see a good deal of parallel and implicitly coordinated behavior. This has indeed been the case in the postwar period. The industry has followed a pattern of price leadership, with General Motors as the price leader. Repeatedly, at the time of new model introductions, Ford and/or Chrysler have announced their list prices for the new models, General Motors has subsequently announced its prices, and the other two firms have adjusted their prices to General Motors' levels, upward as well as downward.

Product behavior in the automobile industry has largely been aimed at inducing consumers to turn over their cars and buy new ones sooner than would be justified on purely physical obsolescence grounds. There are two possible strategies that the industry might have pursued. One would have involved an effort aimed at achieving major technological innovations. The second would have involved frequent styling changes. The industry has chosen the second strategy. It has emphasized annual model changes, buttressed by minor technological advances.

As a consequence, the basic product technology in the industry has not changed very much since World War II. The major features of today's automobiles—V-8 engines, automatic transmissions, power steering, and power brakes—are all prewar innovations. These have been considerably improved and refined over the past 25 years, but, still, the industry has been uninterested in pursuing basic alternatives. The suspension, ignition, carburetion, and exhaust systems are

fundamentally the same. Only the pressure of Federal legislation on air pollution has effected any change in these last three systems.

A second product strategy has been the offering of a range of sizes, models, and options within each make. The Big Three manufacturers, however, have been reluctant to provide cars at the smaller, less expensive end of the spectrum, and they have done so only when import competition has forced them to do so. They have seen small cars as a less profitable item for the industry that would only steal sales from the larger, more profitable cars that the industry has traditionally produced.

The performance that has flowed from this structure and behavior has been largely predictable. The prices that the industry has been able to charge have yielded high profits, as measured by the rate of return on equity. These have been well above those which a competitive industry would have yielded.

The accompanying table 2 provides the postwar average profits for the automobile industry, for all corporations, and for all manufacturing corporations. The automobile industry's profits have been considerably above the average for all corporations and significantly above the average for all manufacturing corporations, even though the latter figure contains some monopoly-oligopoly returns within it.

[Table 2 may be found in Professor White's proposal at the end of his testimony.]

Professor WHITE. These conclusions hold true even if one excludes General Motors' profit figures from the auto industry averages.

As a consequence of rapid technological change in manufacturing processes, the industry's record on price inflation has been reasonably good. The accompanying table 3 presents the relevant figures from 1949 through 1972. The Consumer Price Index component for new cars, which has contained adjustments for quality changes since 1959, has shown an overall increase of 34.1 percent between 1949 and 1972, compared to a 78.8 percent increase in the overall CPI. Unfortunately, we do not know how similar quality adjustments would change the overall CPI.

[Table 3 may be found in Professor White's proposal at the end of his testimony.]

Professor WHITE. When we look at performance in the area of product technology, the record is considerably poorer. There have been step-by-step improvements in engines, transmissions, steering, suspensions, and other systems. But the industry has not pursued fundamental alternatives to its basic technologies or has been very slow in adopting them. The Wankel engine, diesel engines, pneumatic suspension systems, and fuel injection have been commercially succesful elsewhere, but have not been pursued here. It presently appears that the other nonstandard internal combustion engine that will possibly meet the 1975–76 pollution standards, besides the Wankel, will be a stratified charge engine on the Honda automobile. By contrast, the U.S. industry has focused almost exclusively on adjustments and attachments to the existing internal combustion engine. In another area, the U.S. manufacturers were slow to adopt disc brakes to replace drum brakes, though they had long been standard on a number of European cars. Electronic ignition will appear

on U.S. cars in 1975, but primarily in response to the pollution control requirements.

In all, the industry's performance has been poor and sluggish in this area. The industry has preferred not to take the risks involved in more fundamental technological change, and there has been no competitive pressure forcing them to do otherwise.

Finally, in the area of product variety, the industry's performance has been poor in providing small, less expensive cars to the market. In the absence of the press of competition from imports, it is likely that the Big Three might never have provided small cars to the market. Even with the presence of imports, the Big Three have been slow and sluggish in bringing these cars to the market.

Improvement in the performance of this industry must come through structural changes. Behavioral remedies are not sufficient, because the heart of the problem is structural. The automobile market structure, with three large firms, encourages parallel, coordinated behavior and, with very high barriers to entry, the firms need not fear that their behavior will induce entry, except by imports. It is futile to tell firms in a tightly oligopolistic industry to stop taking their interdependence into account. A structural remedy is required.

The courts have been reluctant to deal with structural remedies in cases of substantial market power. The two major cases in which structural remedies were enforced, Standard Oil and American Tobacco, were decided 62 years ago. The courts have preferred to deal with behavioral remedies. The result has been, as noted at the beginning of my statement, that there are many industries in which substantial market power exists but to which the present antitrust laws do not seem to apply.

The structural remedy required for the automobile industry involves the dissolution of the existing three large firms into a larger number of smaller, more equally sized firms.

There are five critical features to the automobile industry that need to be considered in any dissolution proposal: the physical plant and equipment of the companies; their managements; their labor forces; their retail distributions, that is, their dealers; and their brand names.

A dissolution proposal must meet a number of criteria involving these five components: First, the proposal should maximize the number of competitors in the restructured industry, subject to the constraint that the resulting firms should be viable and have a reasonable prospect for survival. Normally, one ought not to worry about the survival of individual competitors but rather about the survival of competition. But, with the very high barriers to entry—which, in a sense, are the primary reason why a restructuring is needed—it does make some sense to be concerned with the viability of the resulting firms; if most of them fail because they were improperly established, the industry will return to its tightly-knit oligopolistic state and little will have been gained. Beyond some point, then, there is clearly a conflict between increasing the number of competitors in a restructured industry and achieving economies of scale and reasonable viability. The five components of the automobile industry listed above should be distributed so as to allow each firm to achieve economies of scale in production and distribution.

Second, production facilities should be reasonably matched with brand names and distribution networks. It would make little sense, for example, to create in a restructured industry a manufacturer who kept the brand name Chevrolet and kept the right to use all the present model names and designs but who had physical production facilities for producing only 800,000 units. Consumer loyalties are such that the brand name Chevrolet, at present prices and product varieties, brings with it the ability to sell over 2 million automobiles.

Third, the transition costs of the restructuring should be taken into account and minimized where possible. This would naturally apply to manufacturing facilities, management, labor force, and dealers.

The detailed dissolution proposal is as follows: General Motors would be broken into four automotive firms and one parent conglomerate firm. The four automotive firms would consist of a Pontiac-Cadillac combination, an Oldsmobile-Buick combination, and two firms created from Chevrolet: One would have the brand name—and appropriate manufacturing facilities—of the full-size Chevrolet, and the other would have the model names—and appropriate manufacturing facilities of the other cars that are currently manufactured by Chevrolet; that is Corvette, Chevelle, Nova, Camaro, and Vega. This last corporation would have to adopt a new overall brand name; for convenience, I shall call it "Vega-Chevelle." The Vega-Chevelle and full-size Chevrolet companies would initially continue to distribute their cars through the existing Chevrolet dealer network.

Ford Motor Co. would be broken into two automotive firms and one parent conglomerate. Of the two automotive firms, one would be composed of the present Lincoln-Mercury combination, plus the brand name—and appropriate manufacturing facilities—of the full-size Ford, and the other would have the model names—and appropriate manufacturing facilities—of the other models that are currently produced by Ford; Torino, Mustang, Maverick, Pinto, and Thunderbird. These last cars would require a new overall brand name, which I shall call "Fairlane." Both full-size Fords and Fairlanes would initially continue to be distributed through the present Ford dealer network.

The Chrysler Corp. would be broken into two automotive firms and one parent conglomerate. The two automotive firms would consist of a Dodge-Chrysler combination and Plymouth.

Table 5 shows the comparison between the present production structure of the industry and the approximate way it would look under the dissolution proposal.

[For the table referred to above, see table 5 in Professor White's proposal at the end of his testimony.]

Professor WHITE. Nine firms would supercede the present four. The share of the largest firm in the industry would fall from over 50 percent of production to under 16 percent. The new firms would be considerably more balanced in size, and there would be less room for the kind of absolute dominance in the market that is now displayed by General Motors.

Further, by separating the foreign operations and truck manufacturing from the automotive firms, the dissolution proposal would increase the level of existing and potential competition. The pres-

ently "captive" imports—Vauxhall, Opel, Rootes, Simca, Taunus, and British Ford—would become independent of the domestic automobile manufacturers and would represent new competition for them. The separated truck manufacturers would similarly represent potential competition at the large station wagon and utility vehicle end of the market.

It is unlikely that text-book style "perfect competition" would emerge from the restructured industry. But firms would be less likely to take into account their interdependence and less likely to consider the interests of the overall industry when contemplating any action. Pricing behavior would become more competitive, with price leadership more difficult to maintain. Manufacturers would be more likely to provide products that met the demands of consumers, as long as those products would appear profitable to the individual firm and even if they were not profitable for the overall industry. And it is likely that one or more firms in the restructured industry would decide to stake out a claim to be the technological leader in the industry, and the overall pace of automotive technological change would quicken. It would be unlikely that the restructured industry would display the very sluggish behavior with respect to the Wankel engine that the present industry has displayed.

It is important to realize that the restructured automobile industries would still be very large corporations. They should not be confused with "mom and pop" grocery stores. With the inclusion of at least some of the component manufacturing facilities, all of the new companies would have at least $2.7 billion in sales and $1.5 billion in assets. This would rank all of them within the top 35 firms by sales and the top 75 firms by assets, among the Fortune 500. They would all be large enough to exploit the available economies of scale in production and distribution.

They would be large enough to support extensive research and development efforts. They would all be large enough to be technologically progressive, both in manufacturing processes and in automotive technology. It is worth noting that NSU and Toyo Kogyo, the firms that have brought the Wankel into commercial use, and Honda, the firm that has developed the stratified charge engine to meet the 1975–76 pollution control standards, are far smaller in absolute size than the Big Three are today or than even the smallest of the new firms that I proposed would be.

All of the new firms would be viable and would have a reasonable chance or prospect of surviving in the restructured industry. Though the "Fairlane," "full-size Chevrolet," "Vega-Chevelle," and "Plymouth" companies would be single brand-name companies, the existing brand loyalties to these names and makes are strong enough to provide these firms with security. One would expect, however, to see these firms try to differentiate their models over time, broaden their coverage of the automobile market, and perhaps eventually try to esablish separate franchises for some of their models.

By maintaining the dealer networks intact but splitting the companies along the above lines, this proposal would provide each make with the same number of retail outlets that it has now. It would thus provide each of the new companies with the current strong distribution systems. Further, many dealers would find themselves

selling the cars of two companies, compared to the pattern of single-company franchises that prevails today. This would be true of virtually all Chevrolet, Ford, and Plymouth dealers and also of many other current General Motors dealers. This would accustom both the dealers and the companies to operating in a context in which dealers really were free to associate with more than one manufacturer, with beneficial effects on the ability of manufacturers, both domestic and foreign, to enter the automobile market at the retailing level.

In summary, the automobile industry is capable of a restructuring that would significantly improve the behavior and performance of this industry.

The resulting firms would be viable, efficient, and likely to be technologically more progressive than today's firms. The pricing and product behavior and performance of the restructured industry would be superior to that found in the present industry. I suspect that detailed studies of many other oligopolistic industries would yield the same or similar conclusions. Congress ought to give serious attention to proposals that would amend the current antitrust laws so as to bring the antitrust laws closer to a market power standard and thus increase the competitiveness, efficiency, and progressiveness of American industry.

Thank you.

Senator TUNNEY. Thank you very much. Senator Hart.

Senator HART. I want to thank Senator Tunney for undertaking to chair the hearing this morning. I anticipated being delayed by a breakfast meeting wtih the supervisors that were here to inquire about Federal revenue sharing, and I'm grateful that you have done it and I apologize.

Mr. CHUMBRIS. Mr. Chairman, before we proceed with the questioning of the witness, could we establish the procedure that Professor White would remain here, assuming that we quit at 10:30, because Senator Hruska would like to be here, and I understood we were going to have Dr. White second so that he would be available for questioning by Senator Hruska.

Senator TUNNEY. Yes, we have a meeting of the full committee at 10:30. Does anyone know how long that will last?

Senator HART. I doubt if anybody could predict how long that meeting will last.

Senator TUNNEY. Your statement on the manufacturing technology of automobile production is most informative. You state that significant economies of scale in automobile production do not seem to extend beyond 400,000 units.

What is it about the making of an automobile that requires the production of 400,000 units in order to achieve economies of scale?

Professor WHITE. Well, there are a number of basic manufacturing processes that are essential to the manufacture of an automobile. I break them down into the processes of stamping, casting, machining, and assembly. Stamping involves the shaping of sheet metal body parts, frequently body parts. Casting involves the pouring and hardening of molten metal into particular forms, like engines and carburetors. Machining involves the smoothing and refining of the cast shapes. And assembly involves the putting together of all the components of an automobile.

It is the machining and the stamping processes that seem to have the highest economies of scale, the highest minimum level of efficient production. Stamping requires a production size of roughly 400,000 units. By contrast the ideal assembly size is smaller, around 200,000 units.

Senator TUNNEY. I think it might be helpful for the purposes of establishing a record to lay the foundation of your expertise in this area.

Can you explain to the committee why it is that you feel competent to testify this morning?

Professor WHITE. The study of the American automobile industry was the subject of my Ph. D. thesis. I spent basically 3 years researching the automobile industry.

My Ph. D. thesis was subsequently published by Harvard University Press as "The Automobile Industry Since 1945," which you have mentioned at the beginning. It is from this research that I have obtained my expertise on the industry.

Senator TUNNEY. Did you get any cooperation from the automobile industry at the time you were doing this?

Professor WHITE. A small amount. I was out in Detroit once during my research. I was mostly asking about things like assembly plants. "How fast do you like to run assembly plants?"—those kinds of questions. To the extent that I was asking reasonable questions they provided me with reasonable answers.

Senator TUNNEY. Do you feel that this 400,000 units figure, which you say is needed to achieve economies of scale, is a figure which would find general acceptance from the automotive industry?

Professor WHITE. I really wouldn't want to say because I've never directly asked them. I am sure that if the question were asked in the context of the possibility of breaking them up, they would say, "Oh, no. Heavens no; you couldn't do that. Clearly we need much bigger companies than 400,000 units."

In other words, they are not a distinterested party in such a——

Mr. CHUMBRIS. Mr. Chairman?

Senator TUNNEY. Yes?

Mr. CHUMBRIS. Since you say you wouldn't know if others could claim maybe a million or a million and a half stampings to be the appropriate one. And if information to that effect is placed in the record as these hearings proceed, would you, then, accept 1 million, or 1.2 million, or 1.4 million, if that's the appropriate number of stampings that would bring as good an efficiency for the manufacturer that makes of those 1.2 million or 1.4 million stampings?

Professor WHITE. I would want to know a lot more than just the number of stampings. I would want to know, essentially, questions about the overall efficiency of the operation. It is not just the number of stampings that I sort of really depended on.

It is an overall feeling of just where it is that significant efficiencies end. Beyond that point there may be a little extra efficiency to be gained, but not a great deal.

Mr. CHUMBRIS. Thank you, Mr. Chairman.

Senator TUNNEY. Thank you, Mr. Chumbris. The mongraph which Bradford Snell prepared for our committee is interesting. On page 63 it states:

The preponderance of economic literature and the actual distribution of assembly facilities in the industry are to the contrary. Bain, for example, has concluded that an assembler achieves maximum efficiency within a production range of from 60,000 to 180,000 cars per year. In their study of the British motor car industry, Maxce and Silbertson found that scale efficiencies in assembly operations were exhausted at the 100,000 unit level; whereas Rhys has suggested that the figure might reach 200,000 units. Reviewing German automobile production, Jurgensen and Berg stated that maximum efficiency in assembly could be realized at output levels of 25,000 to 50,000 units. Significantly, these estimates of efficient production levels are no larger than the average-sized American assembly plant, which in 1972 produced 200,000 cars.

So the figures that some economists use for purposes of demonstrating maximum efficiency of scale are substantially less than 400,000 that you have given to the committee, as I understand it.

Professor WHITE. They are talking only about assembly, whereas I have tried to deal with a wider range of operations.

I disagree with some aspects of Mr. Snell's proposal. I really don't think that it is feasible to break up the industry in the way that Mr. Snell has suggested, in terms of breaking assembly off from the other kinds of operations within the industry.

I think there are significant coordination economies to be had on these essential manufacturing proceses, the stamping, casting, machining, and assembly, and so forth.

That's why my figure on significant economies is larger than just the figure for efficient assembly.

Mr. CHUMBRIS. Mr. Chairman?

Senator TUNNEY. Yes?

Mr. CHUMBRIS. Maybe it appears elementary to those who know the subject real well, but, briefly, would you define for the record what you refer to as stamping?

Professor WHITE. Certainly.

Mr. CHUMBRIS. I have seen it done, but I would like you to explain it briefly for the record.

Professor WHITE. It is basically the process whereby you take a piece of sheet metal, you stick it in the middle of a gigantic press, and then the press has a pair of mating dies, and under pressure these dies come together and shape—bend the metal—into the desired shape.

Mr. CHUMBRIS. And that procedure is one of the many procedures that you use to make a car, and then, when you get all of your parts together, then you are referring to your assembly?

Professor WHITE. Indeed, yes; that is right.

Senator TUNNEY. When you talk about the 400,000 units, you are talking about stampings?

Professor WHITE. That is the point at which I say that you probably are sacrificing some economies if you don't go up to a 400,000 level.

Beyond 400,000 you may sacrifice a little bit, but not a great deal, and, basically, that is the point at which, I think, you could reasonably draw the line and say you have just about exhausted your economies of scale.

Put together a stamping, machining, casting, assembly complex that would altogether have 400,000 units and you have a technically efficient automobile company.

Senator TUNNEY. Is the reason you based your figure of 400,000, on the fact that the dies wear out after the 400,000 and have to be replaced.

Professor WHITE. Yes.

Mr. CHUMBRIS. Mr. Chairman, that is the point where I understand there will be witnesses that state that it may be 1.2 or 1.4 million, and the correct figure will be put in the record.

Professor WHITE. There are some differences of opinion. This was one of the points in which when I did go around and ask questions I got some very hazy answers. Perhaps, because of the kind of issues that we are dealing with, this is considered rather crucial information.

The best information I could put together at the time that I did my research said roughly around 400,000 units.

Senator TUNNEY. But you couldn't get a definitive answer?

Professor WHITE. No one was really willing to come out and pin down the number. I tried my best, but there is a point at which you figure you are pushing too hard and they are going to stop answering all your questions if you keep on pushing too hard on one question. I tried to push as far as I could and then I stopped.

I did carry on some correspondence and the answer came back, "a couple of hundred thousand units." And putting together the other information I had, the kind of testimony that George Romney had given before this committee a number of years ago, 400,000 units looked like the right scale.

Senator TUNNEY. Is that for each of the manufacturers?

Professor WHITE. However, as my statement indicated, I don't think that is the minimum size of a viable company, because of the risks involved in the industry.

One really ought to think about a viable company of 800,000 units, which would be composed of two 400,000-unit makers. Besides reducing risks, this would allow a company to take advantage of some of the small economies beyond 400,000 units. Frequently you can share parts, you can share sheet metal components to some extent, even on different makes and differently designed models.

So, if there are some economies past the 400,000 unit, the size companies that I think are viable, in a risk surviving sense, would be able to take advantage of whatever small economies do exist beyond 400,000 units.

Senator TUNNEY. You mentioned some other aspects of the manufacturing process in your statement; namely casting, machining, and final assembly.

What are the maximum economies of scale, for example, in casting and machining?

Professor WHITE. The maximum size units that you see built for these machining and casting operations basically run to 200,000 to 250,000 a year.

And, as I have said, the most recent assembly plants built were designed for speeds that translate to, basically, 200,000 units a year.

Senator TUNNEY. Well, then, clearly, according to your testimony, a final assembly is not the stage of automobile production which dictates how large a venture an automobile manufacturer must be?

Professor WHITE. That is correct.

Senator TUNNEY. In your prepared statement you describe the risk inherent in the business. There is a leadtime of approximately 2 years from design to the auto actually appearing in the showcase for the year.

After tooling for that particular design as ordered, any changes are increasingly costly. I guess you are talking here about the consequences of one 400,000-unit firm coming up with an Edsel; is that correct?

Professor WHITE. Yes, that is certainly one outstanding example of the kind of wrong guess that a company can make 2 to 3 years ahead of time.

Senator TUNNEY. As I understand it, the technology of stamping is such that all of those 400,000 units would look more or less like an Edsel once they got started; is that it?

Professor WHITE. Yes; that is right. You have to order the tooling; and once it is ordered it takes a long time for the tooling to arrive; and once it has arrived, it has arrived and you are stuck with an Edsel.

Senator TUNNEY. In fact, that is what happened.

Professor WHITE. Yes, indeed; that is exactly what happened. That was simply a bad guess by Ford. They designed it in 1955, a year of big cars—everyone wanted big cars—and by the time it appeared in the dealer showrooms in the fall of 1957 a lot of people did not want big cars. They wanted small cars, and it was simply a case of being stuck with a decision that had been made 2 years earlier.

It is a risky business. I don't want to minimize that. In fact, that is one of the reasons why my esimate of a viable firm is twice the size of a technically efficient firm.

Senator TUNNEY. Well, is it not also true that because it is such a risky business that is one of the reasons that the companies try to minimize the risk?

Professor WHITE. Oh, yes. It is one of the reasons why those who have survived are multiple brand firms, with the exception of American Motors.

The selling of multiple brands is a way of diversifying, of handling some of the risks involved in the business.

Senator TUNNEY. One solution would be to have each of the companies produce two brands of approximately 400,000 apiece.

Professor WHITE. Given the way the industry is currently structured you can't get exactly that. In the details of my proposal I have had to take into account the present volumes and the present brand structure. I do not think you can reasonably wipe out all the brands. Brands are very important to people; they are something they trust; something they believe in. I think you have to take that into account. I think the kind of disruption you would see in the market, if you just wiped out all brand names, would be rather substantial.

You would have to do a lot of convincing before you convinced me that it was worth the disruption to get rid of those brand names.

Senator TUNNEY. Well, one of the things that is interesting to me is the fact that American Motors, apparently, has been able to stay in business with their substantially fewer sales than you envision as being necessary to maintain each one of these new production units in the business.

As I understand it, American Motors sales are less than 300,000 per year?

Professor WHITE. Yes.

Senator TUNNEY. About 280,000.

Professor WHITE. Yes; the average for the 3 years 1969 to 1971 was 250,000.

Senator TUNNEY. Did you, in your research, analyze American Motors' competitive situation in the market and extrapolate from that any information which would have influenced your decision that the 400,000-unit figure or the 800,000-unit figure was necessary for the purposes of keeping these companies in business?

Professor WHITE. Well, as I suppose any American Motors executive could tell you, they have had a rough time of it. They have not been consistently profitable during this period. They have definitely had their ups and downs. Their average rate of profits over this period has been considerably less than that of the other companies. I do not want to speak for American Motors. They can perfectly well speak for themselves.

I think they are smaller than would efficiently utilize the economies of scale in the industry. That does not mean that they are likely to go out of business tomorrow. They can hang on; they have hung on: but it is awfully difficult for them.

Senator TUNNEY. Volvo, I understand, sells about 300,000 units a year, and that is a profitable company; is it not?

Professor WHITE. I would not want to say that you cannot survive, you cannot exist, you cannot be profitable. But if one is trying to come at a reasonable point at which you have exhausted the economies of scale, at which you are reaching minimum efficient size, it appears to me that 400,000 is the right scale. I am quite ready to be convinced otherwise. But my research has led me to believe that 400,000 units is roughly the right scale. If a company is smaller, it is likely to encounter substantial increases in production costs.

There are companies that can and have survived at smaller levels, but I think that if one is thinking about a reasonable restructuring of the industry, one wants to aim at levels that are pretty close, if not right at, the level of minimum efficient size.

Senator TUNNEY. Well, certainly the industry has been able, through refinements rather than techniques, to produce a product about as efficiently as one can be produced; is that not correct?

Professor WHITE. Probably. Without really being there and knowing the alternatives to every single decision, one cannot be sure they have properly grasped every opportunity. However, they are very good at absorbing new manufacturing technologies, and I think their price record indicates this kind of expertise. They really have been able to keep their rate of price increases below the overall trend of the CPI during the postwar period. And that couldn't have happened unless their rate of technological change was faster.

On the other hand, my perception of the manufacturing costs at Ford and Chrysler, compared to General Motors, is that these other two companies are not quite as efficient as General Motors. Essentially, their level of decisionmaking is just not as good. For example, Chrysler has had a tradition of bad labor relations with the UAW, which, to me, is indicative of bad decisionmaking.

Senator TUNNEY. The industry has, however, been able to keep its price of the product down below the increase in the cost of living.

Professor WHITE. The figures that are available to me, which are basically CPI figures, do indicate this. However, to some extent the automobile component has been corrected for quality changes, and not everything in the rest of the CPI has been corrected for quality changes. But I don't think that would make a great deal of difference.

Senator TUNNEY. Is there a chance that this record of efficiency and keeping prices below the increase in the overall cost of living would be lost if we should break the majors up into small companies?

Professor WHITE. I see no reason why. If anything, that kind of record ought to get improved. If my conception of increased competition is correct, you are going to put yet more pressure on the broken up Ford and Chrysler firms to be more efficient, to make better decisions.

They are not going to be able to get along so easily with the kind of decisionmaking that they have made. The kind of decisionmaking that has gone on at Chrysler for the last 4 years in terms of not bringing out a small car, or a subcompact, or whatever you want to call it, to me, is phenomenal.

I am sure they have their own internal reasons, but I find it very difficult to understand how it is that they have guessed so wrong and so badly over the last 4 or 5 years. That is just not very good decisionmaking.

So, I think the basic answer to your question is, no, there ought not to be a worsening of this record of technological change. If anything there ought to be an improvement of this record as more rigorous rivalry would generate yet more pressure on the companies for better decisionmaking and more efficient operation.

Senator TUNNEY. Professor, Senator Hart has a few questions that he would like to ask.

Senator HART. Thank you, Senator Tunney. In your proposal you take the production facilities of Ford, Chrysler, and GM, and make eight companies out of the three.

Professor WHITE. That is correct.

Senator HART. What you have described in your exchange with Senator Tunney, the basic factor in your conclusion, which is that efficiency of size is about 400,000, seems sensible. Then you construct these eight automobile companies.

What other factors figured in your judgment there?

Professor WHITE. Well, as I mentioned before, another important factor was the existing brand names in the industry. I consider these important, consumers consider these important, and I was cut along existing brand names in my efforts to restructure the industry.

I would be the first to admit that this is not a perfect restructuring, but one of the things that I was trying to achieve in this report was to show it was at least reasonable to think about the possibility of restructuring; that it was not totally outrageous, totally beyond anyone's ability to even think about a restructuring of this industry. I started with my estimate of basic efficiency and viability. I also took into account current divisions of production along brand names.

I thus tried to come to a compromise in terms of the restructuring industry.

Again, I really am concerned about questions of viability in this industry because I would think that it would be a serious mistake to go to the great effort of restructuring of this industry if 5 years later you were back where you started from. If I were convinced that this would be the case I would have very serious hesitations about entering into the process in the first place. That is why I am very concerned about viability in the restructuring proposal.

Senator HART. Well, it is a concern that everybody shares. You say that in each of these eight resulting units the firm would be large enough to take advantage of the scaled economies and support your phrase of extensive research and development efforts.

In your study have you made any determination as to the importance of research and development?

Professor WHITE. It is hard to come out with an exact answer to your question. Research and development is important.

You do want to have companies which are interested in looking around for alternative power sources or, if they have not been lucky enough to discover it themselves, are willing to examine someone else's alternative power source with an open mind. The Wankel story to me is a very revealing story about essentially how uninterested the present industry is in really new technology.

What I would hope to see in a restructured industry is that one or more firms would decide that the way to establish themselves would be to acquire the reputation as a technological leader. This kind of prod from one firm would quicken the pace of the industry generally.

Now, to do this you do need to have some capabilities of carrying on research and development, but as I point out in my statement these are not going to be "mom and pop" grocery stores.

These are really going to be very large corporations and they certainly are going to have the capabilities to maintain adequate research and development facilities.

Senator HART. You have, in your proposal, a detailed breakdown of the units that would be assigned and become the property of each of these eight new companies.

Let's look at that first one. You call it full-size Chevrolet, and full-size Vega. It has in it four or five assembly plants.

It has a transmission unit. It has several foundries. In other words, it is vertically integrated.

Professor WHITE. That is correct. At least, over these four crucial processes that I described.

Senator HART. This is an old argument around here. Tell us why you think that this is the way to go when it comes to skill represented. Why did you do it this way?

Professor WHITE. I guess because I do really think that there are substantial transaction economies over these four processes. These are the kinds of transactions that are better handled within a firm than at arm's length across markets.

On the train down to Washington yesterday afternoon I was rereading an essay written by Prof. Oliver Williamson of the University of Pennsylvania, written for the National Bureau of Economic

Research, and he makes the same statement. In fact, it is his argument that I am really quoting. There are some kinds of processes which really are handled better within a firm than outside of the firms in markets. My understanding of the way this industry operates is that those processes which are really the heart of automobile manufacturing—the design, the stamping, the design of the engine, the manufacturing of the engine, and the final assembly of all of the components—do have significant coordination economies. There is a consistent pattern in this country of these processes being located within the automobile companies.

This is less true for other processes and items. Some have their own steel, some don't; some have their own glass, some don't; some have their own electric components, some don't. You can get along without those things. But the four processes that I mentioned earlier really do seem crucial to the coordination of automobile manufacturing.

Senator HART. Is it your judgment that there are economies in making your own engines and your own transmissions as opposed to buying them?

Professor WHITE. Yes; but it is a transactions economy. It involves coordinating your efforts. It is making sure that the right thing gets produced at the right time.

It is not that by making it yourself you are going to have lower production costs than if somebody else makes it. Rather, it is the avoidance of a market transaction; it is making sure that the right thing gets produced at the right time and in the right place.

In my book I describe the experience of Kaiser-Frazer in the early postwar period trying to buy its engines from Continental Motors, and they had just a dreadful time. Now, I realize that the postwar was a very special period, shortage of materials and gray markets and things like that.

But, even so, they had a dreadful time in getting the right number of engines at the right time and in the right place in the right quantities and the right type out of Continental Motors. This kind of experience leads one to think that on something as crucial as engines, a firm is probably going to be a lot better off having engines manufactured within the company rather than having to deal at arm's length with someone.

Senator HART. In the existing Big Three there are variations, I understand, in their practices. Some buy more outside than others. Others make more than their competitors.

Professor WHITE. That is correct.

Senator HART. To what extent, if any, were you able to identify those differences as responsible for the differences in profitability?

Professor WHITE. I couldn't. These are big companies and it is really hard to isolate individual items.

I wish one could, but it is really very difficult.

Senator HART. When you put these eight together, to what extent did you worry about the geography of an assembly plant in Oklahoma City and an engine plant in——

Professor WHITE. Well, as I hope I made clear in the report itself—and I want to say it again to make it absolutely clear—that

I would be the first to admit that this is not the perfect distribution of facilities.

I would need a great deal more information. I would like to have a large group of engineers and other economists along with me before I made the definitive distribution; with the limited information available to me I tried to balance production capabilities as best I could. Assembly plant production is publicly reported. I tried to make reasoned guesses for the other facilities. I tried to balance things like geographical distribution.

My intent was to demonstrate that such a proposal was not outrageous; that it was something one could think reasonably about. Even though my proposal is surely imperfect, it is something one could make a first cut at and then hope to improve as better information becomes available.

Mr. CHUMBRIS. Senator, would you yield on this one point?

I do not agree with your theory of divestiture. But if it makes economic sense to take away from certain of the corporations, then why don't you divide eight into that 8,770,000 autos and come close to 1,100,000 autos for all eight corporations; and give to American Motors, that only has 293,000 autos, one of the plants so that it could come up close to a million so it could survive?

If it makes economic sense for you to break them up, since all of them are going to be new corporations anyway, just give American Motors and possibly Dodge, Chrysler, and Plymouth—because they are still at 788,000 autos—a sufficient auto output and have them all at 1,100,000, or close to a million?

Professor WHITE. I will be the first to confess that I was using personal judgment on this. I was trying to reach a reasonable balance between the ideal theoretical restructuring of the industry and the way the industry is currently structured, the way brand loyalties run, the way manufacturing facilities are currently distributed. I am not sure it would make a great deal of sense to, say, break off the Vega by itself and give it to American Motors.

I think that your suggestion is less reasonable than establishing full-size Chevrolet as one separate corporation and then establishing the remainder of Chevrolet operations as a separate corporation.

If you thought that what you suggested——

Mr. CHUMBRIS. Since you are suggesting divestiture why not make each new corporation of an equal number of autos produced.

Professor WHITE. Again, clearly there is a lot of balancing that has to go on. I am thinking about viability, and I am thinking about ease of transition. I think ease of transition would be furthered by the kind of splitting that I have suggested rather than by picking up big chunks and trying to graft them onto a different corporation.

That, to me, is a recipe for encouraging failure rather than encouraging viability and survival.

Mr. CHUMBRIS. Senator Hruska will have something more to say on that.

Senator TUNNEY. Senator Hart?

Senator HART. The proposed eight includes a conglomerate in the case of each one of the Big Three, Ford, GM, and Chrysler.

Professor WHITE. In addition to the eight automobile firms there would still be the three parent conglomerates as separate corpora-

tions which would have truck manufacturing facilities. In the case of GM, the parent conglomerate would also have the bus facilities. The three parents would also have the overseas manufacturing facilities.

I did not feel that this was the place to start dealing with the conglomerate issue. The conglomerate issue is a very serious one but it ought to be dealt with on its own terms and not under the guise of an effort to deal with the automobile industry. An advantage to my proposal, as I mentioned in my statement, is that the foreign manufacturers would now be independent and would now provide more rivalry and more competition for the existing manufacturers. Similarly, the trucks would provide some potential competition. And following some of the suggestions of Mr. Snell yesterday, if you think that there is some advantage for a balanced transportation system in having bus manufacture separate from automobile manufacture, my proposal encompasses that, since GM bus facilities would be in the parent conglomerate and not in any of the automobile manufacturing firms.

Senator HART. In the case of the general product conglomerate you identified the elements that would be included.

Now, as I take it, in addition to these it would retain all of its automobile subsidiaries overseas. Is that correct?

Professor WHITE. That is correct. In principle, I suppose they could be split off as individual separate firms but I just wasn't sure that this was the right place to be dealing with that question. However, to the extent that you did so, you would create yet a little bit more potential rivalry, potential competition in this industry.

Senator HART. Between the facilities that would be here and their automobile facilities overseas, these three conglomerates as you call them would be in the position to compete back here; would they not?

Professor WHITE. Yes.

Senator HART. Did you ever consider linking foreign subsidiaries to the new companies your proposal created out of the existing U.S. facilities?

Professor WHITE. No, I didn't. I didn't see any particular reason to. Basically, they are on their own and there is no real reason to link the foreign companies to my proposed automobile companies.

Senator HART. There is something off the subject which requires a question, I think. It is a footnote of yours concerning how we handle auto emission standards.

You say that a tax would be a more efficient and equitable way to deal with the problems.

Professor WHITE. That is correct.

Senator HART. Please explain that.

Professor WHITE. Well, in fact I have written an article for a journal called "The Public Interest," which appeared last summer, which dealt with this question.

Generally, when economists think about questions of pollution and about the larger issues of what we call externalities, we frequently think that the preferable way to deal with them is to go to the source of the externality and to impose a cost on the generator of the externality. This will force him to take into account the social

costs of his actions. This should yield to more efficient results than corrective actions based on direct orders or fiat.

I feel especially strong about this position for this particular industry because of the particular events that occurred last spring when the Environmental Protection Agency decided to delay the 1975 automobile emission standards for 1 year.

As I read Mr. Ruckelshaus' opinion at the time, essentially the reason why he decided to delay the standards for a year was that Chrysler had basically told the EPA that it could not meet the 1975 standards. The only alternative that Mr. Ruckelshaus had was to close down Chrysler; that is, to prevent them from producing their 1975 cars. Indeed, he spent a lot of time on his decision asking whether Chrysler had done this deliberately so as to generate this kind of confrontation.

In the end, Mr. Ruckelshaus said, in effect, "Well, perhaps there were reasonable motives for Chrysler's actions; and since I have only this Draconian measure that is available to me, either delay or close them down, I really can't close them down if there is a chance that what they did was reasonable; so I have to order a delay."

Under this kind of circumstance I would prefer a tax. I would prefer a tax on emissions, but even a tax on manufacturing would be preferable. The tax should be steep enough to hurt, to sting, but not so steep that it threatens to close down the company. This, I think, would be much more effective.

You avoid the kind of confrontation situation that occurred last spring, where the only alternative is obey or we close you down. I am very uncomfortable with this kind of policy arrangement.

Senator HART. I understand the economic aspect and I won't burden this record with a debate over the wisdom or lack of wisdom of the Congress in fixing that and the meritorious motives that may have been attached in the case of any manufacturers who felt that the road they were being driven down was really not in the public's best interest.

But that is another thing in another place.

Professor WHITE. Having corporations with that kind of power to decide what is in the public's best interest is something that worries me a great deal.

I am not blaming the EPA on this particular issue. EPA had the powers that it had because that is the way Congress had legislated.

Senator TUNNEY. Doctor, could you bring us up to date on what the present status is of interlocking directorates in the automotive industry, the interlocking directorates that would exist with the automotive companies and their suppliers such as the tire and rubber companies, electrical companies, and others that would have an influence on corporate decisionmaking?

Do you have any knowledge of that area?

Professor WHITE. No, I really don't. I simply don't have any knowledge in that area.

Senator TUNNEY. Well, maybe we ought to recess, Mr. Chairman. We have an executive session waiting. We will recess until such time as Senator Hruska shows up after the executive session. Thank you very much.

[Whereupon, at 10:50 a.m. the subcommittee recessed, to reconvene at 12 noon this same day.]

AFTERNOON SESSION

Senator HART. The committee will be in order. At the time we recessed, Senator Hruska had hoped to be able to question Dr. White following the executive meeting of the Judiciary Committee which has just concluded.

Unfortunately, his schedule does not permit that and it has been suggested that Mr. Chumbris raise certain questions with you, Doctor.

STATEMENT OF PROF. LAWRENCE J. WHITE, DEPARTMENT OF ECONOMICS, PRINCETON UNIVERSITY—Resumed

Professor WHITE. Certainly.

Senator HART. Mr. Chumbris.

Mr. CHUMBRIS. Thank you, Mr. Chairman. Somewhere along the line, it seems like I've lost my voice this morning. I'll make it very brief.

In your book—and I enjoyed reading some of auto's history over the weekend——

Professor WHITE. Thank you very much.

Mr. CHUMBRIS [continuing]. You comment, "General Motor's superior profitability must be attributed to its superior management, a superior ability to utilize efficiently the resources at hand."

Professor WHITE. That is correct.

Mr. CHUMBRIS. Also you have a chart to show the profitability of General Motors compared with the other manufacturers in your book, showing that General Motors is higher.

If General Motors is broken up along the lines that you suggested, that very statement that you have made here could be wiped away completely because you would have instead of one General Motors, five different components of General Motors.

Professor WHITE. General Motors has a tradition of very efficient management, of being able to organize and stimulate their management so as to bring about the efficient decisions that I've described.

And what I'd like to see is that kind of decisionmaking competing against itself; to see five very efficient General Motors out in the market trying to beat each over the head, if you like.

That's exactly what I'd like to see.

Mr. CHUMBRIS. Yes, but that might not work. Evidently, according to your book, American Motors, Chrysler, and Ford, who have been competing with General Motors, were not as profitable as GM. Ford has been competing with General Motors and its components since the forties.

When did American Motors become a corporation?

Professor WHITE. 1954.

Mr. CHUMBRIS. 1954. But you could very well by breaking GM up in five corporations also break up the very ingredients that you mentioned which make General Motors so successful in its profitability; namely, superior management and superior ability to utilize efficiently the resources at hand. These could disappear with divestiture.

Professor WHITE. I don't see anything crucial about the inherent size of the corporation. I think it's the traditions; it's the way they've gone about instilling this tradition of good management.

What I'd really like to see is all of this very good efficient management competing against one another and producing better results for the public.

That's really the name of the game. That's really why one thinks about public policy changes of this sort. And what I'd like to see is better results for the public.

Mr. CHUMBRIS. Now, in your statement, you seem to be saying that because of the strong bargaining power of the United Auto Workers, that auto workers are overpaid.

Would you propose that their wages be cut as part of your restructuring plan and would you be in favor of a breaking up the United Auto Workers also?

Professor WHITE. Let me put it this way: If one examines the wages of UAW members and compares them to the wages of like persons with like skills in other industries, one finds that UAW members are paid more. I suspect one possibility for this is that the UAW is winning away some of the profits of the industry. If the industry were more competitive, if there were less profits to be won away, there is the possibility that in the future, UAW wages might not rise quite as fast as they have. I simply don't know what would happen. I'm simply expressing that as one possibility as to why the true profitability figures may well be higher than that.

There has been some literature in the professional journals on the question of, "Do concentrated market structures encourage higher, than would otherwise be the case, wages in that industry?" The kind of information I was able to pull together on the UAW suggests this is a possibility.

As far as breaking up the UAW, I think that's a very complex question. That's something that a person a lot more familiar with questions of unions and labor management bargaining would have to answer. I'm afraid that I'm just not able to give you an answer on that.

Mr. CHUMBRIS. John Blair was our chief economist from 1957 until he resigned a few years ago. But way back, Senator Dirksen used to very lovingly chide John Blair as to how much business experience he had accumulated in his years to be able to tell the businessmen of the United States how to run their businesses.

And everybody has to admit that your divestiture plan is a lulu.

Professor WHITE. Let me say that this is a frequent charge that is levied at any economist. "Have you ever met a payroll?" That's the standard question.

I'm not trying to tell General Motors how to run its business. If you've read my book, you know that I think they do an awfully good job, from the standpoint of their stockholders, of running of their business. What I'd like to see is more benefits for the public in terms of better product variety, faster technology change, and lower prices.

I'd also like to add to my answer to your previous question. If you're thinking about what's going to happen to UAW under a deconcentrated industry, one possible effect is that with lower prices one will see more automobiles bought and sold and, hence, more employment for UAW people. This will also be true if a deconcentrated industry offers a better variety of products.

So, there are a lot of possible ramifications for the UAW. It's not an area in which I have special expertise, however.

Mr. CHUMBRIS. Were you in the audience yesterday?

Professor WHITE. No; I was not.

Mr. CHUMBRIS. Well, Senator Hruska had some colloquies both with Mayor Alioto and with Mr. Snell and if he had been here today, I am sure that he would have engaged with you in the same type of colloquy that he had with those gentlemen.

And I am pointing it out primarily for the readers of the record so that in case Senator Hruska doesn't get a chance to submit possibly some questions to you for possible answers for the record, that his philosophy that he expounded yesterday would be borne in mind as others read your testimony.

There are a couple of things I noticed from your book; and it's interesting to have books like this because you have statistics and facts that not too many writers have been able to put together in one volume.

I notice from the concentration hearings that Senator O'Mahoney held way back with the TNEC days, that back in 1909 General Motors manufactured 28,550 cars, Studebaker, 14,500 and Ford Motor Co., 10,600.

By 1915, General Motors had manufactured 120,161 cars, Ford Motor had gone to 283,000.

In 1925, we go away from the number of cars to percentages, Ford Motor Co. had 42.8 percent; General Motors, 30 percent; Chrysler, 9 percent.

In 1930, it went to 40 percent for Ford; 34.5 percent for General Motors and 8.5 percent for Chrysler.

In 1935, Ford Motor went down to 30.2 percent; General Motors up to 38.4 percent; and Chrysler, 22.9 percent. In 1938, it was 30.5 percent for Ford; General Motors, 44.8 percent; and Chrysler, 25 percent.

Now, according to your testimony this morning, you pointed out that General Motors went down from 50 percent to 44 percent.

So General Motors is back to where it was in 1938 as far as percentages are concerned. You have a chart that showed that in 1945 Chrysler had 2 percentage points more than Ford did on the market.

But at that point, Chrysler started going down and went back up a little bit in the late forties and early fifties and Ford started moving up. Then it moved down just a little bit until it reached a point where Ford kept on going up and Chrysler kept on going down until they hit a very low.

And then it started picking up again. Now, that is not too long ago. That is only 25 or so years ago. Depending upon the autos—as you mentioned yourself, sometimes you may come up with a style or a type of car which either goes well or goes very bad—you may see these statistics change significantly. You pointed out this morning that General Motors is down from 50 to 44. Hence, Ford, Chrysler, American Motors, and the foreign cars could continue to make gains on GM and move in on what you consider General Motors dominant position.

Professor WHITE. Well, let me comment on that. I would not want to claim that this is a totally stagnant, totally moribund industry

in which nothing ever happens. That's clearly not true. The kind of evidence that you've just cited is indeed indicative of changes.

But the point I want to make is that the kind of rivalry that they've engaged in has been channeled in a very special direction. They've not found it worthwhile to direct their efforts toward more technologically progressive, more technologically daring strategies.

What I would hope and expect to see out of a less-concentrated industry is better behavior on the technological side of things. In addition, I expect to see better behavior in terms of providing a better selection of cars at the right time without having to wait for imports to show the producers where the markets are.

I would hope that the greater number of producers would be more aggressive, more willing to seek out markets which they could sell to.

I would be the first to admit that this is not a totally moribund industry—things do change. It's just that I think that things could be made a lot better in this industry by having more effective rivalry among a larger number of producers.

Mr. CHUMBRIS. Of course, those are decisionmaking issues that each manufacturer must make to his best judgment, not only for the company and for the stockholders but for the general welfare of the economy.

Professor WHITE. That is exactly the kind of decisionmaking that I don't think automobile producers ought to be making.

Mr. CHUMBRIS. What kind?

Professor WHITE. I think they ought to be thinking about the interests of their stockholders and if it is profitable for them to go out and produce a car, they ought to do so.

And they oughtn't to be thinking, "If I produce this small car and my rivals also produce a small car, maybe we aren't going to make so much money together upon it." It ought to be an independent decision.

Mr. CHUMBRIS. Yes. But still you're evaluating their judgment. I listen to debates on the floor of two great Senators and one of them will make a statement and the other Senator will, in effect, say, "Senator, I don't see how you can be so wrong on this issue with all the good judgment you have." They just don't see eye to eye on a particular political level or economic issue that is before them.

This is a judgment that these men have to make. I don't want to dwell too long in this. Let's take some of the automobile manufacturers.

I think it was Studebaker in the early fifties that decided to come out with a unique type of car and it didn't meet the success that Studebaker hoped it would—we don't want to belabor the Edsel one, but that is a good example of where one manufacturer took a chance on a particular car and it proved to be very tragic.

Now, these things about the pollution issue. You had those brought out. We know, because on the staff level three of us from this subcommittee staff, at the suggestion of the chairman and the ranking Republican member, went to Detroit and we spent 3 or 4 days making studies.

We went to the manufacturers; we went to the Ethyl Corp.; we went to the Army Tank Corps to see what they were doing to try to

meet the pollution problems that auto manufacturers had to meet by a certain date.

And we saw what they went through and they showed us these different systems. And for some reason they made a judgment, which was their judgment to make.

They decided not to go with the rotary. But that is a decision, under our system, that they had a right to make.

Professor WHITE. Most certainly. But what I'd like is to have more possibilities of independent decisionmaking. I'd like to see nine independent sources of decisionmaking and hope that with a greater number of independent decision sources you would have a greater likelihood of better decisions being made on the kinds of things that you have just described.

Mr. CHUMBRIS. Yes; and of course that is going to be a decision that Congress is going to have to make. We have had very prominent witnesses, Dr. Kaysen of Harvard, who was an advisor to President Kennedy in the early 1960's. He came before us and stated that he thought the ideal situation in the steel industry would be to have 40 equally-large steel companies.

This subcommittee appreciated having his testimony. If you recall, I think it was 1965 when he testified.

We have had others. Economist Dr. Walter Adams, I don't know of any economist that has been before us more than Dr. Walter Adams.

In 1949 he presented to Congressman Celler, who was chairman of the House Judiciary Committee, a bill to break up concentrated industries, not along the line of S. 1167, but along the line of the Public Utility Act of 1935.

Congressman Celler introduced the bill and it didn't go anywhere. But Dr. Adams, with his usually good humor, said if it wasn't for the Korean War he might have gotten the bill through. And I think I will end at that point. Thank you very much, Mr. Chairman.

Senator HART. Mr. O'Leary?

Mr. O'LEARY. Professor White, as an economist would you agree that at some point diseconomies began to set in when we speak of the size of a company.

Professor WHITE. Possibly. In the economics profession right now there is sort of an active debate about whether there are diseconomies beyond some point, or whether modern methods of organizational structure and organizational management have been able to get over the kinds of costly coordination problems that would otherwise beset large organizations.

Consequently, one really has to be very empirical on this question: Look at the particular industry, look at the particular organization, and ask whether there are or are not diseconomies.

Unfortunately, one can't really answer a general "yes" or a general "no" to your question.

Mr. O'LEARY. Well, I would like to get your reaction to a quote here and I hope you will bear with me because it is a reasonably long quote from a Fortune article of September of 1973 about John DeLorean. It makes reference to the promotion of Mr. DeLorean to corporate vice president for the car and truck group, which accounts for about one-quarter of GM's operations.

You were getting all of your input from lower level professionals. They provided information in such a way that they would get the answer they wanted.

I know. I used to be down below and do it. The feeling I started to get, being suddenly put on the 14th floor was that now I was being presented information that had limited alternatives.

This is totally inconsistent with any thoughtful and creative originality. You could never reflect on or modify a proposal.

You couldn't be a planner. You were too harassed and oppressed by committee meetings and paperwork. You just had tons of it.

You were cut off from the outside world. You saw only the men on the 14th floor. Corporate hierarchy was just reacting to the demands of the organization and responding to some degree to the government and the public.

It was like standing in the boilerroom and tending the machine. You were just watching it instead of running it.

Now, maybe I am using "diseconomies" in the wrong sense. I am speaking now perhaps of an organization which is just so big.

It is something like the Government—almost incapable of being managed.

Professor WHITE. Quite possibly and it's really hard to tell. I really would not be prepared to answer. If you asked me "Is General Motors beyond the size of ideal efficiency?" I really can't tell you.

The description that you've just given is a very disturbing one. Suppose one asks the question "What is the essential function of a businessman?" The proper answer is "He has to make decisions under uncertainty." How does he do it? He relies on good information being channeled to him and then on the basis of that good information he makes his decisions. But it doesn't sound like Mr. DeLorean was getting very good information.

I wish I could be more definite, but I can't. I've really got to say in response to your question that I don't know.

Mr. O'LEARY. Doesn't Mr. DeLorean sound like a man who would be happier running the Vega-Chevelle Division?

Professor WHITE. Possibly. I would have to ask him, but possibly.

Mr. O'LEARY. Thank you.

Professor WHITE. Thank you.

Mr. O'LEARY. Mr. Chairman, I guess we should put this article in the record. We have made reference to it.

Senator HART. Without objection we will print in the record the article from Fortune magazine of 1973 by Rush Loving Jr., entitled "The Automobile Industry Has Lost Its Masculinity."

[See exhibit 2 at the end of Professor White's testimony.]

Senator HART. Thank you very much, Professor White.

Professor WHITE. Thank you Senator.

[The following was received for the record. Testimony resumes on p. 1975.]

MATERIAL RELATING TO THE TESTIMONY OF PROFESSOR WHITE

Exhibit 1.—"A Proposal for Restructuring the Automobile Industry"

A PROPOSAL FOR RESTRUCTURING THE AUTOMOBILE INDUSTRY

(By Lawrence J. White, Princeton University)

The American automobile industry is a classic example of a close-knit oligopoly. Three large firms dominate the industry, accounting for 80–85% of the market. A smaller fourth firm accounts for 3%. Imports, in recent years, have accounted for 15%. Despite the automobile companies' claims as to fierce competition, the industry has displayed the behavioral characteristics of recognized interdependence in the areas of pricing, product strategies, and new

product development. Their performance in these areas has been a good deal worse than that which a more competitive industry would have yielded.

Extensive market power, like that found in the automobile industry, which is unsupported by economies of scale but which also has not been supported by predatory practices or other explicit anti-competitive behavior, has not been subject to legal attack under the current interpretations of the antitrust laws.

"The principal defect of present antitrust law is its inability to cope with market power created by jointly acting oligopolists. Only when joint action takes the form of parallelism sufficiently striking and detailed so that it will support an inference of overt collusion, and directed toward such objects—price fixing, or the exclusion of rivals from the market—as bring collusive action within the ban of an illegal conspiracy to monopolize or restrain trade, do oligopolists now fall within the reach of the law. In the absence of a detailed market-by-market survey of business conduct, it is impossible to say with any precision how much is or is not reachable, but we believe it is safe to say that a considerable number of industrial markets exist in which oligopolists, acting jointly, possess substantial degrees of market power, which they exercise without engaging in conduct violating the Sherman Act." [1]

But new antitrust laws may be passed or judicial interpretations may change, and it is worth considering the structural alternatives that would be possible for the automobile industry if the market power in the industry could be attached directly.

It is the major thesis of this paper that the automobile industry is capable of a significant deconcentration that would increase competition and improve performance, while not seriously impairing the economies of scale in production in the industry. Unfortunately, a competitive industry of, say, 100 firms of roughly equal size is not feasible in the automobile industry; the sacrifice in production economies would be far too great. But an industry composed of nine firms of more equal size then is currently the case is feasible. After a review of the salient features of the structure, behavior, and performance of the current industry,[2] this paper will present the outlines of a feasible proposal to restructure the industry.

STRUCTURE

Table 1 shows the recent sales structure of the U.S. automobile industry. The calendar years 1969–71 have been averaged to wash out strikes and other

TABLE 1.—U.S. NEW CAR SALES, 1969–71 AVERAGE

	Sales	Percentage
Chevrolet	2,016,826	21.6
Pontiac	677,685	7.3
Oldsmobile	598,931	6.4
Buick	610,634	6.5
Cadillac	225,118	2.4
Total, General Motor Corp	4,129,194	44.2
Ford	1,910,191	20.5
Mercury	334,724	3.6
Lincoln-Continental	61,467	6.6
Total, Ford Motor Co	2,306,382	24.7
Plymouth	677,861	7.3
Dodge	530,248	5.7
Chrysler-Imperial	190,099	2.0
Total, Chrylser Corp	1,398,208	15.0
Total, American Motors Corp	251,628	2.7
Total, imports	1,252,767	13.4
Total sales	9,338,179	100.0

Source: "Ward's 1972 Automotive Yearbook" (Detroit, 1972), p. 111.

[1] Carl Kaysen and Donald F. Turner, *Antitrust Policy* (Cambridge, Mass.: Harvard University Press, 1959), p. 110.

[2] This review largely draws on the information contained in Lawrence J. White, *The Automobile Industry Since 1945* (Cambridge, Mass.: Harvard University Press, 1971).

temporary irregularities. General Motors is clearly the dominant firm in the industry, with 44% of retail sales in recent years. This figure is down somewhat from the 50% level that General Motors enjoyed in the middle 1960's. Ford is the second largest firm and has held that position since 1952 Chrysler is the third largest company. And American Motors, the sole remaining firm from the so-called "Independents," is fourth. A major source of variability in the industry has been the share of import sales. From below 1% in 1955, import sales rose to 10% in 1959, fell to 5% by 1962, and rose again in the 1960's, reaching 15.5% in 1971.

All of the automobile companies are conglomerate and multinational firms, in the sense that they do more than just manufacture and sell automobiles in the United States. They all have Canadian manufacturing facilities, which are fully integrated with their American operations. They all produce trucks (American Motors produces jeeps), and they produce parts for cars and trucks. All have defense sales. General Motors produces buses, diesel engines, and locomotives. Ford and Chrysler produce tractors. General Motors and Ford produce large home appliances, through their Frigidaire and Philco divisions. Chrysler produces marine engines, boats, outboard engines, and air conditioning and heating equipment. Al lbut American Motors have substantial automobile manufacturing facilities in Europe, Australia, and Latin America.

The basic manufacturing technology of automobile production can be divided roughly into four categories: stamping, casting, machining, and final assembly. Stamping is the processwhereby pieces of sheet metal are pressed by heavy dies into various shapes; the fenders, doors, hoods, tops, and other body parts of automobiles are formed by stamping. Casting involves the pouring of molten metal into molds and allowing it to cool and harden; machinery then refines and makes more precise the shapes that emerge from the molds. Engines and transmissions are manufactured by casting and machining. Final assembly is the process most frequently associated with automobile manufacturing; it is the process by which the various components of the automobile are broaght together and welded, bolted, screwed, tacked, and fastened into a complete automobile.

The significant economies of scale in automobile production do not seem to extend beyond 400,000 units.[3] In other words, an automobile company which produced around 400,000 units a year would be large enough to achieve roughly the minimum production costs available from the existing manufacturing technology.

There are, however, considerable demand uncertainties facing automobile producers. Though brand loyalty is strong, consumer tastes can and do change with respect to styles, sizes, and shapes. If the producer could instantaneously change his product to meet these changes, these uncertainties would be of little importance. But there are substantial lead times required for the production and sale of automobiles. A particular model automobile is designed two to three years before it first appears in the dealers' showrooms. The design is usually frozen about two years before it appears, and orders are put out for the tooling required to produce the cars. Changes in the design and engineering of the model become increasingly costly after this point. If consumer tastes change in the interim, the company will sell fewer units of the model than it had expected, and this will persist until the company can design a new model. Recent practice in the industry has been to design "all-new" models every two to three years, with "face-lifting" changes in trim and sheet metal components in the intervening years. If a company, having guessed wrong once with respect to consumer tastes and having endured poor sales, were to guess wrong a second consecutive time, it would find itself in serious straits. Financial losses would start mounting up, new financing from banks or the capital markets would become difficult to arrange, management morale would decline, retail dealers would become discouraged and might try to acquire other franchises or emphasize their repair businesses. The company could well go into a financial and psychological tailspin from which it would not recover.

Accordingly, a company's chances of survival would be greatly enhanced by producing and selling more than brand or make, each with a separate identity in consumers' minds. The postwar experience in the automobile industry has indicated that two makes would probably be sufficient to weather the uncertainties in the market. Since the efficient scale for each make would be

[3] For the evidence on this point, see White, Chs. 3 and 4.

400,000 units, the efficient scale for a firm that would have a high probability of weathering the vagaries of consumer tastes would be 800,000 units. A firm this large would have assets of over $1 billion and sales of over $2 billion. It would be large enough to achieve efficient distribution of its products and to maintain an effective research and development capability.

With minimum efficient viable size at 800,000 units, the barriers to entry in the automobile industry are quite high. This scale is slightly less than 9% of the current market. A new entrant could not expect to slip into the industry unnoticed by the present producers; the latter would be most reluctant to yield their market shares. Further, the new entrant would face strongly established brand loyalties and reputations. He would have to build up a retail dealer organization. And finally, and perhaps most seriously, he would have to attract a large amount of capital to finance this venture, which would appear to be fairly risky. In the late 1960's the costs of manufacturing facilities, initial engineering and tooling expenses, and working capital required for a firm producing 800,000 units would have been around $1.0 billion. By now inflation has probably carried this figure to $1.2–1.3 billion. The *Fortune* list of the largest 500 manufacturing corporations in 1972 contains only 94 corporations with assets of $1.2 billion or above, and three of these are automobile companies.[4] It would be virtually impossible to establish a new company of this size, and established giants in other industries would be unlikely to be willing to invest in the sums required in a venture that would be as risky as a new automobile company.

The only successiful entry that has taken place in the automobile industry has been at the marketing stage by foreign-based manufacturers. Strengthened by their foreign reputations and having a solid manufacturing base abroad, these foreign manufacturers have been able to surmount the entry barriers and sell substantial numbers of cars in the United States. As mentioned above, import sales rose to 15.5% of the market in 1971. This entry has had the effect of keeping prices at the low end of themarket below what they otherwise would have been, and the competition from imports has forced the domestic manufacturers to offer a wider selection of automobile varieties than would otherwise have been the case. But imports do not really compete with the bulk of the domestic industry's output, and imports have not been a sufficient substitute for increased domestic competition.

BEHAVIOR

With only a few, dominant firms in the industry and with very high entry barriers, we would expect to see a good deal of parallel and implicitly coordinated behavior. This has indeed been the case in the postwar period. The industry has followed a pattern of price leadership, with General Motors as the price leader. Repeatedly, at the time of new model introductions, Ford and/or Chrysler have announced their list prices for the new models, General Motors has subsequently announced its prices, and the other two firms have adjusted their prices to General Motors' levels, upward as well as downward.

Further, in Canada the industry has been able to maintain a wholesale price level that is currently 9% above the U.S. level.[5] Before 1965, the higher Canadian price used to be justified on the basis of smaller production runs in Canada and higher costs. But since the 1965 United States-Canadian Automotive Agreement, the companies have rationalized production on both sides of the border, and Canadian costs are now the same as U.S. costs. Some combination of higher Canadian tariffs on European and Japanese cars and a greater perceived inelasticity of demand has made the higher price level worthwhile for the companies. The important point is that the companies have coordinated their pricing strategies sufficiently so as not to compete away this extra margin over U.S. automobile prices, which in turn are above that which a competitive industry would yield.

On pricing to fleet purchasers—business, rental agencies, and governments—the industry's behavior has been cyclical. Periodically, General Motors has announced an end to special rebates or discounts on fleet sales, and the other

[4] *Fortune*, Vol. LXXXV, No. 5 (May 1972), pp. 190–207.
[5] *Financial Post*, Jan. 27, 1973, p. 1.

companies have followed suit. Then, gradually, over a few years, rebates and discounts have begun again and have grown larger, as one or another of the companies have found the prospects of a large fleet sale enticing enough to warrant some price cutting through rebates. Finally, a new announcement to end rebates is made, and the cycle begins again. The Justice Department has recently filed a Sherman Act suit against the automobile companies, charging that the companies' latest round of efforts to end rebates and hold the line on fleet prices involved collusion and price fixing.

Product behavior in the automobile industry has largely been aimed at inducing consumers to turn over their cars and buy new ones sooner than would be justified on purely physical obsolescence grounds. There are two possible strategies that the industry might have pursued. One would have involved an effort aimed at achieving major technological innovations. The second would have involved frequent styling changes. The industry has chosen the second strategy. It has emphasized annual model changes, buttressed by minor technological advances. This strategy has been followed for two reasons. First, most automobile buyers are relatively unsophisticated in automotive technology and might be unreceptive to taking chances on new innovations. The minority who would be receptive are not a large enough market, and the companies have not aimed their major efforts in this direction. And, second, a strategy emphasizing fundamental technological change would be riskier than a styling-model-change strategy. When a company invests money in research and development, it never knows whether a successful innovation will emerge. At least with a styling strategy, the company knows that new designs will emerge, though their acceptibility to consumer tastes still generates uncertainties. The industry collectively has decided to avoid the risks of the fundamental technological change strategy, and there has been little competitive pressure for them to do otherwise.

As a consequence, the basic product technology in the industry has not changed very much since World War II. The major features of today's automobiles—V–8 engines, automatic transmissions, power steering, and power brakes—are all pre-war innovations. These have been considerably improved and refined over the past twenty-five years, but, still, the industry has been uninterested in pursuing alternatives. The suspension, ignition, carburetion, and exhaust systems are fundamentally the same. Only the pressure of Federal legislation on air pollution has effected any change in these last three systems.

The industry's response to the Wankel rotary engine is typical of the industry's lack of interest in fundamental change. The engine, developed in Germany, was first put into commercial production by a German manufacturer, NSU. Japan's Toyo Kogyo was the second manufacturer to adopt the engine, on its Mazda car. The U.S. industry remained uninterested, not even bothering to obtain the initial patent rights to the engine in this country. Curtiss-Wright was the first firm to obtain patent rights in the U.S. Only in the past two years have the U.S. automobile companies begun to show interest in the engine, since it seems to hold promise as a way of meeting the 1976 Federal automotive pollution standards.

A second product strategy has been the offering of a range of sizes, models, and options within each make. The Big Three manufacturers, however, have been reluctant to provide cars at the smaller, less expensive end of the spectrum, and they have done so only when import competition forced them to do so. They have seen small cars as a less profitable item for the industry that would only steal sales from the larger, more profitable cars that the industry has traditionally produced. An individual producer might believe that small cars would mostly steal cars from his rivals, and he would thus have an incentive to introduce it. But the Big Three producers have been able to recognize their interdependence and joint interests in this area. They jointly refrained from producing small cars in the middle 1950's and again in the middle 1960's until import competition stole too many sales. With the pressure from imports, reduced profits on small car sales were better for the Big Three than no profits on lost sales to imports.

The industry's behavior with respect to safety and air pollution considerations was characterized by extreme foot-dragging until the middle 1960's, when Federal legislation forced the industry to pay more attention to these areas. In the case of air pollution, this attitude was natural and to be expected. Air pollution is a classic case of externalities, in which the motorist inflicts costs on others which he himself does not incur. Motorists had no interest in paying extra for pollution control technology, and the industry had no interest

in providing it. This was a natural and proper area for government action.[6] In the case of safety, the industry appeared to want to avoid scaring consumers. If a manufacturer mentioned safety features, that might imply that cars were unsafe and might make consumers reluctant to buy any cars. The individual producers, again seeing their joint interests involved, refrained from stressing safety features. Since 1967, with the push of Federal legislation and a Federal agency setting standards, the industry has stressed safety features, and consumers do not seem to have been frightened off.

PERFORMANCE

The performance that has flowed from this structure and behavior has been largely predictable. The prices that the industry has been able to charge have yielded high profits, as measured by the rate of return on equity. These have been well above those which a competitive industry would have yielded. Table 2 provides the postwar average profits for the automobile industry, for all corporations, and for all manufacturing corporations. The automobile industry's profits have been considerably above the average for all corporations and significantly above the average for all manufacturing corporations, even though the latter figure contains monopoly-oligopoly returns within it. These conclusions hold true even if one excludes General Motors' profit figures from the auto industry averages.

TABLE 2.—AVERAGE PROFITS: RATE OF RETURN ON EQUITY

	General Motors	Ford	Chyrsler	American Motors	All auto industry [2]	All auto except G.M.[2]	All corporations	All manufacturing corporations
1946–68 [1]	20.54	12.36	12.08	[3] 2.86	16.63	11.47	7.89	9.08
1946–71 [1]	19.74	12.15	10.99	[4] 1.74	16.00	11.06	N.A.	N.A.

[1] Arithemetic averages.
[2] Weighted average.
[3] 1954–68.
[4] 1954–71.

Sources: Balance sheets, various companies; U.S. Internal Revenue Service, "Statistics of Income," corporation returns, various years.

There are three factors which modify these conclusions, principally in the direction of a larger gap between the auto industry's profits and those of other corporations. First, the auto industry figures are based on consolidated balance sheet figures, which include non-automotive as well as overseas activities. There are some hints in the company reports that the profitability of the companies' North American automotive operations has been greater than for their other operations, but until their balance sheets are fully dis-aggregated, these will have to remain hints. Second, cost levels in the industry may well be higher than they would be if the firms were under do-or-die competitive pressures. The other firms in the industry appear to have higher costs than General Motors, and these higher costs do not appear to be related to size or economies of scale but rather to poor management and bad decision-making.[7] The substantial market power of the industry has provided the cushion that permits these inefficiencies to persist. In a sense, then, some of the higher profits of the industry have disappeared in higher costs. Finally, the strong bargaining power of the United Automobile Workers may have transferred some of the potential profits of the companies to UAW members' wages. The automobile companies do pay wages that appear to be at least $.50 per hour above the wages paid by other companies in other areas for similar skills.[8]

[6] One can, though, question the wisdom of the specific government pollution control programs. Many economists, including this author, believe that a tax related to automotive emissions would be a more efficient and equitable way to deal with the automotive air pollution problem.

[7] This has traditionally been true in the area of labor use and labor relations. See Robert M. MacDonald, *Collective Bargaining in the Automobile Industry* (New Haven, Conn.: Yale University Press, 1963). However, recently, for the first time, General Motors seems to have had its share of labor difficulties.

[8] For the evidence on this point, see White, pp. 254–255.

When we examine the area of progressiveness, the automobile industry's performance record is mixed. In the area of manufacturing technology, the automobile industry has originated comparatively little of the new technology developed in the postwar period, but they have been reasonably prompt in assimilating that which has become available. Labor productivity in the automobile industry has increased at a rate around 4% a year, significantly above the 2.8%–3.3% for manufacturing as a whole. This evidence does not contradict the earlier assertion that many of the automobile companies were inefficient. It means that they have moved to new technologies reasonably rapidly, while never being able to utilize the maximum amount of efficiency from their resources at any given point in time.

As a consequence of this rapid technological change, the industry's record on price inflation has been reasonably good. Table 3 presents the relevant figures from 1949 through 1972. The Consumer Price Index component for new cars, which has contained adjustments for quality changes since 1959, has shown an overall increase of 34.1% between 1949 and 1972, compared to a 78.8% increase in the overall CPI. Unfortunately, we do not know how similar quality adjustments would change the overall CPI. Also, the Federal excise tax was removed in 1971; it had been 5% (on the wholesale price) in 1949, 10% in 1959, and 7% in 1967, so over the entire period, retail prices received a net 4% "assist" from the removal of the tax. Again, this evidence on price movements does not contradict the earlier assertions concerning prices and profits in the industry. At any point in time, automobile prices have been above those that a more competitive industry would have charged. However, as cost and demand conditions have changed, the profit-maximizing price for the industry has also changed. The higher than average productivity increases in the industry have meant lower than average cost increases and hence lower than average price increases over time.

TABLE 3.—AUTOMOBILE PRICES

	New car Component, consumer Price Index (1967=100)	Overall Consumer Price Index (1967=100)
1949	82.8	72.1
1959	105.9	87.3
1967	100.0	100.0
1972 [1]	111.0	125.3
Percent increase:		
1949–59	27.9	21.1
1959–67	−5.6	14.4
1967–72	11.0	25.3
1949–72	34.1	78.8

[1] Preliminary.

Sources: "Monthly Labor Review," "Survey of Current Business."

When we look at performance in the area of product technology, the record is considerably poorer. There have been step-by-step improvements in engines, transmissions, steering, suspensions, and other systems. But the industry has not pursued fundamental alternatives to its basic technologies or has been very slow in adopting them. The Wankel experience has already been described. Diesel engines, pneumatic suspension systems, and fuel injection have been commercially successful elsewhere, but have not been pursued here. It presently appears that the other nonstandard internal combustion engine that will probably meet the 1975–76 pollution standards, besides the Wankel, will be a stratified charge engine on the Honda automobile. By contrast, the U.S. industry has focused almost exclusively on adjustments and attachments to the existing internal combustion engine. In another area, the U.S. manufacturers were slow to adopt disc brakes to replace drum brakes, though they had long been standard on a number of European cars. Electronic ignition will appear on U.S. cars in 1975, primarily in response to the pollution control requirements. In all, the industry's performance has been poor and sluggish in this area. The industry has preferred not to take the risks involved in more fundamental technological change, and there has been no competitive pressure forcing them to do otherwise.

Finally, in the area of product variety, the industry's performance has been poor in providing small, less expensive cars to the market. In the absence of the press of competition from imports, it is likely that the Big Three might never have provided small cars to the market. Even with the presence of imports, the Big Three have been slow and sluggish in bringing these cars to the market.

A STRUCTURAL REMEDY

Improvement in the performance of this industry must come through structural changes. Behavioral remedies are not sufficient, because the heart of the problem is structural. The automobile market structure, with three large firms, encourages parallel, coordinated behavior and, with very high barriers to entry, the firms need not fear that their behavior will induce entry, except by imports. "It is futile to tell firms in a tightly oligopolistic industry to stop taking their interdependence into account."[9] A structural remedy is required.

The courts have been reluctant to deal with structural remedies in cases of substantial market. The two major cases in which structural remedies were enforced, *Standard Oil*[10] and *American Tobacco*,[11] were decided sixty-two ago.[12] The courts have preferred to deal with behavioral remedies. The result has been, as noted at the beginning of this paper, that there are many industries in which substantial market power exists but to which the present antitrust laws do not seem to apply.

The structural remedy required for the automobile industry involves the dissolution of the existing three large firms into a larger number of smaller, more equally sized firms. The spirit in which this is proposed has been well expressed by Kaysen and Turner:

"We base our presumption in favor of dissolution on the proposition that changing a tight oligopoly market into a looser one, or a market dominated by a single seller into one in which several large firms operate by reorganizing the larger firms in the market, will in fact change the market sufficiently so that the degree of market power exercised by the (still) relatively few large firms will be greatly reduced. Put crudely, the proposition is that the market with ten moderately large and thirty small firms will be much more competitive than the same one would be with four very large firms and thirty small ones. We also assume that the limits of reorganization we have suggested above will not be such as to prevent any effective program of increasing numbers from being put into effect.

Both experience—such as it is—and logic support the first proposition: the looser the oligopoly structure, the less market power any individual firm or the group as a whole exercises. Although evidence is scant, loose oligopoly industries such as oil refining and rayon appear to show more competitive behavior by the large firms than do tight ones such as cigarettes and flat glass. In general, joint action by oligopolists without the operation of an explicit cartel depends on the symmetry of their interests. Small numbers make it likely that each firm will serve a similar segment of the whole market. The larger the number, the greater is the likely diversity among firms: in costs, in the part of the market which they serve, in the range of products offered, in the kind and volume of expenditures devoted to innovation, in the expectations of executives concerning future changes in cost and demand. These diversities in turn increase the probability that some of the firms in the oligopoly group will find independent action rather than joint action advantageous, and so make less likely a pattern of action which approaches joint profit maximization. To be sure, factors other than the size and character of the rival firms are important in determining the way an oligopolistic market functions—the nature of the product, the technological maturity of the industry, the rate of growth of demand, the cyclical stability of demand, are all important. But within the framework defined by a given set of values of these variables, the larger the number of rival sellers and the smaller the relative size of the largest few, the more likely will it be that no firm and no group exercises much market power.[13]

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[9] F.M. Scherer. *Industrial Market Structure and Economic Performance* (Chicago: Rand McNally, 1970) p. 466.

[10] *U.S.* v. *Standard Oil Co. of New Jersey et al.*, 221 U.S. 1 (1911).

[11] *U.S.* v. *American Tobacco Co.*, 221 U.S. 106 (1911).

[12] A more recent case has been *U.S.* v. *Grinnell Corporation et al.*, 384 U.S. 563 (1966).

[13] Kaysen and Turner, pp. 114–115.

A dissolution plan for the automobile industry does not face one of the problems that some other dissolution proposals have faced. In some cases, the company for which the dissolution has been proposed has had a single production plant which could not be feasibly divided.[14] By contrast, the Big Three automobile manufacturers have tens of millions of square feet of manufacturing floor space divided among many factories, primarily concentrated in Michigan, Illinois, Indiana, Ohio, New York, and Ontario, Canada. These factories and facilities can be divided among successor firms without the need to "saw buildings in half." Even in the case in which a company has centralized in one factory all the activities of one particular process there are almost always parallel production lines doing the same things within the plant, and these separate production lines can be moved to separate facilities without significant loss of operating efficiency.

On the other hand, there is one problem in a dissolution proposal for the automobile industry that has not really been discussed before in other dissolution suggestions. The large automobile companies, as mentioned earlier, are really conglomerate firms, encompassing autos, trucks, parts, and non-automotive activities in North America, as well as activities overseas. If the purpose of the dissolution proposal is to restructure the automobile manufacturing activities of these companies, what does one do with the non-automotive fractions of the companies? Indeed, where does one draw the line between automotive and non-automotive? This issue cannot be avoided and will be treated in the dissolution proposal.

Since the automobile companies are fully integrated in manufacturing and in brand names across both sides of the U.S.-Canada border, it makes sense to talk about the industry in a broad North American context, and the dissolution proposal will deal with the entire North American industry. Table 4 provides the figures on total North American production for the average of the 1969–71 calendar years.

TABLE 4.—*North American automobile production, average of 1969–71 calendar years*

Chevrolet	2, 158, 744
Pontiac	738, 576
Oldsmobile	640, 112
Buick	654, 987
Cadillac	232, 072
Total, General Motors Corp	4, 424, 491
Ford	2, 067, 407
Mercury	383, 933
Lincoln	65, 342
Total, Ford Motor Co	2, 516, 682
Plymouth	746, 786
Dodge	583, 310
Chrysler	205, 608
Total, Chrysler Corp	1, 535, 704
Total, American Motors	293, 837
Total, North American production	8, 770, 714

Source: "Ward's 1972 Automotive Yearbook," pp. 93, 139.

There are five critical features to the automobile industry that need to be considered in any dissolution proposal: the physical plant and equipment of the companies; their managements; their labor forces; their retail distribu-

[14] This was true, for example, in the United Shoe Machinery and General Motors bus cases. See *U.S.* v. *United Shoe Machinery Corporation,* 110 F. Supp. 295 (1953) and *U.S.* v. *General Motors Corporation,* CCH 1965 Trade Cases, Para. 71, 624. For further comments on the dissolution problems in the United Shoe Machinery case, see Carl Kaysen, *United States* v. *United Shoe Machinery* (Cambridge, Mrss.: Harvard University Press, 1956), pp. 272–275, 289–294.

tion networks (i.e., their dealers); and their brand names. A dissolution proposal must meet a number of criteria involving these five components: (1) The proposal should maximize the number of competitors in the restructured industry, subject to the constraint that the resulting firms should be viable and have a reasonable prospect for survival. Normally, one ought not to worry about the survival of individual competitors but rather the survival of competition. But, with the very high barriers to entry (which, in a sense, is the primary reason why a restructuring is needed), it does make some sense to be concerned with the viability of the resulting firms; if most of them fail because they were improperly established, the industry will return to its tightly-knit oligopolistic state and little will have been gained. Beyond some point, then, there is clearly a conflict between increasing the number of competitors in a restructured industry and achieving economies of scale and reasonable viability. The five components of the automobile industry listed above should be distributed so as to allow each firm to achieve economies of scale in production and distribution. (2) Production facilities should be reasonably matched with brand names and distribution networks. It would make little sense, for example, to create in a restructured industry a manufacturer who kept the brand name Chevrolet and who kept the right to use all the present model names and designs but had physical production facilities for producing only 800,000 units. Consumer loyalities are such that the brand name Chevrolet, at present prices and product varieties, brings with it the ability to sell over two million automobiles. (3) The transition costs of the restructuring should be taken into account and minimized where possible. This would naturally apply to manufacturing facilities, management, labor force and dealers.

THE PROPOSAL

The detailed dissolution proposal is as follows: General Motors would be broken into four automotive firms and one percent conglomerate form. The four automotive firms would consist of a Pontiac-Cadillac combination, an Oldsmobile-Buick combination, and two firms created from Chevrolet: One would have the brand name (and appropriate manufacturing facilities) of the full size Chevrolet, and the other would have the model names (and appropriate manufacturing facilities) of the other cars that are currently manufactured by Chevrolet (Corvette, Chevelle, Nova, Camaro, and Vega). This last corporation would have to adopt a new overall brand name; for convenience, I shall call it "Vega-Chevelle." The "Vega-Chevelle" and "Full-size Chevrolet" companies would initially continue to distribute their cars through the existing Chevrolet dealer network. Ford Motor Company would be broken into two automotive firms and one parent conglomerate. Of the two automotive firms, one would be composed of the present Lincoln-Mercury combination, plus the brand name (and appropriate manufacturing facilities) of the full-size Ford, and the other would have the model names (and appropriate manufacturing fcilities) of the other models that are currently produced by Ford (Torino, Mustang, Maverick, Pinto, and Thunderbird). These last cars would require a new overall brand name, which I shall call "Fairlane." Both full-size Fords and Fairlanes would initially continue to be distributed through the present Ford dealer network. The Chrysler Corporation would be broken into two automotive firms and one parent conglomerate. The two automotive firms would consist of a Dodge-Chrysler combination and Plymouth.

Table 5 shows a comparison between the present production structure of the industry and the approximate way it would look under the dissolution proposal. Nine firms would supercede the present four. The share of the largest firm in the industry would fall from over 50% of production to under 16%. The new firms would be considerably more balanced in size, and there would be less room for the kind of absolute dominance in the market that is now displayed by General Motors. Further, by separating the foreign operations and truck manufacturing from the automotive firms, the dissolution proposal would increase the level of existing and potential competition. The presently "captive" imports—Vauxhall, Opel, Rootes, Simca, Taunus, and British Ford—would become independent of the domestic automobile manufacturers and would represent new competition for them. The separated truck manufacturers would similarly represent potential competition at the large station wagon and utility vehicle end of the market.

TABLE 5.—PRESENT AND PROPOSED PRODUCTION STRUCTURE OF THE NORTH AMERICAN AUTOMOBILE INDUSTRY

[Using 1969–71 average production figures]

	Present			Proposed	
	Production	Percentage		Production	Percentage
General Motors	4,424,491	50.4	Ford-Lincoln-Mercury	1,369,518	15.6
Ford Motor Co	2,516,682	28.7	Oldsmobile-Buick	1,295,098	14.8
Chrysler Corp	1,535,704	17.5	"Fairlane"	1,147,164	13.1
American Motors	293,837	3.4	"Vega-Chevelle"	[1] 1,146,353	13.1
Total	8,770,714	100.0	"Full-size Chevrolet"	[1] 1,012,391	11.5
			Pontiac-Cadillac	970,648	11.1
			Dodge-Chrysler	788,918	9.0
			Plymouth	746,786	8.5
			American Motors	293,837	3.4
			Total	8,770,714	100.0

[1] These figures are approximate, because the Canadian Production figures do not distinguish between full-size Chevrolets and Chevelles.

Source: Table 4. "Ward's 1972 Automotive Yearbook," pp. 93–139.

It is unlikely that text-book style "perfect competition" would emerge from the restructured industry. But firms would be less likely to take into account their interdependence and less likely to consider the interests of the overall industry when contemplating an action. Pricing behavior would become more competitive, with price leadership more difficult to maintain. Manufacturers would be more likely to provide products that met the demands of consumers, as long as those products would appear profitable to the individual firm and even if they were not profitable for the overall industry. And it is likely that one of more firms in the restructured industry would decide to stake out a claim to be the technological leader in the industry, and the overall pace of automotive technological change would quicken. It would be unlikely that the restructured industry would display the very sluggish behavior with respect to the Wankel engine that the present industry has displayed.

It is important to realize that the restructured automobile companies would still be very large corporations. They should not be confused with "Mom and Pop" grocery stores. With the inclusion of at least some of the component manufacturing facilities, all of the new companies would have at least $2.7 billion in sales and $1.5 billion in assets. This would rank all of them within the top largest 35 firms by sales and the top largest 75 firms by assets, among the Fortune 500. They would all be large enough to exploit the available economies of scale in production and distribution. They would be large enough to be able to support extensive research and development efforts. They would all be large enough to be technologically progressive, both in manufacturing processes and in automotive technology. (It is worth noting that NSU and Toyo Kogyo, the firms that have brought the Wankel into commercial use, and Honda, the firm that has developed the stratified charge engine to meet the 1975–76 pollution control standards, are far smaller in absolute size than the Big Three are today or than even the smallest of the new firms would be.) All of the new firms would be viable and would have a reasonable chance of prospect of surviving in the restructured industry. Though the "Fairlane," "Full-size Chevrolet," "Vega-Chevelle," and "Plymouth" companies would be single brand-name companies, the existing brand loyalities to these names and makes are strong enough to provide these firms with security. One would expect, however, to see these firms try to differentiate their models over time, broaden their coverage of automobile market, and perhaps eventually try to establish separate franchises for some of their models.

By maintaining the dealer networks intact but splitting the companies along the above lines, this proposal would provide each make with the same number of retail outlets that it has now. It would thus provide each of the new companies with the current strong distribution systems. Further, many dealers would find themselves selling the cars of two companies, compared to the pattern of single-company franchises that prevails today.[15] This would be true

[15] As of January 1972, out of the 25,825 dealers who held franchises for the four domestic manufacturers, only 730 held multiple franchises that included makes from two or more companies. See *Ward's 1972 Automotive Yearbook,* p. 110.

of virtually all Chevrolet, Ford and Plymouth dealers and also of many other current General Motors dealers. This would accustom both the dealers and the companies to operating in a context in which dealers really were free to associate with more than one manufacturer, with beneficial effects on the ability of manufacturers, both domestic and foreign, to enter the automobile market at the retailing level.

As mentioned earlier, the conglomerate nature of the existing companies creates some problems in creating the new automobile manufacturing companies. Where should we draw the line at automobile manufacturing, and what should we do with the remaining parts of the companies? With respect to the second part of this question, it seems easiest and most straightforward to keep the non-automotive and overseas parts of the companies together in conglomerates. The alternatives would be to divide the non-automotive and overseas parts of the companies equally among the automotive components or to break them into individual companies. There is no logic on consistency to guide the former, and the latter would mean an attack on conglomerates under the guise of a dissolution proposal aimed at automobile manufacturing. The issues surrounding conglomerates are serious ones, and there are valid arguments both for and against. Action against conglomerates, if it is to be taken, should stand on its own merits and should not ride the coat-tails of a proposal aimed at something else.

The problem of where to draw the line, both horizontally and vertically, in separating the newly established automobile manufacturers from the remaining conglomerates is an extremely difficult one, and only approximate answers can be given here. There are about 15,000 individual components in an automobile, and not even the automobile companies themselves—or sometimes even the divisions within a company—are consistent in what they decide to manufacture for themselves versus what they decide to purchase. It would take a team of economists and engineers, with access to internal company information, to determine the exact boundaries that a restructured automobile industry ought to have. But some approximate lines can be drawn.

Generally, one has to distinguish between those operations of the present companies which are crucial to the efficient manufacture of automobiles in North America and those operations which are presently located in the companies for historical, accidental, or other reasons incidental to the efficient manufacture of North American automobiles. Along these lines, the overseas manufacturing operations of the Big Three should be located in their respective parent conglomerates. Since imports from these overseas companies would now be independent of the wishes of the domestic producers, these overseas companies would represent an increase in the actual and potential competition faced by the domestic producers at the lower end of the market. General Motor's diesel engine, diesel locomotive, and Frigidaire appliance operations can be placed in its parent conglomerate. The same would be true of Ford's steel, glass, tractor and farm implement, and Philco appliance and electronics operations. And Chrysler's glass, air conditioner, boat, and marine engine operations should similarly be placed in its parent conglomerate. The truck operations of the Big Three (including General Motor's bus operations) should also be placed in their parent conglomerates. This would have the added benefit of increasing the actual and potential competition at the large station wagon and utility vehicle end of the market.

At the other end of the spectrum, the operations of final assembly, casting and machining of engines, transmissions, and other power train components, and the stamping of body parts do seem to be essential parts of automobile manufacturing. These operations ought definitely to be included in the restructured automobile manufacturing companies. The Appendix provides a suggested distribution of the present facilities in these areas.

The gray area is that of parts and miscellaneous components. As mentioned above, the companies' pattern of production in these areas has not been uniform, so they do not seem crucial to the efficient production of automobiles. Ease of splitting these operations among the restructured companies versus keeping them within the parent conglomerates ought to be one guiding factor. Another is the argument made by Professor Robert W. Crandall before the Senate Subcommittee on Antitrust and Monopoly in 1969.[16] In brief, Crandall

[16] Robert W. Crandall, testimony before U.S. Senate, Committee on the Judiciary, Subcommittee on Antitrust and Monopoly, *Automotive Repair Industry, Hearings,* Part 2, 91st Congress, 1st Session, 1969, pp. 801–824; see also Crandall, "Vertical Integration and the Market for Repair Parts in the United States Automobile Industry," *Journal of Industrial Economics,* Vol. 16 (July 1968).

argues that, by manufacturing components that are used for replacement purposes as well as for original equipment, by changing designs and specifications frequently so that companies trying to produce for the replacement market only will not be able to fully exhaust the economies of scale in their tooling, and by placing pressure on their dealers to stock and use these replacement parts, the present companies have been able to keep the prices of their repair parts high. To the extent that the component manufacturing operations are kept separate in the part conglomerates, this kind of market power position is less likely to arise. Accordingly, there probably ought to be some presumption in favor of keeping these components within the parent conglomerates, especially in the case of components subject to frequent replacement. Electrical components, for example, would appear to be a prime candidate. Finally, we need to resolve the position of the retail and wholesale financing operations: GMAC, Ford Motor Credit Co., and Chrysler Credit Corporation. In the past, both the courts and Congress have declined to take actions that would have split these financing operations from the parent companies.[17] As long as dealers are effectively free to deal with outside finance companies, there seems no reason to propose here what the courts and Congress have explicitly refused to do in the past. The assets of these financing operations could be easily split among the successor firms in the restructured industry.

The mechanics of the dissolution would be fairly straight forward. Stockholders of the parent companies would be given stock in the new automotive and conglomerate companies, in proportion to the book value of assets allocated to each. The other liabilities of the parent companies would be similarly split among the new companies. Since the stockholders would hold proportionate shares of each of the resulting companies, they would not be directly affected if one piece of the original company were allocated to one or the other of the new companies. Dominant stockholders in any of the original companies would only be allowed to participate in the management or board of directors of one of the resulting companies and would have to dispose of their stock in the other resulting companies. The managements of the new companies would be required to dispose of any holdings that they held in the other new companies. Management could be allocated among the new companies generally along present operating lines. The dissolution plan is not greatly disruptive of production facilities, so there would be little dislocation of production workers.

SUMMARY

The automobile industry is capable of a restructuring that would significantly improve the behavior and performance of this industry. The resulting firms would be viable, efficient, and likely to be technologically more progressive than today's firms. The pricing and product behavior and performance of the restructured would be superior to that found in the present industry. I suspect that detailed studies of many other oligopolistic industries would yield the same conclusions. Congress ought to give serious attention to proposals that would amend the current antitrust laws so as to bring the antitrust laws closer to a market power standard and thus increase the competitiveness, efficiency, and progressiveness of American industry.

APPENDIX

As mentioned in the text, a complete allocation of manufacturing facilities under the dissolution proposal would require a team of economists and engineers and internal company information. But an approximate distribution of assembly, casting, machining, and stamping facilities can be made here. This ought to be considered as an illustrative allocation, to show that it can be done in a reasonable fashion, rather than as the definitive allocation. I would be the first to admit that better information would permit a better allocation.

The only publicly available production figures, by individual manufacturing facility, are for assembly plants. Table 6 provides these figures for the 1971 model year. (It is worth noting that the General Motors production figures

[17] *See U.S.* v. *General Motors Corporation,* CCH 1952–1953 Trade Cases, Para. 67,323; U.S. Senate, Committee on the Judiciary, Subcommittee on Antitrust and Monopoly, *Auto Financing Legislation,* Hearings, 86th Congress, 1st Session, 1959; U.S. House, Committee on the Judiciary, Antitrust Subcommittee, *Auto Financing Legislation,* Hearings, 87th Congress, 1st Session, 1961.

are somewhat depressed because of the UAW strike that occurred at the beginning of the model year.) Since these plants would have to be divided among eleven companies (including the three truck manufacturers in the percent conglomerates) under the dissolution plan, it is clear that the new companies could not all have as complete a geographical dispersion of assembly plants as do the present companies. This would not pose a serious problem, however. With the advent of the bilevel and trilevel rack railroad car, the freight cost of shipping an already assembled car, relative to shipping stacked parts, has fallen sharply, and the cost advantages of regional assembly plants have been substantially reduced, if not completely eliminated. The companies' behavior on building new assembly plants substantiates this point. Since 1960, the two new assembly plants that have been built have been in Illinois and Ohio, rather than on the West or East coasts. The West coast assembly plants produce only half of the cars sold on the West coast, but the companies have shown no inclination to expand them or build additional ones.

TABLE 6.—*Production of automobiles and trucks, by assembly plant, 1971 model year*

General Motors:	
South Gate, Calif.: Cars	127, 633
Fremont, Calif.:	
Cars	107, 879
Trucks	96, 467
Van Nuys, Calif.:	
Cars	107, 975
Trucks	19, 908
Wilmington, Del.: Cars	165, 907
Doraville, Ga.: Cars	152, 811
Lakewood, Ga.:	
Cars	81, 381
Trucks	79, 647
Fairfax, Kans.: Cars	169, 211
Baltimore, Md.:	
Cars	139, 975
Trucks	96, 853
Framingham, Mass.: Cars	88, 157
Detroit, Mich.: Cars	162, 651
Flint, Mich.:	
Cars	240, 680
Trucks	176, 397
Lansing, Mich.: Cars	305, 325
Pontiac, Mich.:	
Cars	180, 169
Trucks	108, 497
Willow Run, Mich.: Cars	245, 841
Leeds, Mo.:	
Cars	127, 974
Trucks	25, 357
St. Louis, Mo.:	
Cars	183, 172
Trucks	135, 240
Linden, N.J.: Cars	129, 864
Tarrytown, N.Y.:	
Cars	138, 318
Trucks	13, 693
Norwood, Ohio: Cars	131, 999
Lordstown, Ohio:	
Cars	269, 905
Trucks	105, 314
Arlington, Tex.: Cars	163, 388
Janesville, Wis.:	
Cars	136, 066
Trucks	71, 790
Oshawa, Ontario and St. Theses, Que.:	
Cars	406, 186
Trucks	101, 020

Ford Motor Co.	
Los Angeles, Calif.: Cars	87, 076
San Jose, Calif.:	
Cars	97, 468
Trucks	86, 845
Atlanta, Ga.:	
Cars	174, 568
Trucks	26, 136
Chicago, Ill.: Cars	178, 812
Louisville, Ky.:	
Cars	88, 173
Trucks	82, 913
Dearborn, Mich.: Cars	192, 430
Wayne, Mich.:	
Cars	151, 345
Trucks	138, 651
Wixom, Mich.: Cars	92, 375
St. Paul, Minn.:	
Cars	96, 416
Trucks	9, 731
Kansas City, Mo.:	
Cars	228, 371
Trucks	105, 142
St. Louis Mo.: Cars	128, 099
Mahwah, N.J.:	
Cars	174, 529
Trucks	48, 679
Metuchen, N.J.: Cars	178, 038
Lorain, Ohio:	
Cars	230, 045
Trucks	90, 359
Norfolk, Va.:	
Cars	44, 092
Trucks	39, 670
Oakville, Ontario:	
Cars	173, 389
Trucks	144, 397
St. Thomas, Ontario: Cars	219, 138
Chrysler Corp.:	
Los Angeles, Calif.: Cars	60, 051
Newark, Del.: Cars	158, 314
Belvidere, Ill.: Cars	234, 649
Detroit, Mich.: Cars	100, 215
Detroit, Mich.: Cars	176, 811
Hamtramck, Mich.: Cars	355, 374
Warren, Mich.: Trucks	120, 614
St. Louis, Mo.: Cars	140, 893
Fenton, Mo.: Trucks	72, 273
Windsor, Ontario:	
Cars	232, 749
Trucks	17, 010

[1] Trucks and Canadian figures are for calendar years.
Source: "Ward's 1972 Automotive Yearbook," pp. 77, 96, 139.

In the absence of detailed figures on other manufacturing plants, only a suggestive distribution of facilities can be made. If actually put into effect, it would require some moving of individual production lines among the plants so as to obtain the right balance of components and volumes. Better information would undoubtedly generate better allocations that would reduce the amount of shifting requiired. The suggested distribution is as follows (some component manufacturing facilities, particularly electrical components, have been excluded):

FULL-SIZE CHEVROLET

Flint, Mich., manufacturing facilities (presently Chevrolet), including assembly (presently trucks), stamping, engines.
Doraville, Ga., assembly.

Tarrytown, N.Y., assembly.
Jamesville, Wisc., assembly.
Norwood, Ohio, assembly.
Leeds, Mo., assembly.
Chevrolet, Saginaw, Mich., transmissions.
Chevrolet, Gray Iron Foundry, Saginaw, Mich., castings.
Fisher, Flint, Mich., body hardware, moldings, trim.
Chevrolet, Warren, Mich., gears, axles, housings.
Fisher Stamping, Kalamazoo, Mich., stampings.
Fisher Stamping, Cleveland, Ohio, stampings.
Chevrolet Parts, Bay City, Mich., parts.

VEGA-CHEVROLET

Lordstown, Ohio, assembly.
Willow Run, Mich., assembly.
Van Nuys, Calif., assembly.
Baltimore, Md., assembly.
Tonnawanda, N.Y., engines, castings, forgings.
Chevrolet Axle, Buffalo, N.Y., gears, axles, differentials.
Hydramatic, Willow Run, Mich., transmissions.
Chevrolet Aluminum Foundry, Massena, N.Y., aluminum die castings.
Fisher Stamping, Pittsburgh, Pa., stampings.
Fisher Stamping, Mansfield, Ohio, stampings.
Fisher, Columbus, Ohio body, hardware, mouldings, trim.
Chevrolet Gray Iron Foundry Waukegan, Ill., castings.
Fisher Cut-and-Seq Tecumseh, Mich., interior trim.

OLDSMOBILE-BUICK

Central Oldsmobile, Lansing, Mich., assembly, engines, forgings.
Buick Home Plant, Flint, Mich., assembly, engines, stampings.
Wilmington, Del., assembly.
Fremont Calif., assembly.
Arlington, Texas, assembly.
Framingham, Mass., assembly.
Chevrolet Transmission, Toledo, Ohio, transmissions.
Central Foundry, Defiance, Ohio, castings.
Hydramatic, Ypsilanti, Mich., transmissions.
Fisher, Columbus, Ohio, body hardware, moldings, trim.
Fisher Stamping, Grand Blanc, Mich., stamping.
Fisher Stamping, Willow Spring, Ill., stamping.
Chevrolet Gear and Axle, Detroit, Mich., gears and axles.
Fisher Cut-and-Sew, Livonia, Mich., interior trim.

PONTIAC, CADILLAC

Pontiac Home Plant, Pontiac, Mich., assembly, engines, castings.
Cadillac Home Plant, Detroit, Mich., assembly, engines, stampings.
Lakewood, Ga., assembly.
St. Therese Ontario, assembly.
Linden, N.J., assembly.
Fairfax, Kans., assembly.
Chevrolet transmission, Muncie, Indiana, transmissions.
Central Foundry, Bedford, Ind., castings.
Saginaw Steering Gear, Saginaw, Mich., shafts, universals, parts, steering linkages.
Fisher Stamping, Grand Rapids, Mich., stamping.
Fisher Stamping, Marion, Ind., stamping.
Fisher, Trenton, N.J., body hardware, moldings, trim.
Fisher Cut-and-Sew, Grand Rapids, Mich., interior trim.

GENERAL MOTORS PARENT CONGLOMERATE (TRUCK MANUFACTURING)

GMC Truck and Coach, Pontiac, Mich., assembly, engines.
Oshawa, Ontario, assembly.
St. Louis, Mo., assembly.

Southgate, Calif., assembly.
Chevrolet Commercial Body, Indianapolis, Ind., body assembly.
MacKinnon, St. Catherines, Ontario, engines, axles, castings.
MacKinnon, Windsor, Ontario, transmissions, engines, trim.
Fisher Stamping, Hamilton, Ohio, stamping.
Chevrolet Transmission, Parma, Ohio, transmissions.
Fisher Fort Street, Detroit, Mich., body hardware, molding trim.
Central Foundry, Saginaw, Mich., castings.
Central Foundry, Danville, Ill., castings.
Chevrolet Forge, Detroit, Mich., forgings.
Fisher Station Wagon Assembly, Euclid, Ohio, assembly, interior trim.
Chevrolet Spring and Bumper, Livonia, Mich., springs and bumpers.
Fisher, Elyria, Ohio, stamping, die castings.
Fisher, Syracuse, N.Y., die castings.

FORD (FULL-SIZE)-LINCOLN-MERCURY

Oakville, Ontario, assembly.
Chicago, Ill., assembly.
St. Paul, Minn., assembly.
St. Louis, Mo., assembly.
Loraine, Ohio, assembly.
Mahwah, N.J., assembly.
Norfolk, Va., assembly.
Livonia, Mich., transmissions.
Cleveland Engine Plants 1 & 2, Cleveland, Ohio, engines.
Cleveland Foundry, Cleveland, Ohio, castings.
Walton Hills Stamping, Cleveland, Ohio, stamping.
Chicago, Ill., stamping.
Sterling, Mich., axles, shafts, gears, floor pans.
Novi, Mich., interior trim.
Rawsonville, Mich., parts.
Canton Forge, Canton, Ohio, forgings.
Monroe, Mich., parts.

FAIRLANE

St. Thomas, Ontario, assembly.
San Jose, Calif., assembly.
Atlanta, Ga., assembly.
Kansas City, Mo., assembly.
Metuchen, N.J., assembly.
Fairfax, Ohio, transmissions.
Windsor, Ontario, transmissions, engines, castings.
Lima, Ohio, engines.
Sheffield Foundry, Sheffield, Ala., aluminum die castings.
Woodhaven, Ohio, stamping.
Buffalo, N.Y., stamping.
Utica, Mich., interior trim.
Indianapolis, Ind., parts.

FORD PARENT CONGLOMERATE (TRUCK MANUFACTURING)

River Rouge Complex, Dearborn, Mich., assembly, stamping, castings, engines, forgings, steel, class, parts.
Wayne, Mich., assembly.
Louisville, Ky., assembly.
Los Angeles, Calif., assembly.
Sharonville, Ohio, transmissions.
Sandusky, Ohio, moldings, hardware, die castings.
Saline, Mich., interior trim.

DODGE-CHRYSLER

Jefferson Assembly, Detroit, Mich., assembly.
Lynch Road Assembly, Detroit, Mich., assembly.
Windsor Automobile Assembly, Windsor, Ontario, assembly.
St. Louis, Mo., assembly.
Los Angeles, Calif., assembly.

Windsor Engine Plant, Windsor, Ontario, engines.
Indianapolis Foundry, Indianapolis, Ind., castings.
Kokomo Transmission, Kokomo, Ind., transmissions.
Kokomo Casting, Kokomo, Ind., aluminum die casting.
New Castle Forge, New Castle, Ind., forgings.
New Castle Machining, New Castle, Ind., gears, axles.
Sterling Stamping, Sterling, Mich., stamping.
Warren Stamping, Warren, Mich., stamping.
Eight Mile Stamping, Detroit, Mich., stamping.
Ajax Trim, Ajax, Ontario, interior trim.
Perrysburg, Ohio, power steering, pumps, pistons, wheels, brakes.
Universal Products, Detroit, Mich., universals, drive shafts.
Toledo Machining, Toledo, Ohio parts.

PLYMOUTH

Hamtramck Assembly, Detroit, Mich., assembly, stamping.
Belvidere, Ill., assembly.
Newark, Del., assembly.
Mound Road Engine, Detroit, Mich., engines.
Etobicoke Casting, Toronto, Ontario, castings, aluminum die casting.
Huber Foundry, Detroit, Mich., casting.
Twinsburg Stamping, Twinsburg, Mich., stamping.
Outer Drive Stamping, Detroit, Mich., stamping.
Lyons Trim, Lyons, Mich., interior trim.
New Process Gear, Syracuse, N.Y., transmissions, differentials, axles, gears, universals.
Highland Park Machining, Highland Park, Mich., parts.

CHRYSLER PARENT CONGLOMERATE (TRUCK MANUFACTURING)

Warren, Mich., assembly.
Windsor Truck assembly, Windsor, Ontario, assembly.
Fenton, Mo., assembly.
Trenton Engine, Trenton, Mich., engines, industrial engines.
Indianapolis Electrical, Indianapolis, Ind., transmissions, power steering, electrical items.
Detroit Forge, Detroit, Mich., forgings.
Eldon Axle, Detroit, Mich., axles, differentials.
Vernor Trim, Detroit, Mich., interior trim.
Mack Stamping, Detroit, Mich., stamping.

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Exhibit 2.—Excerpt Re John DeLorean, GM Executive

[From Fortune, Sept. 1973]

"THE AUTOMOBILE INDUSTRY HAS LOST ITS MASCULINITY"—REFLECTIONS ON THE ABBREVIATED CAREER OF JOHN DELOREAN, A NONCONFORMING EXECUTIVE AT GENERAL MOTORS

(By Rush Loving Jr.)

Three years ago John Zachary DeLorean, then general manager of General Motors' Chevrolet division, ordered members of his research staff to find him the world's best-handling passenger car. They came back with two Mercedes, and DeLorean ordered his engineers to duplicate their suspension and steering characteristics for the 1973 model of Chevrolet's medium-priced specialty car, the Monte Carlo. When the body of the Monte Carlo was restyled, DeLorean carefully avoided all frills, keeping it distinctively sleek and alive. This year the Monte Carlo is being acclaimed as one of the best-looking, easiest-to-handle cars Detroit has ever produced.

But last spring, while thousands of impatient customers were signing their names on waiting lists for the Monte Carlo, DeLorean was walking out of General Motors. At forty-eight, he resigned from a job that paid more than $550,000 in salary and bonuses, ending a career that had seemed to point him toward the presidency of the world's largest and most powerful manufacturing corporation. Instead, he plans to become a Cadillac dealer somewhere.

There is no question that DeLorean's departure was a significant loss to the corporation. Semon E. (Bunkie) Knudsen, who served both G.M. and Ford in high capacities and is now chairman of White Motor Corp., considers him one of the smartest automobile engineers he knows. And Richard C. Gerstenberg, G.M.'s current chairman and chief executive, pays him this tribute: "He was highly regarded by his colleagues and by his dealers. He was good in marketing, too. That's surprising, because he was an engineer, and you don't always find the two going together."

DeLorean had created three of the hottest cars to come out of Detroit since World War II. He holds well over 100 patents, and was responsible for dozens of design innovations. And as a manager, he had rescued Chevrolet from a downturn that bordered on catastrophe, a crisis that G.M. has successfully kept secret.

In view of his achievements and seemingly brilliant future, DeLorean's departure was not only a surprise, but a mystery. The industry has been buzzing with rumors ever since. Chairman Gerstenberg stands by G.M.'s original public announcement that the company was losing, *with regret*, a valued executive. There is not the slightest hint at corporate headquarters that DeLorean was fired or even that he left under a cloud. But that still leaves the question of why he chose to interrupt his career at such a momentous point.

His own stated reason is that he was sick of life at G.M. "The automobile industry has lost its masculinity," he says. "Management's not the same type as when I came here." The substance of his complaint seems to be that encroaching government regulation has taken the fun out of business, reducing it to the status of a utility, and that G.M.'s sheer size has led to mind-dulling bureaucratization, which left no room for an individualist like John DeLorean.

Taken at face value, this indictment would be a serious matter for General Motors, and, perhaps, for other large corporations. It would mean that General Motors, for all its wealth, was unable to hold onto a man of proved talents because the man decided General Motors was not good enough for him. But that explanation may be too simple to fit the actual facts and circumstances. DeLorean, after all, carried individualism to the extreme, and his superiors may not have been able to stomach much more of his abrasive qualities. Other men have traveled as fast a track at G.M. as DeLorean had, only to fall short of the chief executive's office. DeLorean may well have surmised he was going no farther up the corporate ladder, and decided to get out before his ambitions were formally rebuffed. The whole truth may never clearly emerge; nevertheless, DeLorean's last years at General Motors make a poignant tale of corporate life in America.

LIFTING WEIGHTS AT VIC TANNY'S

Lanky, six-feet-four, with friendly blue eyes and a rich, commanding voice, DeLorean practiced the art of nonconformity at G.M. with an intemperance that was downright exuberant. Now that he is out, his daily uniform around Bloomfield Hills, Michigan, is an open-necked sports shirt, faded blue denims, and a well-worn pair of black loafers. Proud of his physique to the point of vanity, he lifts weights at Vic Tanny's three days a week. ("Those weights weighed 150 pounds when I posed for that picture [opposite]. I held them up for a half-hour.") Shooting golf in the 70's, he also rides motorcycles, is a tennis player and horseman, and is part owner of the San Diego Chargers and the New York Yankees. He dyes his hair coal black and keeps it impeccably styled, although touches of tattletale gray sometimes appear at the bottom of his sideburns. He travels in a glittering world of sports stars and movie makers—a group that is decidedly *not* General Motors. Although one divorce is now considered permissible at the company, DeLorean has been married three times, on the last two occasions to actress-models who were in their early twenties.

"A SQUARE FELLOW WHEN I HIRED HIM"

The child of parents who separated, DeLorean spent half his boyhood in Los Angeles, his mother's home, and half in Detroit, where his father was a set-up man in a Ford foundry. A gangly youth, he doesn't remember winning any school-yard fights, but in other ways he soon developed an intense, almost uncontrollable drive to attain perfection. Something of a loner, he stuck to activities in which he excelled, giving up saxophone and clarinet lesssons because he realized he would never be a great musician.

After getting an engineering degree at the Lawrence Institute of Technology in 1948, DeLorean went to work for Chrysler. It was an era when automobiles were seen as a glamorous product; schoolboys vied to win the Fisher Body Craftsman Guild design contest, and aspired as much to be president of G.M. as to be President of the U.S. DeLorean saw the business as an important calling, a way to give Americans mobility, and he still retains that view to some degree. He went to night school, earning a master's degree in automotive engineering and another in business administration; he got half his credits for a law degree before he decided he was taking on too much. By 1952 he had grown restless at Chrysler. "It was too big for me to be noticed," he says, and he switched to Packard. These were happy days. Because of Packard's size, he was able to learn firsthand about a lot of different operations that he wouldn't have been able to get into in a larger company. Four years later, when he was head of research and development, Bunkie Knudsen, then general manager of G.M.'s Pontiac division, offered him a similar post with Pontiac. "He was a pretty square fellow when I hired him," says Knudsen. By then married to a secretary from northern Michigan, DeLorean wore his hair short, and his suits came off the rack. He smoked three to four packs of cigarettes a day, and when he quit smoking his weight ballooned to a pudgy 230 pounds.

Knudsen was laboring to change Pontiac's image from a little old lady's car to a sleek racing machine, and DeLorean was soon supplying him with a new generation of "hot" Pontiac engines. In 1961, DeLorean became chief engineer, and four years later, at forty, the youngest general manager in Pontiac's history. He was also named a vice president of the corporation.

Building on the momentum Knudsen had created, DeLorean led the division to its most successful year. A rock-music enthusiast, he developed a feeling for what young people wanted. "Automobiles are a fashion thing, like clothing," he says. "And the people who set fashions are really the young people, people up to thirty-five." He crafted his idea of what the young wanted into two fast specialty cars, the Firebird and the Grand Prix.

As a perfectionist would, DeLorean preached quality with the fervor of an evangelist hounding sinners. In an unused warehouse at the division's home plant in Pontiac, Michigan, he set up an inspection line where every new car was checked to ensure that it was flawless. Pontiac became known as just about the best-engineered car in the business. DeLorean tightened the pressure on the dealers, and sales leaped from 688,000 in 1964 to 877,000 in 1968, a record that still stands. The Firebird and the Grand Prix accounted for half the increase.

After a triumph of this magnitude, one might think DeLorean would have been immeasurably happy. But he had begun to have misgivings. Back around 1960, Knudsen had taken him to a Pontiac dealers' conference at the El Dorado Country Club in Palm Springs. The late Harlow Curtice, G.M.'s retired president and chief executive, was vacationing nearby and DeLorean met him at the festivities. A powerful executive, Curtice had run the company almost as a monarchy, and he had done so with spectacular success. "I looked at this guy almost as a god," DeLorean recalls.

Talking with the club's golf pro the next day, DeLorean mentioned Curtice. "That's the loneliest human being who ever lived," said the pro. "He comes into my golf shop for a couple of hours every day and talks to me and my assistant about the automobile business. We don't know anything about the automobile business, but we listen to him. He just seems to want to talk so badly."

DeLorean was shaken. Recounting the episode recently, he said, "You realized he never had been regarded as a human being, but only for his job." Like many other G.M. executive, Curtice had devoted all his hours to The Corporation; his friendships were corporate, even his interests and knowledge were pretty much limited to the affairs of General Motors. Now that G.M. was in the hands of others, Curtice's world had rolled away without him. "What is life all about?" DeLorean asked himself. "You work forty years, and what have you got?"

WAS THERE A CRASH AT LIME ROCK?

As DeLorean climbed at General Motors and his annual income broke through the quarter-million mark, he gradually shed any attributes Bunkie Knudsen might have considered square. He was beginning to wear turtleneck sweaters and wide lapels, and he grew his hair long. Several years earlier he

had dieted much of his fat away, cutting his weight to 195 pounds. Now he worked off the rest, trimming his frame to 170. As proud of that as he was of his management skills, he was quick to show off his lean torso. "I have a thirty-one-inch waist," he would boast, pulling up his shirt and patting his well-tanned stomach muscles. Recalls Pierre Cossette, the Hollywood producer, who met DeLorean at about that time: "He looked like a million-dollar picture star * * * like he had been put together by the property department of M–G–M."

When DeLorean's fourteen-year marriage fell apart, he turned up at discotheques, escorting leggy actresses like Ursula Andress and Pam Austin (who had been playing the Dodge Rebellion Girl in TV commercial.) In May, 1969, he married Kelly Harmon, the twenty-year-old daughter of Michigan's famous All-American halfback Tom Harmon. He wrote a song to his bride, which a boys' choir sang at the wedding.

DeLorean's transformation stirred rumors to the effect that he had undergone a face-lift and the sideburns were there to hide the scars. He concedes the part about the sideburns, but insists that the scars resulted from an automobile accident in late 1968. According to his account, a friend of his who builds racing cars was having trouble with a suspension system he had designed. DeLorean offered to help diagnose the problem. While he was test-driving the racer at eighty miles an hour on a racetrack near Lime Rock, Connecticut, the suspension system threw the car out of control and off the track. DeLorean claims he was flung through the windshield and back in again; he was knocked unconscious, and was left with multiple head cuts. Because General Motors has a strict policy of forbidding its top executives to take such risks, he says, he kept the accident secret and immediately took a three-week vacation, hiding out in hospital rooms and a friend's New York apartment while he mended. The story sounds plausible until you ask the man who owned the Lime Rock track at the time. He says he never heard of the accident, and to his knowledge, DeLorean has never even driven there.

"YOU TRAVEL LIKE AN OIL SHEIK"

As his own life changed, DeLorean began questioning what he calls the cloistered life at G.M.'s upper levels. As he saw it, the senior officers spent most of their days confined to meetings on the fourteenth floor of the corporation's headquarters in Detroit. Most executives worked ten-hour days, leaving for home around 7:00 p.m., lugging bulging briefcases. On Saturdays many reappeared in the office, this time in shirtsleeves, to put in a few more hours.

Most G.M. executives lived in Bloomfield Hills or neighboring Birmingham, where they socialized together. When they weren't playing golf with suppliers or dealers, they frequently formed foursomes with one another at the Bloomfield Hills Country Club, because few made close friendships outside General Motors. While debate was allowed within the company, it was never to be aired in public, and since G.M. dominated the field, this meant there was little open self-criticism in the industry. Dinner conversations with G.M. executives, DeLorean felt, tended to concentrate on narrow interests—automobiles or finance or engineering—and to exclude such subjects as films or music.

DeLorean wondered if the kinds of friendships that developed around G.M. were really meaningful. In 1968, when Bunkie Knudsen left to become president of Ford, Knudsen became a nonperson at G.M.—despite the fact that his father had been a president of the company and Bunkie himself had built some lifelong associations there. DeLorean made a point of continuing his friendship with the Knudsens, and spent a lot of his time outside the G.M. community with people whose style of life blended with his own, men like Mark McCormack, the lawyer-agent for Arnold Palmer and other sports stars; Roger Penske, whose race car won the Indy 500 last year; and Robert Anderson, president of Rockwell International and a former back-fence neighbor (for more on Anderson, see the article on page 224).

In DeLorean's view, even the way G.M. executives traveled seemed to separate them from the real world. "I don't think the heads of state of many countries come close. You travel like an oil sheik." He could point to the fact that any officer can fly in one of the corporation's eighteen private planes (which cost $10 million a year to operate). When he lands, new cars whisk him and his retinue into town. If he is on his way to visit a dealership, two or three subordinates may drive ahead to assure all is in order. Before he

arrives at his hotel, a public-relations man checks out his suite to make certain, among other things, that flowers are in place. A p.r. man once checked out the suite of John F. Gordon, who was president in the early Sixties, and noticed a suspicious-looking crusty substance on the sofa fabric. He ended the afternoon, handkerchief in hand, scraping at the sofa and wondering how such an assignment had befallen him.

If this way the way the executives traveled, DeLorean wondered, how could they understand the concerns of more common folk—concerns about maneuvering 4,000-pound cars through big-city traffic, or seeing over hoods that were six feet long, or saving gas, or having room in the trunk for all the family luggage. When a G.M. officer *did* drive himself to the airport in his company-supplied, $9,000 Cadillac Eldorado, DeLorean noted, the trunk was not large enough to hold both his golf clubs and his luggage.

On January 25, 1969, a Saturday, DeLorean was summoned from the twelfth hole of Palm Springs' Thunderbird Country Club by an urgent call from Roger Kyes, then vice president for the car-and-truck group and DeLorean's boss. Kyes told him to catch the first plane back to Detroit and meet him at President Edward N. Cole's house in Bloomfield Hills at eight o'clock the next morning. There Cole told DeLorean he wanted him to become general manager of Chevrolet.

Chevrolet was in trouble. As one G.M. executive describes it, using a metaphor that DeLorean himself is supposed to have coined, "You were looking at the Penn Central of the automobile industry." Chevy's profits were falling, hundreds of dealers were losing money, and the division's market share was shrinking, from 26 percent in 1965 to 22 percent in 1968. Yet Ford was retaining most of its share, even under the battering of imports. As one Chevy dealer says in retrospect: "G.M. got so conservative and so conscious of the corporate image that Ford was beating them with new products people wanted."

Communications among some of the division's major departments were erratic, primarily because each lived in a state of secluded autonomy. The marketing department had launched an ad campaign for the four-cylinder Nova with little warning to the manufacturing department, which had no chance to plan and had to go on overtime to meet the demand the ads generated. The division had twenty-five computers, and they had not been coordinated into an efficient system. When a new car was designed, its specifications had to be taken from the engineering department's computer and reprogrammed into the manufacturing department's computer. Things broke down altogether when the 1969 models were introduced; the computers failed to invoice hundreds of new cars.

All in all, DeLorean faced a staggering assignment: he was being asked to turn around what amounted to the world's fifth-biggest industrial company. By Fortune's estimate, the annual sales of Chevrolet total some $10 billion, about the same as the sales of General Electric.

THE TYRANNY OF THE PERFECTIONIST

DeLorean visited plants and talked to supervisors and workers as he searched for the trouble spots. He met with the dealers, whose low morale had been driven even lower when the division's sales manager told *Automotive News*, the industry's trade paper, that part of Chevy's problem was too many fat-cat dealers. DeLorean answered their complaint realistically, avoiding pie-in-the-sky promises the dealers claimed they had received in the past. "He stimulated the dealers, and he gave them confidence," one dealer recalls. "They loved him. From the second meeting we had with him, we'd give him a standing ovation when he walked into the room. He'd romance the dealers, but with facts, not b---s---!"

DeLorean fashioned his staff into a dedicated team. He would sit in his office, his feet on the desk, while questioning each new visitor incisively and answering an incessant barrage of telephone calls. He grasped one complex issue after another, as if he were performing a cerebral juggling act. "He wasn't hanging over anybody's shoulder to keep an eye on them," says Gerstenberg. He didn't have to, for he cultivated his people, delegating authority and persuading them that his demands were really their own ideas. But he would brutally tyrannize anyone who didn't measure up to his standards.

DeLorean put new fire into the marketing department. Upon discovering that new-car orders sometimes waited a month and a half before reaching the

assembly line, he revamped the order-entry system. To put better merchandise in the dealers' showrooms, he ordered new models, among them the 1973 Monte Carlo and a Vega with a rotary engine, which will go on sale next year. He insisted that his production people build cars that hold up. "This is part of your morality in the system of America," he declared. "If you do less, it's immoral." He says he even shut three plants for as much as two days because their cars did not pass inspection. The closings cost Chevrolet tens of thousands of dollars, but emphasized to managers and workmen that DeLorean wanted quality first and profits second.

The division's slide stopped, and its market share leveled off at about 22 percent. Chevy's profits continued to decline during 1969 and 1970, the latter year because of the long United Auto Workers strike. But they turned up in 1971 and have been growing ever since. Dealers' profits before taxes have doubled since 1969 to more than $400 million in 1972.

"NOT A GROWTH INDUSTRY ANYMORE"

Despite his success at Chevy, DeLorean had a difficult time getting some of his ideas across to his superiors. As early as 1970 he foresaw that congested roads, the rising cost and consumption of gasoline, and government pressures for cleaner air would bring about a fundamental shift in the demand for automobiles in the U.S. He pointed out that if G.M. continued on course, it would be producing no cars in the range between 2,300 pounds, the weight of its subcompact Vega, and 3,200 pounds, the weight of its smallest compact, the Nova, and he predicted that market trends would favor cars in this range. Such vehicles were, of course, already being imported in growing numbers. Imports had increased their market share from 6 to more than 14 percent in five years, and DeLorean argued that the domestic industry would not be able to stop this trend unless G.M., as its leader, reduced the size of its intermediate and compact cars, and introduced small cars to the middle and luxury markets (to compete with such imports as the BMW, the Volvo, and the Mercedes). "The dollar imbalance is due largely to the failure of the auto companies to make small cars," DeLorean charged. "The increase in the foreign-car population is a tremendous erosion of the American economic base. That's why our industry is not a growth industry anymore."

Independently of one another, DeLorean and Ed Cole both campaigned for smaller versions of Chevrolet's compact car, which has grown in seven years from 2,700 pounds to nearly 3,200. Cole argued that the Nova had "lost its attractiveness." Their solution was to design a car weighing some 2,800 pounds, about the same size as the large Toyota. DeLorean launched what he called the K-Project, to design 2,800-pound versions not only of the Nova but also of the Camaro, Chevy's small specialty car, and the Pontiac Ventura. But the K-Project died because it had no support from his immediate superiors. Within the past year, Olds and Buick *have* in fact entered the compact field with the Omega and the Apollo—but these weighed in at 3,300 pounds. Now, Cole says, there is no way to come out with a smaller compact before the late 1970's.

To DeLorean, that rebuff was symptomatic of the degree to which G.M.'s senior managers were out of touch with the marketplace. "If you wanted to make it two feet shorter, no one would let you, they'd be so frightened," DeLorean complained. "There's no forward response at General Motors to what the public wants today. It's gotten to be a total insulation from the realities of the world. From the standpoint of America it's frightening."

Failure to introduce more small cars hurt the company's position in the market—although with record profits of $1.6 billion for the first half of 1973, Chairman Gerstenberg doesn't appear overly concerned. American compacts and subcompacts—along with imported cars—have accounted for close to half of the U.S. car sales this year, and their share is still climbing. General Motors, which produces about 45 percent of the cars sold in the U.S., is manufacturing only 37 percent of the U.S.-made compacts and subcompacts. Ford is only a few notches behind, producing 32 percent of the small cars, though it has only 25 percent of the auto market as a whole. And despite the dollar devaluation, imports have continued their inroads, raising their share of the total market to well over 15 percent. (A small irony is that, while the debate was raging more than a year ago, General Motors' engineers bought a Datsun 240–Z sports car for routine examination. Demand for the model was so strong that Datsun had a five-month waiting list, and G.M. had to pay $600 extra to get the car early.)

NO GOLF NEXT THURSDAY

While absorbed in trying to bring Chevrolet under control, DeLorean was beginning to have problems at home. He was on the road much of the time and worked long hours when he was back in Detroit. He never seemed able to spend enough time with Kelly and the son they were adopting. DeLorean even woke the baby at 6:00 a.m., so that he could see him for a few minutes before he left for work. The social life he had embarked upon between marriages had evaporated. Kelly was younger than some of the daughters of other G.M. officers, and feeling out of place in Detroit society, she grew homesick for southern California. To spend more time with her, DeLorean had given up golf, but that didn't help much. He and Kelly separated in the fall of 1972, and they were divorced last February.

To be sure, DeLorean earned more in a year than many people do in their lifetimes. But he was discovering that neither the money nor the position could guarantee happiness. Some dealers he knew, including one of his three brothers, were making as much as he and giving a lot less of themselves to the job. "I make $600,000 a year," he once told a Chevrolet dealer in Illinois. "But I can't play golf next Thursday and you can."

Toward the end of 1970, DeLorean heard that a franchise for a new Cadillac dealership might soon become available in California. The franchise not only would bring in a hefty income, it also would entitle DeLorean to collect his bonuses, which G.M. pays out over five years and would not normally pay if he severed his connections with the company. (His back bonuses total more than $800,000.) DeLorean went to Thomas A. Murphy, then a corporate vice president and his immediate superior, and told him he wanted to resign and take the dealership. As DeLorean recalls the conversation, Murphy replied: "Jesus! I don't see why you want to leave. Nine chances out of ten, when Cole leaves you'll be the next president."

Murphy, who is now vice chairman (and is expected to become chairman when Gerstenberg retires), emphatically denies having made the statement, and DeLorean insists with equal vigor that he did. It is natural for a superior to try to hold a good man by describing his future in rosy terms, but the statement DeLorean attributes to Murphy would mean that DeLorean was favored for the presidency over two of his seniors—Elliott M. Estes and Richard L. Terrell. Whatever Murphy actually said, it is clear that he and Gerstenberg eventually dissuaded DeLorean from leaving. Nevertheless, DeLorean remained restless and reiterated his feelings to Murphy a half dozen times in the next two years.

LIKE PUTTING SECRETARIAT IN A STRAITJACKET

Last October, DeLorean was promoted to corporate vice president for the car-and-truck group, which accounts for about a quarter of G.M.'s operations. He moved onto the fourteenth floor, where he worked with other senior officials, attending meetings of the many committees that make the decisions at the top. Such a post might be viewed as the place where G.M. puts the final trim on its future presidents. But the change was too much for DeLorean. As one friend, a dealer, says: "That's like putting a straitjacket on Secretariat."

As general manager of a car division, DeLorean had been the center of attention, enjoying a large measure of autonomy. Fourteenth-floor executives like to tell about a Pontiac general manager who, when promoted to the corporate level, joked that he had commanded 14,000 men at Pontiac but now was in charge of only a secretary. The change was more dramatic for DeLorean; at Chevrolet he had directed 100,000 men and women. He also felt that he had known what was going on inside the Chevy division and could make his decisions there intelligently. But he found that a group executive, who oversees the division managers, is cut off from sources of information. The committee system so annoyed him that, if a particular meeting seemed to him unimportant, he deliberately stayed away, to the irritation of his superiors.

"You were getting all your input from lower-level specialists," he says. "They provided information in such a way that they would get the answer they wanted. I know, I used to be down below and do it. The feeling I started to get, being suddenly put on the fourteenth floor, was that now I was being presented with information that had limited alternatives. This is totally inconsistent with any thoughtful and creative originality. You never could reflect on and modify a proposal. You couldn't be a planner. You were too harassed

and oppressed by committee meetings and paperwork—you just had tons of it. You were cut off from the outside world. You saw only the men on the fourteenth floor. The corporate hierarchy was just reacting to the demands of the organization and responding to some degree to the government and the public. It was like standing in the boiler room and tending a machine and you were just watching it instead of running it."

As high up in the corporation as he was, DeLorean continued to have trouble getting his views across. About three months after his arrival on the fourteenth floor, he proposed that General Motors save what he claimed would amount to $1 billion annually by making a number of changes. If the company made its restyling decisions earlier, he argued, it could reduce overtime and retooling costs, and if it followed the Ford example of making model changes overnight and during weekends, it could cut plant closings to a minimum. Last year G.M., which produces twice as many cars as Ford, recorded ten times as many plant downdays. But DeLorean's seniors decided that his proposals would not save any money; Gerstenberg says the company uses plant downdays to catch up on painting and other maintenance.

"A GUY WHO IS GIVING HIS LIFE'S BLOOD"

Perhaps the most controversial issue DeLorean got embroiled in was what position G.M. should take on federal emission standards, and whether it should request a year's extension of the 1975 deadline set by Congress. By last fall, when DeLorean got into the debate, G.M. had finished extensive lab and proving-ground tests on catalytic converters, which management sensed might meet the standards. In November the first thirteen large, converter-fitted Oldsmobiles, of a fleet of 250 prototype cars, were sent to the California Air Resources Board for field testing. By February each car had rolled up as much as 5,000 miles, and the converters were proving successful.

According to sources within the company, what bothered DeLorean was that General Motors, despite these harbingers of success, was arguing for the year's delay because it did not know for sure that the converters would meet the standards completely. DeLorean contended that instead of asking for the delay, the company should take a more positive and realistic stand and announce that it was willing to *try* to meet the existing standards—even if it could not guarantee 100 percent success—by equipping the 1975 cars with the new converters. Because he was getting nowhere with a lot of his arguments, he became dejected: "When this happens to a guy who recognizes what ought to be done, and who is giving his life's blood and can't get it done, then hell, he ought to go on and do something else."

The longer he inhabited the fourteenth floor, the more DeLorean realized that the rewards he had believed would lie at the top, the immense power and sense of fulfillment, simply were not there. Suppose he did one day become president, what would it mean? Cole was a man who knew the product and its market, yet as president, Cole often seemed to be powerless. Cole had also urged that G.M. be more aggressive in small cars, but lost. DeLorean finally concluded that what he regarded as Cole's predicament would be his own.

In March he told Murphy he wanted a Cadillac franchise that was opening in Florida. Murphy, Gerstenberg, and others tried to dissuade him, but this time they did not push very hard. "After awhile you begin to wonder whether you're wasting his time and ours," says Gerstenberg.

STILL SEARCHING FOR GLAMOUR

On April 18, the day his resignation was announced, DeLorean moved out of the General Motors Building. For a year, at Gerstenberg's urging, he will be president of the National Alliance of Businessmen, a group of corporate executives that promotes such causes as the hiring of minorities and Vietnam veterans. This will give him ample opportunity to work for something he believes in while he sets up his dealership. There is some doubt whether he will get the agency he seeks in Florida. The established Cadillac dealers in the area, apparently fearing the competition, are opposing his request for the necessary state license.

Looking back on what he left, DeLorean reflects: "I'm sure, the guys on the fourteenth floor feel they're contributing all there is to contribute. But I'm best at taking a weak business and making it strong. That's a unique gift. There aren't too many guys who do that. I think I should be making that contribu-

tion. I'll probably end up eventually running some other business in the U.S. I could be pretty happy running a company, but I don't think I could be happy being part of a committee structure."

DeLorean doesn't yet really know what kind of company he'd want to run, but it must be something with glamour and potential, something like what he imagined the auto industry would be when he entered it back in 1948. Meanwhile General Motors rolls on. "It's got momentum," says a Chevrolet dealer. "But General Motors is under fire today. It needs the human element. They're losing a lot in John DeLorean."

Senator HART. Next, the committee will receive testimony from Mr. Kenko Misaka.

Mr. Misaka, earlier the subcommittee has received the testimony that two firms produced railroad locomotives in this country—only two—and that one of them accounts for about 80 percent of all rail locomotive production.

This raised the question whether a more competitive structured industry, particularly one not dominated by the largest motor vehicle manufacturers, would produce more technologically advanced products.

The world's fastest commercial trains, Japanese high-speed electric bullet trains, are produced in a country that has several competing rail manufacturers.

Our witness today is a director of the Japanese National Railways. We have asked him to describe the characteristics of this high-speed electric bullet train and to comment upon Japan's decision to electrify it's rail system shortly after World War II.

I know that Mr. Misaka is accompanied by an associate, who will serve, if necessary, as an interpreter and I would ask him to identify himself for the record.

STATEMENT OF KENKO MISAKA, DIRECTOR, JAPANESE NATIONAL RAILWAYS, NEW YORK OFFICE; ACCOMPANIED BY KAZUYUKI MATSUO, INTERPRETER

Mr. MISAKA. Mr. Chairman, besides my statement, I have a picture of our railways. So, if you'll allow me later, I would like to show it to you.

Senator HART. We would welcome having the film and we can do that before we address any questions to you.

Mr. MISAKA. Thank you.

Senator HART. Now, if your interpreter would identify himself for the record.

Mr. MATSUO. My name is Kazuyuki Matsuo, living in Washington, D.C.

Senator HART. You may proceed.

Mr. MISAKA. Mr. Chairman and the members of the committee: First of all, I would like to trace the development of railways in Japan.

Japan opened her doors to the Western World in the year 1853 when Commodore Perry knocked on her doors. At the time of his visit, Commodore Perry brought with him a model of a steam engine as a gift to the Shogun, who was a military leader, and demonstrated its operation in Yokohama.

This was Japan's first introduction to a "railroad." After the Meiji Restoration in 1868, the new Government deemed it an urgent

necessity to construct railways as a vital step in the modernization of Japan.

The Government borrowed capital and techniques from Great Britain and inaugurated the first railway between Tokyo and Yokohama in the year 1872. Japan's entrance into rail transportation was thus about 50 years later than in Western countries.

Because Japan is a small, mountainous, and poor country, the English advised us to construct a narrow-gage railroad. At that time, the Japanese were not familiar with gages but they agreed to the narrow gage since it was less expensive to install. We now realize its shortcomings in terms of speed and traction power.

Railways, both governmental and private, were constructed rapidly in the late 19th century. However, in the year 1906, they were incorporated into one nationwide network under the "Railways Nationalization Act."

Today, we have many excellent private railroads in and around larger cities, although their services are limited to the local area.

One factor leading to the nationalization of railroads in Japan lies in the financial difficulties in the private sector due to their rapid expansion and competition.

Another reason can be attributed to the strategic considerations posed by the military. Japan was engaged in a war with China in 1894 and with Russia in 1904. During wartime, Japan found it necessary to transport her soldiers rapidly to her western ports. Thus, the Government felt compelled to monopolize transportation in the interest of efficiency.

The first Minister of Railways in Japan was Mr. Goto. He fully realized the shortcomings of our existing railroads and proposed the widening of the gage. His plan was supported by the military, but the funds for the needed improvements were not available. Mr. Goto's idea came to fruition after World War II with the construction of the "Shinkan-sen," or the "Bullet Train." The nationalized railroad network expanded gradually along with impressive technical improvements and innovations. Even then, with her narrow-gage, Japan was able to boast of one of the most punctual and efficient railways in the modern world.

During the Second World War, we suffered greatly from American bombings as well as shortages in material and manpower. However, the Japanese National Railways operated quite efficiently, and following the War, it aided in the repatriation of Japanese soldiers and in the reconstruction of Japan's economy from the ravages of the war.

The damage sustained by the Japanese National Railways during the War and the postwar economic dislocation led to many serious rail accidents which in turn lowered the workers morale.

In 1949, the Japanese National Railways became a public corporation—independent of the Government—at the suggestion of Gen. Douglas MacArthur, the Supreme Commander of the Allied Powers.

This reorganization was prompted mainly by labor problems, but in retrospect, I believe that it was invaluable for the improvement in railway administration and efficiency of operations.

In the year 1964, we inaugurated the world's fastest commercial train—the "Shinkan-sen"—which runs between Tokyo and Osaka—

about 320 miles in 3 hours. Its maximum speed is 130 miles per hour.

This line was extended 100 miles to the west to Okayama in 1972. and this December it will reach Hakata in the southern island of Kyushu, about 730 miles west of Tokyo.

Prime Minister Tanaka's idea of remodeling Japan into decentralized cities is based on the premise that the "Shinkan-sen" will eventually connect every major city with a rail system which can operate efficiently and safely in the shortest space of time.

The law for the construction of nationwide, high-speed railways was enacted in 1970. Under this law, we are constructing three trunk lines at present and four other lines are under geological study.

Secondly, I would like to discuss the reasons for the rails being uniquely adaptable to transportation in Japan.

The first reason can be attributed to Japan's geological formation. Although the Japanese islands are smaller in area than the State of California, their population is about 100 million—about one-half of that of the United States. At the same time, the land area is mountainous for the most part so that the population density in the low-lying areas is very high.

Thus, every city and town is built along railway networks. I might mention in passing that in Japan, real estate values are largely determined by the distance from railroad stations. Real estate firms advertise their properties as "five minutes walk from the railroad station" though it often takes more than 20 minutes in reality.

The second reason may be found in the relatively low standard of living which prevailed in Japan in the past. The Japanese could neither afford automobiles nor was there economical land for parking space.

However, with the rising standard of living and the construction of new highways, the ownership of automobiles by the citizens has increased considerably in the past 10 years. Railroad ridership and freight traffic were affected accordingly. However, with the energy crisis at hand in Japan today, it is very likely that this trend will be changed.

The third reason is our roads. In the past, our highways and roads were quite bad. American soldiers who came to Japan would often ask, "Is this a road or a road-to-be?" Moreover, the limited land area precluded any large-scale highway system in Japan.

The Japanese National Railways now operates a network of 13,000 miles. We are the biggest passenger railway in the world. Our 25,000 trains carry 18 million passengers daily—which comes to 6.7 billion fares annually. The share of railroads in domestic passenger transportation was 47 percent in 1972; automobiles 34 percent; and buses 16 percent. On the other hand, our share of freight transportation is declining and accounted for only 17 percent in 1972.

Around the Tokyo area, we carry 6.5 million passengers daily by operating 10-car constant unit trains every 2 minutes. In the Osaka area, we carry 1.5 million fares daily. Obviously, buses and automobiles cannot hope to meet this traffic demand each day, not to mention the impossible demand for highways.

In addition to the impressive number of passenger, our railways have some other characteristics. One of them is the electrification of our system. Today, one-third of our route is electrified. From the

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standpoint of traffic volume, about two-thirds of our rail transportation is powered by electricity.

After the war, some Americans advised us to dieselize our lines. However, we adopted a policy of electrifying our main lines and dieselizing our local lines. As we have to import almost all of our petroleum from abroad, oil is comparatively expensive in Japan.

Thus, although we need some investments on ground facilities, we have found that electrification is more economical when the traffic exceeds certain limits. Usually, it is said that 75 trains on double tracks and 45 on single tracks are the points where electrification is warranted.

We have found that electric engines or cars are more powerful than diesel, and their acceleration or deceleration capability are better than diesel. At the same time, electrification is preferred from the environmental standpoint.

The Japanese National Railways had in 1971, 1,900 electric locomotives and 12,900 electric rail cars. Comparable figures for diesels are 1,600 and 5,400 respectively. These cars are currently being manufactured by such Japanese companies as Hitachi, Mitsubishi, and Toshiba.

Finally, I would like to describe our "Shinkan-sen," or "Bullet Train."

Around the middle of 1950's the then president of the Japanese National Railways, Mr. Sogo, proposed the construction of a supermodern railway system between Tokyo and Osaka because of the saturation of the traffic volume between the two cities. However, most of the people were opposed to this idea. At that time, the United States represented the ideal as a progressive nation. In that light, the Japanese saw that railroading was a declining industry in the United States and Western countries, and thus more emphasis should be placed instead on the construction of modern highways as in the West.

Mr. Sogo insisted that the railroad was the most efficient mode of transportation inasmuch as its operations could be computerized. Theoretically, trains could be operated every 3 minutes without a driver. He asked rhetorically, "How can you call this a declining industry?"

He ultimately convinced cabinet members and politicians that his analysis was correct, and the Japanese National Railways was able to borrow funds from the World Bank. I believe that this represents the most successful loan from the Bank since our "Shinkan-sen" yields double the revenue over operating costs. In 1971, its revenue-to-cost ratio was 46.

Today, we operate more than 200 "Bullet Trains" daily. This means that a train leaves Tokyo Station every 10 minutes from 6 a.m. to 8:30 p.m. Each train is a 16-car unit, and thus we carry on the average about 300,000 passengers each day, or about 100 million in a year. From its inauguration in 1964, we have carried more than 500 million passengers without a single fatality.

It has been estimated that the Shinkan-sen will have reached its maximum limit by 1980. Our technical engineering staff is now developing ultra-high-speed trains which will be capable of speeds of up to 300 miles per hour, completing the Tokyo-Osaka run in

about an hour. Surely, railroading is not a declining industry in Japan today. On the contrary, it is a very prosperous industry in Japan.

Thank you.

Senator HART. Thank you, Mr. Misaka, and particularly after that explanation, I think all of us will look forward to seeing this film. I suggest you show it now.

[At this point a film presentation was shown.]

Senator HART. That was an excellent film. Thank you. I am sure that some of us in this country that are not familiar with the rail system in Japan would be struck by many of the things in that film, as well as in your own testimony. Almost all of us, I think, would be impressed by the fact that while carrying almost 500 million passengers in the 10-year period, you had no fatalities. That safety record is marvelous.

You have shown us in the film, as well as described in your testimony, the anticipated 300-mile-an-hour train, as contrasted with the top speed of the "Bullet Train" of 130 miles. Was it 130 miles an hour?

Mr. MISAKA. Yes, at present, 130 miles, but we are trying to raise that speed limit to 160 miles. When Shinkan-sen is connected to Kyushu Island, it is a very long distance, so we would like to cover it at more higher speeds.

Senator HART. I doubt if you can answer this, because so many factors, including roadbed, must be involved. But the trip from Tokyo to Osaka is 320 miles, and you run that in about 3 hours. How many stops are made in that run?

Mr. MISAKA. It is very difficult, the operation is exclusively for Shinkan-sen, but these stations are commonly used with the narrow gage stations, so those station employees are working for Shinkan-sen and the narrow gage at the same time. But compared to a conventional narrow gage railroad, it is a very rationalized system.

Senator HART. Yes, but at how many points do you pick up passengers on that run?

Mr. MISAKA. Between Tokyo and Osaka, 10 stations.

Senator HART. Now, what I am getting to is the comparison that Americans always try to make between the speed that you are able to serve that Tokyo-Osaka run of 300 miles, and the Metroliner that runs from Washington to New York. That is a distance of 225 miles, and we now operate that on a 3 hour and 15-minute schedule. This is my point, I don't know how you can answer this, given the problem of the roadbeds. But how fast would the bullet train make it from Washington to New York?

Mr. MISAKA. One of our biggest cities, Nagoya, is about 200 miles west of Tokyo. We connect from Tokyo to Nagoya in 2 hours.

Senator HART. Making how many passenger pick-up stops on that run?

Mr. MISAKA. Almost every train stops at Nagoya, 100 one way, so 100 trains stop at Nagoya station one way, so 200. There are two sorts of limited expresses in Shinkan-sen. One is Hikari, which doesn't stop between Tokyo and Nagoya. It just stops Tokyo, Nagoya, Kyoto, Osaka.

But another type of limited express, Kodama, stops at every station between Tokyo and Osaka, 10 stations.

Senator HART. In your testimony, you said that most of the people in Japan opposed the construction of this railroad system. They saw the decline in the West of the railroads, and hence thought that it was a declining industry.

How did Mr. Sogo persuade the Cabinet and the legislature that they should build railroads instead of highways?

Mr. MISAKA. I mentioned that Mr. Goto—he was the first minister of railroads in Japan—and Mr. Sogo is, let's say, a disciple of Mr. Goto, and Mr. Sogo intended to do work that Mr. Goto couldn't get done, to widen the gage. And Mr. Sogo persuaded the Cabinet members and other politicians by saying the railroad must be an effective transportation mode, and when seen from energy, or seen from the capacity of the transporters, and if you want to carry a big number of passengers by motor car, each motor car would carry only 1.5 or 1.2 passengers, so you need a very, very wide highway, and very big numbers of highways.

So, from energy, and from these points of view, Mr. Sogo persuaded that it is far cheaper and far more economical.

Senator HART. Those reasons are now being cited in this country in the effort to persuade us to commit more of our resources to both mass transit and long distance rail transit.

Now, Mr. Misaka, you say that one-third of your route system is electrified, two-thirds of your rail traffic volume is powered by electricity. Then you say that electrification is more economical when the traffic exceeds certain limits, and you say 75 trains on double tracks, and 45 on single tracks.

What do you mean? What does the 75/45 mean?

Mr. MISAKA. Well, as I mentioned, when you operate electric trains you have to invest in ground facilities, so if point A to point B is connected by train, diesel is far cheaper because it will only spend oil. But in the case of electricity, you have to make power stations, and power lines along side the railroad. So, it is very expensive.

But in Japan, petroleum is a little expensive, and in the case of our rolling stock, an electric car is cheaper and its maintenance costs are far cheaper than the diesel cars.

So, if this train number increases, the cost of construction of the ground facilities becomes cheaper and cheaper.

So, on single track, when this train number comes to 45, there is no difference between the expenditures for the diesel operation and for the electrical operation.

From that point, the electrical operation becomes more economical than diesel.

And in the case of double tracks, this certain number of trains becomes 75.

That is our experience. Situations may be different in other countries.

Senator HART. You say that after the war, some Americans advised you to dieselize, but what was your rail system before the war? Was it steam, or diesel, or electricity?

Mr. MISAKA. Because our country is very mountainous, with long tunnels, our transportation is electrified.

Senator HART. My question goes to the kind of transport you had before the World War?

Mr. MISAKA. Our railroad was operated by steam.

Senator HART. Steam?

Mr. MISAKA. Yes, and very short distances by the electrified, such as long tunnels.

Senator HART. Now, who were the Americans that advised you to dieselize your line after the war?

Mr. MISAKA. Right after the war, there came the occupation forces, and there was the General Headquarters of American Forces, and they supervised our railroads, and these occupational forces, those men maybe from American railroads, and from their experience in American railroads, they recommended we modernize our railroads, and there were two ways of modernization; one was dieselization, and the other was electricity.

But in Japan, it is very mountainous, so we wanted to have a powerful engine, and in Japan we don't have any oil, but we have very good reserves of coal and water, and electricity can be generated from both.

So, we decided to adopt electricity on main lines.

Senator HART. The speed of an electric-powered train is much greater than a diesel-powered train?

Mr. MISAKA. I think so.

Senator HART. You told us something about the balance of your transportation system, the respective shares of domestic passenger transportation. In your testimony, you say that for the year 1972 railroads accounted for 47 percent of passengers, autos 34 percent, and buses 16 percent, yet you say that the railroads' share of freight transportation was declining.

Why is that so? Why are you losing your freight?

Mr. MISAKA. Well, it is by the geographical situation. Because our country is very small each city is easily connected by trucks, and most of the bigger factories are constructed alongside the seacoast, so bulky cargoes come by ships, and the product goes abroad by ship, and goes inland by trucks. So, we are losing our share.

Senator HART. Do the same rails carry your freight and your passenger trains, or are they different tracks?

Mr. MISAKA. If the traffic volume is very high these lines are separated. But at the local areas where the traffic volume is not so high we use the same line.

Senator HART. Finally, you told us that the Japanese railway became a public corporation, that is a corporation independent of the government, and there was an improvement in efficiency and administration.

Could you tell us why it had that effect?

Mr. MISAKA. Well, I don't like to blame our government, but usually, a government agency is not so effective. We call it a "bureaucracy."

Mr. CHUMBRIS. That is what we call it here, too.

Mr. MISAKA. So, in the past we were the public servants, and our business is a little bureaucracy. But after we became a public corporation employees changed their minds and became more effective.

Senator HART. Was your labor force the equivalent of what we would call "civil service" while it was a government thing, and did it become a trade union then, afterward?

Mr. MISAKA. Yes. But in some points we keep the status of public servant. They are not genuine public servants. For instance, if someone attacks a railroad station and injures railway employees, he is then indicted for "disturbance of official business."

So, in a sense, they retain, then, the nature of public servants.

Senator HART. The device of a strike is outlawed in Japan?

Mr. MISAKA. Yes, outlawed, but in reality they walk out. They are scheduled to do it tomorrow.

Senator HART. Mr. O'Leary reminds me that you can't fire an employee in Japan anyway, is that right?

Mr. MISAKA. Yes, and their status is guaranteed by our law, the Japanese National Railways Law. But at the same time, this law states "in case of a nationalization, there may be a layoff of employees. But we never did that—only once after the Second World War. We had 600,000 employees, because we absorbed all the soldiers from the navy and the army after that time, and by the suggestion of Douglas MacArthur we laid off more than 100,000 employees. This is the only case.

Senator HART. This is the only case?

Mr. MISAKA. One case.

Senator HART. Mr. Chumbris.

Mr. CHUMBRIS. I have no questions, Mr. Chairman.

I appreciate very much both the film and the statements that you have made. I gather from your testimony that you have special circumstances in Japan which would require a certain type of transportation. You have the mountains. You don't have the plentitude of wide open spaces like we do in the United States, where we may have a different mode of transportation.

The fact that your population is condensed into three major cities creates problems that we don't have throughout the United States.

I appreciated very much having your testimony.

Mr. MISAKA. Thank you.

Senator HART. Mr. O'Leary.

Mr. O'LEARY. Mr. Misaka, there is just one point that is not clear in my mind.

When you say electrification is more economical when the traffic exceeds certain limits, 75 trains on double tracks and 45 on the single tracks as the points where electrification is warranted, is that the number of trains per day?

Mr. MISAKA. Yes.

Mr. O'LEARY. So that if your volume is such that you have 75 trains per day on double tracks, or 45 trains per day on single tracks, it is more economical to go electric?

Mr. MISAKA. Yes.

Mr. O'LEARY. Thank you.

Mr. CHUMBRIS. One of the reasons you use electricity quite so much is because of the availability of the power to create the electricity, isn't that correct? You don't have oil and natural gas, so you have to lean, whether you like it or not, toward electric power; even if it wasn't quite as efficient you would probably have to use electric power, wouldn't that be so?

Mr. MISAKA. Yes. The first reason is natural resources, and the second, we wanted a very powerful engine.

Mr. CHUMBRIS. Thank you.

Senator HART. Gentlemen, thank you very, very much. Your testimony was extremely helpful.

Mr. MISAKA. Thank you.

Senator HART. Having concluded the witnesses for today, we will adjourn. We are scheduled to resume in room 2228, at 11 tomorrow morning.

[Whereupon, at 1:30 p.m., the subcommittee adjourned, to reconvene at 11 a.m., Thursday, February 28, 1974, in room 2228, Dirksen Senate Office Building.]

THE INDUSTRIAL REORGANIZATION ACT (S. 1167)

(Ground Transportation Industries)

THURSDAY, FEBRUARY 28, 1974

U.S. SENATE,
SUBCOMMITTEE OF ANTITRUST AND MONOPOLY
OF THE COMMITTEE OF THE JUDICIARY,
Washington, D.C.

The subcommittee met at 11 a.m., in room 2228, Dirksen Senate Office Building, Hon. Philip A. Hart (chairman of the subcommittee) presiding.

Present: Senators Hart and Kennedy.

Staff Present: Charles E. Bangert, general counsel; Patricia Y. Bario, editorial director; Janice C. Williams, chief clerk; Peter N. Chumbris, minority chief counsel; and Charles E. Kern II, minority counsel.

Senator HART. The committee will be in order. Our first witness is Ramsey Clark. This is one of the occasions when it is the literal truth that our witness needs no introduction; but I always welcome a chance to put on the record my faith in him and enormous respect for his intellectual capacity and his decency and courage.

I hope he joins us here in January of next year as a Senator. Today we welcome him as a former Attorney General whose views, therefore, on the restructuring of the automobile industry have been developed against a background of responsibility for the enforcement of the antitrust laws.

STATEMENT OF HON. RAMSEY CLARK, FORMER ATTORNEY GENERAL, U.S. DEPARTMENT OF JUSTICE

Mr. CLARK. Thank you very much, Senator Hart. It is an honor to appear before you and I appreciate the opportunity given me and for the courage manifested.

It is a dangerous business introducing a former Attorney General these days, which I can't say entirely in jest.

Senator HART. Even your harshest critics would not be even the least unsure of your integrity—even if they do question your wisdom.

Mr. CLARK. I did detect that on occasion as recently as a few moments ago. I have a short statement that, on reading, seems to end where your hearings need to begin.

In a sense, I should apologize for that, but I think that I may be able to contribute more by context than by specificity.

I am trying to say in the statement four things I believe. First, that we must conjure with the enormity of the meaning of the automobile in our mass society, the way it permeates our lives and so directly affects the quality.

Second, in terms of the basic principles of the country, we must seek to recognize and understand the meaning of all this.

I believe, for instance, that as never before in history the right to travel must be a fundamental human right.

We have prisoners in the ghetto—that have never been arrested—in the sense that it is so hard to leave physically.

The cost of transportation is so far beyond their means and the availability of adequate public transportation is so inadequate that there they remain.

Third, the comprehensive approach that is necessary to address the needs of this society in travel because it is so pervasive and therefore, the beginning to me is the creation of a clear, and recognized by the people, transportation policy.

We are so tied down in so many ways by so many things we do that we are barely aware of vote through laws, the Congress just take taxes and things like that and the Highway Trust Fund that we don't see the interrelationship, therefore, really, to meet human need in a mass urban technologically advanced society we must develop a clear public theory or concept, if you will, of rights to transportation and the means for fulfilling them.

And, finally, I sadly have to address, as one who participated in the romance for a long time, the importance in some ways, yet the clear inadequacy in others, of the antitrust litigation remedy and with that, if you would like, I will read this statement; but I will defer to your pleasure.

Senator HART. I think it would be useful.

Mr. CLARK. All right. What has more drastically changed our lives in America this century than the automobile? My father saw the first car to come to Dallas, Tex. Still a very active man today, he shares the peril and the pleasure of our streets and highways with his grandchildren and 90 million automobiles in a vastly different society.

Now there are more cars than there were people in the United States in 1900. We have manufactured more new units in many of these past 20 years than babies were born.

Millions of us spend hours daily in automobiles, often alone. We see tens of millions of car carcasses smashed along the highway, on blocks in backyards, and stacked high in junk heaps on the outskirts of our towns. As a nation we spend a major fraction of our wealth, perhaps one-fifth, on cars and things related to their performance. Many spend hours weekly in traffic jams or circling the block looking for a parking place—and more recently of course, in line for gasoline. The automobile moved us to the suburbs, resegregating the poor, leaving them in central city. It has depersonalized much of our contact with each other. It has made us the most mobile, rootless, urban people in history. One in five here lives within 50 miles of the place he was born while in most times and places only one in five ever ventured 50 miles from where he was born.

The patterns of our lives have been profoundly altered by automobiles and in more ways than we can count. It would take volumes to describe the effect of the automobile on crime and crime control. This is something I have thought about for a long time. I wouldn't mind working on those volumes.

For how many youngsters has car theft been the first offense? How often has what began as a joyride become a life journey in crime? The number of cars stolen approaches a million a year now; nearly two-thirds by persons under 18. They are the third most frequent of FBI index crimes, the second most costly in property value. A major part of all police expenditures relate to the use and control of, and criminal act with, the automobile. One-fourth of all Federal prisoners are serving sentences for interstate transportation of stolen vehicles—more than one-half of all Federal youth offenders and juveniles sent to prison are convicted of car theft.

On April 28, 1922, the New York Times reported that 10 police autos were beginning crime patrols. Doubtless we thought then we would soon run the last hoodlum down. Alas, we have been on a merry chase ever since: Taking the foot patrolman off the beat where he could know and serve the people, moving him toward the one-man squad car in the name of efficiency and for many making him the enemy—how many hearts flutter when the squad car passes by—has not brought safety.

Noxious fumes fill our lungs. A pall of smog hangs over great cities. Crammed freeways fray our nerves. We slaughter tens of thousands annually—more each year of these past 10 than were killed in war during the entire decade of our tragic military involvement in Vietnam. Nearly all of us have seen bloody, fatal accidents which we feel powerless to control and which erode reverence for life.

It is sad to note the Judiciary Committee's action on the death penalty yesterday.

Senator HART. Yes, sir.

Mr. CLARK. One of the last times I appeared before you was the day of the Supreme Court's decision that we celebrated.

Senator HART. That is right.

Mr. CLARK. We have not controlled events; events have controlled us, as Lincoln "plainly confessed" concerning the conduct of the Civil War. But technology, human creation, does not make moral judgments. Society must make moral judgments and apply them sensitively and effectively to technology.

In a mass, urban, technologically advanced society the right to travel by vehicular means has become a fundamental human right. How limited is your life without it? Where can you walk? How far can you get? How will you cope without transportation? As a young man said to me in Watts, down on 133d Street, Charcoal Alley, following the riots of 1965, "A car is like part of your wardrobe, man. You can't go nowhere without one."

If we are to control our destiny, affect things of greatest importance to the quality of our lives, we must address such problems as transportation directly and seek to solve them through the social compact. The interdependence of people compels this.

As I read this I realize that I have got a copy that I penciled some notes on and if I can be excused for a minute I will see if I can find them because they had a few different ideas.

I guess they are lost to posterity. I had some ideas I wrote on the plane coming down and now I can't find them.

The beginning will have to be a national transportation policy.

What I mean is a theory for this society as to how we want to get from one place to another and a socially conscious effort to provide the means of doing just that. If we go on just building units because we have got the production lines ready and turning them out without thinking of where they are taking us we will be in real trouble indeed.

Do we want fast, safe, efficient transportation for our teeming millions? Should it include intracity and intercity, interstate and international modes? What form of energy will be in the best interest of the people—gasoline, diesel fuel, electricity? Do we think it possible for all of us to get where we wish to go by automobile? I don't think it is possible. We are going to wind up like that French movie that was coming around a few years back: In one big traffic jam and as the theater darkens the people are climbing out of their automobiles and shaking their fists at each other, paralyzed. Dare we plan for free mass transit in our cities servicing all areas efficiently? Should mainline rail, subway, and elevated rail provide most urban needs? Is large, safe, clean, and efficient bus transit the intermediate, interstitial mode, followed by fleets of taxis, limousines and lease cars to meet particularized needs? When will we be prepared to regulate the hours of truck delivery and limit the use of private automobiles on crowded public streets to priority needs—for the crippled people and special occasions? Will a national transportation policy be meaningful before we decide by law on the rough numbers of units—private cars, lease and hire automobiles, buses, trains, ships, and planes—to be manufactured?

Right now we are out of control. Can the transition of the present automobile industry to production of the needed transportation services and other manufacture, related and unrelated, be accomplished by the decision of private management? Look at the history of America's railroads, all the power and wealth the people vested in them by charters, land grants, a vast domain out in the West and in the other parts of the country, permitting monopoly and by direct subsidization peoples money. How can the automotive industry transform as it must in these next 25 years except with the help of public decisionmaking?

It is in this context that competition in the manufacture of ground transportation units must be viewed. Certainly the oligopoly that has emerged, the pressure for annual models, large, wasteful machines, and all that chrome is harmful. The control by GM of bus and rail locomotive manufacture has grossly distorted the proportions and types of car, bus, and rail transportation needed for acceptable transportation. The quality, utility, and efficiency of the units produced has in my judgment been greatly diminished. But competition in the manufacture of the basic units will not solve America's transportation problems.

A clear, sensitive, comprehensive transportation policy and plan will be essential. Only such a policy can turn us toward the efforts required to create fast, effective, efficient intercity rail service; free mass transit within urban areas and the control of automotive output that will reshape travel patterns. It is not possible for us to flee 50 miles further from the city and cope through four-car garages in the year 2000 A.D. A comprehensive transportation policy can liberate us from such phenomena as the highway trust fund and the

variety of taxes, tariffs, and regulatory measures that favor highway over rail transportation. A national transportation policy can coordinate efforts by government at every level to reorient passenger and freight movement to the most efficient, the safest, the best modes.

Through law, as an early and major priority, America should seek to establish free competition in the manufacture of automobiles among more than half a dozen and hopefully a dozen independent private companies. This is possible and would offer the chance for a much fuller use of human ingenuity and energy in design, engineer, production, utility, efficiency, and beauty for those who find some in the beast.

We should also, through law, strive for free competition in bus and train manufacture independent of each other and of alternative modes of transportation so that single companies won't have an economic interest in pushing one mode for profit purposes over another mode where the people need a different form. Four or more major manufacturers of buses and as many of trains will bring out the best in human skills to create effective machines.

The means of accomplishing this are many. We have to move on all fronts. The idea that there is a single remedy that can bring this about, such as litigation, is contrary to our experience in the human nature.

These means include Government purchasing policy; not that there is a direct analogy but look at what Government purchasing policy did to aircraft manufacture.

We came out of World War II with how many viable companies. When we moved down toward the Douglas-McDonnell merger we had two commercial manufacturers of jet aircraft and their models were really developed by public funds for military craft.

Government purchasing policy could have made an enormous difference in real viability and effective competition in airplane manufacture.

It can do that still to some considerable degree here in automobiles.

Funds for research and development: As I recall, at the time the *Emission Control* case was filed in 1968 or 1969, the private industry had spent just a handful of millions of dollars in trying to develop equipment to control exhaust that was polluting the lungs of babies and others in this country.

I remember the industry saying:

> But you can't expect us to compete and control the emission devices because nobody wants them.
>
> Why would they? They cost money. They don't make your car look better. They cost in performance. They consume energy. All you can get is a Boy Scout medal on the outside or something saying I have got one. There would be no competition here.

This is one of the major arguments of industry. I didn't particularly agree with it. I think if the public demand had said "We are tired of asphyxiating ourselves, we want emission control," the manufacturers would have moved quickly enough to develop effective units for that purpose.

But funds for research and development may be necessary. A policy of free licensing under patents perfected at public cost would be necessary.

The enormity of monopoly power that has been based upon patents that were developed at public cost is just stunning when you look at the total scene; and that is still a possibility in this area.

We will need direct Government subsidy. We know that we will need sensitive and comprehensive tax treatment. And finally, along with the other means as well, we will need vigorous antitrust enforcement.

As one who first observed antitrust while Thurmond Arnold was creating his legend, I should say I can remember as a youngster the political cartoons that showed Thurmond Arnold standing with Nazi Germany and Fascist Italy and an impeder to the war movement—literally on the front page of newspapers—and the theory was that by enforcing the antitrust laws he was deterring American industry from meeting our military needs.

I don't believe that. I think we can have freedom, too. But that is the way it went and by 1942 Thurmond Arnold was out of the Antitrust Division and sitting comfortably or uncomfortably on the bench.

But I watched him creating this legend and I enjoyed the romance of the field of law, the mystique of the big case, only slightly diminished, in fact, since then. But let me utter a few words of caution concerning antitrust enforcement as an instrument of social change.

It has severe limitations and to be realistic and without illusions we will have to face those. Basic laws enacted in 1890 and 1914, general in terms, for all the gloss history has placed on them are not adequate to establish competition in the manufacturing of land transportation vehicles. This doesn't mean that antitrust law is not effective in many other areas, but it needs to be applied early in an industry development and when you have to look back to mergers before 1919 in the late 1860's to determine whether there is a legal basis for proceeding, when you have to look back to franchise policies developed before the Attorney General of the United States was born to determine whether you can file a suit, something is out of kilter.

These laws can be effectively applied to the emerging new industries; for instance, manufactured equipment or new forms of generation of electric power are important areas. But to try and go back after all these years into a crystallized industry is just not going to work.

Litigation as a means of determining a crystallized industry structure in an older industry is inherently irrational.

Judges and juries are simply not the rational tools needed to decide such complex and massive legal-economic issues.

They begin in ignorance and they are diverted by other cases; they don't have the resources necessary for research and study; they are incumbered by procedures that are devised for entirely unrelated needs; and court personnel and procedures will be too slow, too tortured, too indecisive, and finally too weak. I love it all, and I love the judicial sanction; but if we can't recognize the limitations of its power we will fail to do many things that have to be done.

The courts have no adequate continued capacity for modification and no real accountability to the people. Fixing the price of bread

involves a simple single criminal act quite often, and that can be addressed.

The addressing of the phenomona of industry, all it encompasses, with its billions in investment, its millions of stockholders, and the millions of employees and their families whose interests are so directly and vitally affected, cannot be done constructively by judge and jury alone.

Among other impotencies, they cannot address all factors of Government policy, taxation, and transition that are inextricably interwoven in the solution. Nor do courts have the power to cause such massive transformations in mass society. They just don't have it.

Finally to seek to address the structure of the automobile industry under the rubric of general laws passed generations ago upon which an industry has developed to its present stage is essentially lawless.

It really is in my judgment. The legal sanction sought does not arise from the social compact, but from the intellect of a handful of lawyers and economists who, however brilliant, do not represent the will of the people.

This is not the way for a free democratic society under law to make decisions that so vitally affect its well-being.

Competition in the industry should be brought about by comprehensive legislation creating independent diverse companies capable of effective performance.

New laws, comprehensive in scope, with the institutional backing of representative Government, the Congress of the United States, and the underlying support of the people—it is implicit in that—are needed to create competition in this vital industry. And if they will do that, we will be on the road again.

Thank you, Senator.

Senator HART. I think there would be much broader support for this idea of restructuring among the people if everyone could listen to you.

Senator Kennedy?

Senator KENNEDY. Thank you, Mr. Chairman. I want to extend a warm welcome to Mr. Clark to this committee. Of course, he has appeared before the Judiciary Committee, as one of our very fine Attorneys General.

His interest in commitment to the law and devotion to it has been demonstrated time and again, and he has helped the members of this committee and other subcommittees of the Judiciary Committee to cope and deal with the problems that we have been facing. I want to extend a warm word of welcome in appreciation for your testimony here today.

I just have two questions, Mr. Clark. Why do you think there is such a general reluctance among the American people to really move along the lines that you've outlined here today?

It seems to me to be as clear and plain from your testimony that if we're really interested in a competitive system—the essential aspects of a free and open market—that suggestions you have outlined here just makes eminently good sense.

Yet, I think as a member of this committee—after the very lengthy hours spent dealing with this matter of very great consequence and importance—about the difficulty of really arousing the public interest.

I can't think of an instance—I've run in Massachusetts three times now—that I've ever been asked by a college student or by a businessman about antitrust laws, with the exception of, "Will antitrust law be extended to the labor unions." That would be the one time and perhaps the only time, you hear antitrust mentioned.

But you, as an observer, and as someone who understands these laws, obviously can make a very strong social comment. You have outlined in your statement here today the eminent reasonableness of legislative action in this area. It really is sound in terms of our own free and open market history.

Why is it that we are not able to get a greater sense of urgency about this problem?

Mr. CLARK. I have a bundle of reasons that I see. I think foremost among them is this: We are creatures of our environment to a very considerable degree. The north wind made the Vikings. I remember how often Bob Kennedy would say, "He's a good man. He's been through a lot," which was his way of saying that going through a lot makes you a strong person.

We're creatures of our environment in that we have a generation born with automobiles on the scene, just like the chickens were in the back yard for the earlier generation.

We don't see the total in this mass society. It's very difficult. We're in an age that almost approaches incoherence in our incapacity to see and communicate the overall meaning of these phenomena, so what we see are the models out there, and we even tend to identify our personality—you talk to youngsters, and you can see their preference is in models. This generation is going to have more difficulty liberating itself psychologically from the automobile than my generation has had liberating itself psychologically from guns. We love them and we identify with them in so many different ways.

The question of survival, really, is whether we can see the truth in time in all this complexity; whether we can see how the automobile is affecting us, how monopolization in the industry has so fundamentally altered our lives in so many ways.

So many of the really brilliant ideas that have come through and documentation that has come through in the staff work for this committee—and why does the United States alone have a rail system that's powered by diesel fuel in the main? How did that happen? Was that a preconscious decision of the people? The people: all they know is that they get on the train once in a while, but not very often, and they smell the smoke of the burning oil if they live near the tracks, as poor people tend to do.

But the idea that they can control it is, I guess, as difficult as the idea that you could control the weather. You were born, the weather was there, and it just changes, and you can't do anything about it.

We'll have to control the technology; we'll have to see that we can; and to see that, we'll have to have leadership that tells it simply and clearly and frequently, until we come to grips with it.

Then, because we have the power to solve all of these problems so clearly, we begin to exercise that power. We can move these people around. One of the great sources of strength in this society is our diversity and our mobility.

But now the means of mobility are beginning to choke us and paralyze us and alter us in ways that we don't control, but we must.

Senator KENNEDY. Just a final question, and perhaps it is not really unrelated to the previous question. What do you see happening—in this case it's the automobile industry, but in the larger context of the hearings that we have been having on a number of different major industries of the country—unless we take the kind of remedial steps that you've outlined, in 10 years, 20 years from now? Are we going to be worse off?

Mr. CLARK. I don't want to sound pessimistic; I am an optimistic person, and I insist on it. However, the gloomier things look, the more I try to smile.

I don't see how we can expect to survive without enormous human suffering and loss of the vestiges of freedom that remain unless we take control through the social contract, through the decision of the people of democratic institutions, of major decisionmaking as to basic economic factors that so control our lives. Suppose we continue, for instance, this head-long pursuit of fossil fuels. I think we ought to leave the poor fossils to their rest—they've earned it after all these years—and seek, vigorously, alternative sources of energy as the highest public policy.

But suppose we just continue digging deeper, scraping off the tops of the mountains of Kentucky, and squeezing the oil out of the shale under the Rockies—mountains can make decent men, as William O. Douglas said, but they're not going to make decent men when we treat them like sponges—killing the caribou by sending pipelines across the north slopes of Alaska, where the last migratory herds on this Continent live in a very fragile ecology; How are we going to survive? We're going to have a billion more people in 10 years, and we're building up a greater dependency upon fossil fuel energy, and the fossil fuel energy is an exhaustible supply and we know it. It may last 30 40, 50 years—take your choice. We have to have a new vision.

It's not going to be 7 years of drought that gets us; it's going to be 7 years of failure of vision in humanity. If we don't have initiative and foresight as a people through the social compact to solve these problems, we are in for real trouble.

Senator KENNEDY. Thank you very much.

Senator HART. I take it that your judgment is that—I think you used the word "irrational"—it would be irrational for the Justice Department to seek to restructure long-existing economic concentrations, even if it could be proved, tedious though the litigation would be, that at some point or another they actually violated the antitrust laws.

Mr. CLARK. It would be irrational as an overall policy. It would make our future dependent upon past acts that are really irrelevant to present and future needs. It would depend upon the conjuring of theories often. Looking back through the studies in the Department of Justice addressing this industry, you see lawyers straining to develop new, and enlarge on emerging, legal theories that can't really address the overall problem.

Should we go after General Motors? Should we go after the Big Three? The factors that determine those questions, if you are applying a 1914 and an 1890 statute, don't really relate to the overall need of the public today, and very frequently, are so far removed

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from anything that was possible in the philosophy of the authors of the law, as to make the act really lawless.

It's a handful of people—brilliant and devoted, usually, in my judgment—seeking to determine what can be put together to address only a minor fraction of the overall problem.

That doesn't mean that we shouldn't do it. I'm kind of in favor of it as a matter of fact, but I would like to see it from private sources first, because I think for the Government itself to go too far beyond the law is the use of government power in a dangerous way.

Most of all, I would be concerned that we might feel that there was some potential for an adequate remedy, a solution to this overall problem, through litigation. Litigation is not the way to stop wars—it's just too slow and it's too cumbersome, and there's a big slaughter before you get a case decided and, finally, they say this is a matter of public policy anyway.

Senator HART. Well, to the extent that your memory permits, can you explain, while you were Attorney General and familiar with the planning of the Department of Justice, how is the decision made as to when a case, which would seek major structural relief—such as a case against an auto company or companies, steel, or any of the old, highly concentrated industries—is reached?

Some of those brilliant minds in the Department, I am sure, have on their shelves half a dozen proposed bills of compaint directed toward either automobiles or steel.

Does a decision like this—and I am not suggesting it would be improper—go to the President?

Mr. CLARK. Well, I would suggest that is improper.

Senator HART. You would?

Mr. CLARK. I feel that very strongly. I think that necessarily politicizes the importance of the rule of law. I think it would be grossly improper to discuss an antitrust case with the President of the United States, or to entertain communications with the White House on specific issues of enforcement on a specific case.

Senator HART. Even when the Attorney General might think the consequences of which would have very serious economic ripples.

Mr. CLARK. Yes. We are dealing with the rule of law, and if there is to be integrity in the rule of law then the standard, even in antitrust, has to be a rational, professional determination of the application to a particular set of facts by accepted legal procedures.

We've had several cases come up—it seems to me like Rome Cable might have been the name of one—where there would be unemployment in several towns and things like that. That can't be a determining factor in law enforcement. If you have that as a factor then you're really in trouble. There'd be no equal justice under the law, there would be no processing of principle, as Earl Warren called it. The law becomes politics. If the White House is telling you they don't want that case in court because of the economic consequences, or because they're friends, or anything else, then you're going to have all sorts of problems with political contributions. All of a sudden, the White House is going to be making decisions to enforcement of law, and the rule of law will fail.

Senator HART. Well, then, very specifically, while you were the Attorney General, action was brought against IBM. No action was

brought against automobiles. Would you think out loud on that? How did that happen?

Mr. CLARK. Well, I think that it worked this way. Down in the bowels of the Department, as it is referred to in institutions, like people need bowels, there was, I think, considerable freedom to think and to explore and to develop theories of law and cases.

Now, the *IBM* case was under study for several years. It addressed an emerging industry, still, to me, an industry on which all other industries would become more and more dependent because of the numbers in our lives, mass society.

To fail to achieve competition there while it was still possible to risk a future that was burdened with less than the best, most sensitive use of computers that human ingenuity could devise, in my judgment, could be catastrophic.

If this sounds out of date it may have been our perception, but the Department of Justice didn't move into computer use until the time I was Attorney General.

We were just riding in the computer age, so to speak. The FBI had some, but we're only talking about the Legal Division.

By the time we looked at it, at least by the time the papers got up to me, which meant they had been processed all of the way through the Assistant Attorney General's office and he had a recommendation, we had, by our definition of the relevant market, one company that had virtually two-thirds of the action.

And the second company didn't have one-tenth what the first company had. In other words, it had less than 6.66 percent, an intolerable situation.

So we filed a very general suit, but one that was, I think, clearly stated to be directed toward industry structure; an emerging, expanding industry.

The automobile industry: I think we had enough freedom in the Antitrust Division to permit initiative and exploration of the use of the antitrust sanction.

I don't really know this, but I assume that some measurable quantity of our total resource was devoted entirely to this sort of thing.

They were testing and considering this constantly in a variety of ways, as I was aware. I do not believe that a single recommendation ever came to me as Deputy Attorney General or as Attorney General.

I don't recall even an informational memo. The only discussions I recall are when I would have fairly regular staff conferences with the Antitrust Division. I liked to do that, not in all of the measures, but I love antitrust law and I liked to go down there and hear what they were thinking about and this would come up in discussions, as would other things.

I knew about that. The *Emission Control* case came up. It was, you know, peripheral to the industry and certainly the industry structure.

But it presented an issue that antitrust law could deal with, in my judgment, with some effectiveness, with some rationality.

It was a latter-day fact; it was only in the 1950's, really, that the industry as an industry began to look at the problem, look at it together and seek some Government purchasing policy. Our theory was, at least mine was and I think that of the Assistant Attorney

General, that our role would be much more effective in the years ahead in areas other than litigation.

We tried to talk to Department of Defense, to AEC, and to many others, about a patent policy. Things like that will have a much greater impact in litigation.

I tried to diversify our litigation to use it as a criminal sanction and price fixing, where you can make an enormous difference from the price of bread in the ghetto in a single, simply fact situation.

But to restructure ancient industries we would try to take on something like the Penn-Central merger once in a while and we just found it incredibly difficult to do anything.

The merging industries you could do something with. I think it has to do with a time in history. And the time to do anything very meaningful in the automobile industry, in terms of industry structure, began to slip away 50 years ago.

Senator HART. All right. I don't want to say anything that would reduce the enthusiasm of any future Department of Justice officials in enforcing the law, but I do understand what you are saying.

Mr. CLARK. I understand that concern, too.

Senator HART. I understand what you are saying and I think the bill I have introduced is in response to that, but it doesn't go as far as I think you are urging us to go.

You say in your prepared statement that competition should be brought about by comprehensive legislation creating independent, diverse companies capable of effective performance.

Now, certainly, there is precedent for that kind of thing: The Public Utility Holding Company Act, where Congress actually spelled it out. But I have trouble believing that Congress is equipped to make judgments which involve problems as complex as taking the large business enterprise apart, separating out the entities, and creating new ones.

The legislation that I introduced identifies specific segments of the economy for priority and creates an Industrial Reorganization Commission to make a finding that if one of three elements is found in a given industry, that that is monopoly no matter how it was achieved. A special Industrial Reorganization Court is created to which the Commission would go and, ideally, as we visualize it, most of the litigation time would be not be whether monopoly existed—Congress would have taken the bull by the horns there—but rather how can we restructure in a fashion that would more effectively serve, including the long haul, the interest of those directly involved and engaged in the industry.

How do you react to that less-dramatic step?

Mr. CLARK. I react very sympathetically and approvingly. I think it is, in comparison with what others with the power such as you have have suggested, very, very bold and far seeing.

I haven't seen, however, a very creative experience in reorganization courts or in the use of courts or agencies to implement policy.

I think they tend toward captivity by their constituency. The very dynamics tend that way: What is their experience? What is their background? What is their opportunity?

I certainly don't think that the Congress can sit down and provide a blueprint that says, for instance, we're going to take GM

and break it into these four parts; we're going to take Ford and Chrysler and break them each into these two parts; and they're going to have their plants here and there and hire so many. That's just not possible.

I think some basic policy decisions can be made: First, that a much broader range and diversity of competition within, for example, the manufacturing level of basic accessories, parts. It's essential that we believe there's a need for 6, 8, 10, 12, whatever it is, to work toward that.

We think that the total range of Federal legislative address has to focus on this so that the tax policies and other policies are coordinated into it.

I frankly think we don't come to grips with the mere numbers. I think as long as we're talking about 10 million units, we've got trouble.

We fail to make some basic policy decisions about how we're going to get from one place to another. And, therefore, I think we have to look at an overall policy that says mass transit should be used within cities—contemplates—creates incentives for going in this direction.

But having said all of that, I obviously like your bill and the philosophy behind it and the approach suits me fine as a bold beginning.

Senator HART. I will conclude with this, and this almost returns to Senator Kennedy's first question: Neither the Department of Justice nor the Federal Trade Commission—I shouldn't speak for either of those agencies—at least by their silence, have been understood to say that existing law is adequate, and the American Bar Association officially has been reacting to this bill saying that existing law is sufficient.

Now, are they really saying that we shouldn't come to grips with this problem or are they kidding themselves? Which one is it?

Mr. CLARK. Well, I have to begin with the idea that the present law is inadequate. It's just so contrary to everything I see and feel that I can't believe that others really think they're adequate. If they have examined their value patterns—and I guess like most people they haven't; we're generally as oblivious of our values as we are the air we breathe—then they cannot believe that from the human needs standpoint that we as a nation are adequately addressing our transportation needs.

I think the history of the railroads is really an American tragedy.

We think of all the people gave them, and all of the opportunity there was; and if there had been an early vision with public support, with a sense of interdependence in national needs, to convert what was going 75 years ago into mass transit, what a different life we would have today.

If we don't have that vision now, what's going to happen to the automobile industry and us in the next 25 years? I guess it's a combination of the two factors, as you say, and it's also the serving of power.

We see power, and we respect power, yet we fail to see and empathize with the plight of the powerless.

Senator HART. Mr. Chumbris?

Mr. CHUMBRIS. Thank you, Mr. Chairman. Both you and Senator Kennedy anticipated several of the questions that I had in mind and I think I will forego any further questions.

Senator HART. Mr. Bangert.

Mr. BANGERT. I have no questions.

Senator HART. Thank you very much.

Mr. CLARK. Thank you.

Senator HART. Our next witness is Mr. Thomas R. Asher. Mr. Asher is a distinguished private attorney in practice in Washington, but formerly was with the Antitrust Division of the Department of Justice.

During his period with the Antitrust Division, Mr. Asher was in charge of the automobile industry investigation. In this capacity, he reviewed several staff recommendations specifically concerning how the industry might be restructured.

It is obvious that his insight and counsel would be of great help to this subcommittee, and I am very grateful that he was willing to come.

STATEMENT OF THOMAS R. ASHER, FORMER COUNSEL, ANTITRUST DIVISION, U.S. DEPARTMENT OF JUSTICE

Mr. ASHER. Thank you, Mr. Chairman.

I realize that my prepared written remarks would substantially impose on the committee's time if I read them all, so I will try to summarize them and focus on those factors which I think are most pertinent to the legislation before the committee.

[Mr. Asher's prepared statement appears at the end of his oral testimony as exhibit 1.]

Mr. ASHER. There was considerable discussion in Mr. Clark's testimony and the questions adressed to him, as to whether or not the existing antitrust laws and the existing antitrust enforcement mechanisms are capable of dealing with the problem of monopoly as we see it in the automobile industry and other industries, where there is all evidence of monopoly power, of nonresponsiveness to the pressures of the marketplace; and yet, rather than one firm holding two-thirds or more of the market, which is sort of a benchmark for antitrust law measuring monopoly, we find two, three, or four firms collectively possessing that power.

I will, therefore, focus my remarks on the activities that took place during the years that I was working on the automobile industry in the Antitrust Division, 1966 to 1969, to give some insight into the way in which the enforcement machinery works or does not work, and perhaps, the inherent limitations.

To be clear at the outset, my recommendation is that new legislation is definitely necessary, in large part because the enforcement machinery is incapable of dealing with the problems of monopoly as it exists in major entrenched industries.

This, of course, is essentially tied to a political judgment that, in turn, goes back to 1890 and the passage of the Sherman Act—that the creation of competition that deals with the questions of huge market power is the least drastic, and in the eyes of many, the most reliable remedy around.

I intended to divide my remarks into three basic parts, the first of which was to give some historical background to the passage of the Sherman Act and its focus on the notion of market power—what monopoly power is all about. I think that the committee is quite familiar with those concepts as set out in my written remarks, and I will only touch upon them briefly.

Second, I will trace through the actions that took place in the Division when a substantial number of the chief law enforcement officers were devoting their time and energy to the matter of the automobile industry and, secondarily, to other industries that exhibited shared monopoly power and the potential for applying the Sherman Act or, potentially, section 7 of the Clayton Act to those industries for the purpose of fragmenting them, of creating a larger number of competitors and thereby, hopefully, creating or recreating, if it ever existed, some semblance of competition.

Finally, I will indicate why, in the absence of new and clear legislation, Federal enforcement efforts are unlikely to attack the structure of shared monopoly power, which is really what it's all about.

I wish to touch briefly upon the historical antecedents of where we're at and what the Sherman Act is all about. Senator Sherman, in proposing the introduction of the antimonopoly law in 1890, spoke of the need "to preserve not only popular rights in their broad sense, but the rights of individuals as against associated and corporate wealth and power." Woodrow Wilson, in 1913, perhaps spoke of the political problem in more strenuous terms, but terms which, I think, are at least as relevant today as when they were written. He said:

> If monopoly persists, monopoly will always sit at the helm of the Government. I do not expect to see monopoly restrain itself. If there are men in this country big enough to own the Government of the United States, they are going to own it.

The political nature of our historic aversion to monopoly and of the legislation designed to deal with it was also stated by an economist and a lawyer, Carl Kaysen and Donald F. Turner, in a book called "Antitrust Policy," which was originally written in 1960 and updated in 1965. They stated that antitrust "rests basically on a political judgment. * * * In our democratic egalitarian society, large areas of uncontrolled private power are not tolerated."

So when Mr. Turner became Assistant Attorney General in charge of the Antitrust Division in late 1965, it was not surprising that he mobilized substantial resources within the Division to bring about the filing of suits against shared monopoly, or at least one such suit. Most of the efforts were focused on the automobile industry. However, the Division made not one recommendation to the Attorney General—which I think sheds some light of Mr. Clark's testimony which preceded me—not one recommendation went up suggesting that any such suit be brought, or even, to my knowledge, which I think is fairly authoritative because I was reviewing the entire matter until I left in December of 1969, not even a suggestion that the matter was of such serious importance that it should be discussed at high policy levels to see whether or not a priority allocation of resources should be focused within the Antitrust Division or elsewhere within the Justice Department to bring about such a suit.

What occurred was basically an institutional paralysis within the Antitrust Division which can in part be understood by considering the following factors.

First, Mr. Turner came to the Antitrust Division, as I noted, as America's preeminent antitrust theorist, coauthor of the work that I cited earlier, "Antitrust Policy," a work which clearly spells out the thesis that shared monopolies represent the major threat to competition in present-day America and that they must be broken up if antitrust is to carry out its stated objectives.

Second, since the most conspicuous and most economically pernicious of all the shared monopolies is the automobile industry, Turner set his most trusted advisers—both legal and economic—working to put together a share monopoly case against either GM or the Big Three.

It should be noted that there was virtually unanimous agreement among those who analyzed the situation that the domestic auto industry was not only structured like a monopoly, but performed like one. Profits over the years were consistently and substantially above the average for manufacturing industries, with General Motors enjoying a wide margin over both Ford and Chrysler.

Pricing was "administered" rather than competitive, with General Motors calling the tune. For example, in 1956 Ford led off the announced price increases with an average per car rise of $58. Two weeks later, General Motors announced Chevrolet prices $180 above the previous year. Ford immediately upped its price by $50 and within 3 months again raised them to within $10 of Chevrolet.

Even the most elementary high school text on economics tells you that's not the way competition works. People don't vie with one another to get their prices up. Somehow or other, competition is supposed to work to keep prices down.

Moreover the auto makers turned out strikingly similar products, and this is still true. It is interesting to note that the 1974 basic Ford, Chevrolet, and Plymouth weights, respectively, are 4,300, 4,300 and 4,315 pounds.

Moreover what little innovation the auto makers exhibited was virtually uniform among them. Their lockstep refusal to produce small and/or economical cars is a classic example of unresponsiveness to consumer demands which, in light of the current energy situation, can generously be characterized as crass social irresponsibility. Sometimes the industry even resorted to open conspiracy in order to deprive the public of better and less socially offensive products. The classic case involves the suppression of pollution control devices and technology, which the Justice Department finally attacked in 1969.

Of special concern to the Antitrust Division was General Motors, which appeared to have monopoly power because of its substantially greater size and profits. By reducing its prices to a still profitable level, GM had—and has—the power to drive both Ford and Chrysler out of business, as well as virtually all of its other competitors. I should amend that and say, "all" of its competitors.

Furthermore, only General Motors was substantially integrated forward into the automotive accessories business such as sparkplugs, electrical equipment, and batteries. Its profits on these replacement

parts are much higher than on automobiles themselves, enabling GM not only to milk the market but thereby further subsidize any price warfare it might choose to wage against Ford, Chrysler, American Motors, or the foreign producers. With such monopoly power it is not surprising that GM called the shots.

And there was virtually no chance of new entry into the automobile industry. Barriers were universally regarded as insuperable, and the relatively recent demises of Nash, Hudson, Packard, Studebaker, and Kaiser were proof of the pudding.

Third, while their approaches differed, all who worked on the question within the Antitrust Division during this time recommended a major structural suit. That is, a suit which would not simply prohibit certain conduct or practices of the industry but, rather, would restructure it, thereby hoping to remove some of the power that the industry had to control the market.

One economist suggested limiting the relief to divestiture of the franchised dealer system, which was perceived as a major impediment to new entry into automobile manufacturing.

All others, however, recommended breaking up GM into several independent automobile makers, and several recommended that Ford, as well, be at least split in half. Some recommendations also included forcing GM to divest its parts divisions, which I referred to earlier.

All agreed that the automobile industry acted like a monopoly, made money like a monopoly, was unresponsive to consumer demands and desires like a monopoly—in essence, that it had been monopolized and a suit should be brought to restructure it so that competition might at least have a fighting chance.

At the subcommittee's request I will provide it with a copy of the memorandum dated October 17, 1969, in which I summarize the 1966 to 1968 memos on the automobile industry, and in which I make some recommendations of my own. I am also prepared, at the subcommittee's request, to provide it with copies of the memos by Mr. Turner and Mr. Weiss.

Senator HART. We would welcome those documents.

[The memos referred to appear as exhibits 2, 3, and 4 at the end of Mr. Asher's testimony.]

Mr. ASHER. Thank you very much, Senator Hart.

Fourth, although the Division's intellectual elite believed that General Motors should be broken up and that an effort to do so would, more than any other single act, prove that Antitrust can deal with the ugly realities of mid-20th century plutocracy, groped for a "legal theory" which comported with judicial precedent. In the absence of a theory which met his high intellectual standards, Turner did nothing; that is, he made no recommendation whatever to the Attorney General that any suit be instituted, proving Goethe's thesis that "thinking is easy; action is difficult; to act in accordance with one's thoughts is the most difficult thing in the world."

However, several weeks after he resigned, Mr. Turner suddenly focused his energies on the automobile industry. After his oft-proclaimed intention to attack shared monopolies, after setting up a task force of lawyers and economists—on which I served—to hunt down the best cases, presumably, so that one or two could be brought,

and after turning virtually all of his closest advisers loose on the automobile industry, and after he himself had resigned without recommending the filing of one suit, Mr. Turner wrote a memorandum to his successor, Edwin H. Zimmerman, on July 28, 1968, recommending a monopolization suit against GM and Ford to break GM into three parts and Ford into two and, in addition, to prohibit exclusive franchising; that is, franchise relationships with the dealer which implicitly or explicitly prohibit them from carrying cars made by any other manufacturer. Needless to say, Turner's recommendation, like those which preceded it, was never acted upon.

Fifth, after Turner's departure I inherited the automobile file with instructions to put together a synthesis of all previous work and a recommendation for suit. Blinded by my youthful zeal, I did not realize that if Turner's memo was quietly buried after one relatively brief meeting, anything I wrote would simply be an epitaph.

Nonetheless, I worked closely with Prof. Leonard Weiss, one of the leading economic experts on the auto industry, who had taken a year's leave of absence from the University of Wisconsin to serve as special economic consultant to the Assistant Attorney General in charge of the Antitrust Division.

The results of these efforts were two lengthy memos. The first was written by me and delivered to Deputy Assistant Attorney General Comegys on October 17, 1969. It recommended the breaking up of GM, Ford, and, perhaps, Chrysler so that there would result a minimum of six to eight relatively comparably sized firms.

In addition, I recommended that the auto makers be required to sell to all comers and that warranties be unbundled from the sales price of cars. Maybe I should explain those two items. The notion of requiring that manufacturers sell to anyone who wished to purchase automobiles for resale rather than simply dealers who have a franchise relationship, was based upon the assumption on the part of many that new marketing systems could not build up in this country unless they could draw upon the more popular brands as well as the less popular brands; and, in turn, that the less popular brands, being given access to new dealers, would encourage, or hopefully encourage, new entry into the industry. The discount houses could sell cars the same way discount houses can sell television sets. In fact, the Department had a suit based upon GM's pressure upon dealers in Los Angeles not to market their cars through discount houses. But it never attacked the question of whether the discount houses could buy directly from the auto makers.

This opens up such questions as if firms like Sears Roebuck, with nationwide retail marketing systems, could gain access to automobiles could they not, perhaps, market several lines and thereby encourage new entry into the industry?

My feeling is that, at least in terms of domestic industry, this was sort of wishful thinking. But, in any event, we'd certainly wind up with more price competition at the retailing level if more retailers could get their hands on cars and, in turn, market them competitively to the public. Whereas, under the present system, the number of retailers marketing particular brands of automobiles in any market is severely limited by the auto maker.

Unbundling of warranties means that the auto makers would be required to sell their warranties separately from selling the car, because warranties are one way of locking the car buyer into having his car serviced at the dealer in order to preserve his warranty coverage. This, in turn, enables the auto makers to have considerable power over the dealers to force the dealers to accept parts made by them rather than by independent manufacturers, often at much higher prices which, not surprisingly, are in turn passed on to the public.

I hope that's clear. It's a subject that one could spend many hours on, and I think both retailing and warranties are really peripheral to the structural question. But we were, in some ways, groping for something that would appear plausible and not raise great political fears so it might, hopefully, be at least passed on to the Attorney General.

Professor Weiss' memo was written 2 weeks after mine, in response to Comegys' request that he comment upon my recommendations and analysis. Since we had been working closely together, Weiss' recommendations were substantially similar to mine.

He further suggested that GM be required to divest its lucrative automotive replacement parts divisions, Delco-Remy and A–C Sparkplug. Addressing the political question, Professor Weiss made the following statement which, in retrospect is tinged with irony:

> In terms of winning votes, a big automobile case might be worth a hundred merger cases. Conceivably, it would make Nixon into another Teddy Roosevelt.

No comment on my expertise there.

Senator HART. I will restrain myself.

Mr. ASHER. I will do the same. To the best of my knowledge no action was ever taken on Weiss' or my recommendations. Indeed, Assistant Attorney General McLaren would not even schedule a meeting to discuss them.

Today the automobile industry is bigger and, I would suggest, badder than ever. The present head of the Division talks of "a full-scale mobilization" toward the "urgent development of * * * energy conservation measures."

Yet the Senate Commerce Committee, after finding that increased automobile economy is one of the most significant and attainable short-run sources of energy conservation and that the U.S. auto makers have consistently produced overweight and needlessly energy-wasteful cars, suggests a 10-year period in which to attain significant economies.

This time frame is based on "the automobile industry's estimates of its leadtime requirements," their leadtime requirements to implement "technology that is well within the current state of the art"—that's a quotation from the Commerce Committee's report.

The Commerce Committee's findings illustrate the immense economic and social costs we are paying for a monopolized automobile industry, and I quote:

> There are clearly no technological barriers that would prevent American manufacturers from producing fuel efficient, high quality automobiles if they decided to follow some of the basic principles developed within the European market.

However, the Commerce Committee concludes:

There seems to be general agreement in this country that some Federal action is needed to achieve significant improvements in automobile fuel efficiency.

Whatever that Federal action might be, it seems clear to me that it will not be enforcement of the existing antitrust laws. Federal antitrust enforcement has long sought to curb the abuses of the automobile industry, and most significantly General Motors, with an endless string of suits and prosecutions involving bad conduct—that is, manifestations of monopoly power—rather than the power structure itself.

Thus, GM was criminally convicted in 1939 of conspiring to force its dealers to finance their wholesale purchases through GMAC, a wholly owned GM subsidiary. In affirming the conviction, the court of appeals saw through to the root of the problem, and I quote—this was in 1941:

Not only is market control present in the instant case, but a peculiarly pernicious form of it is exhibited. This becomes apparent at once when it is observed that General Motors occupies a dominant position in the automobile industry. * * *

Nonetheless, both the Department of Justice and the FTC have pursued the reckless course of continuing to attack monopolists' conduct rather than their structure.

Recently, the Justice Department unsuccessfully charged GM and Ford with conspiring to eliminate price concessions to the purchasers of automobile fleets. The *1969 Smog* case, a conspiracy to restrain pollution control development which I referred to earlier, resulted in a settlement whereby the auto makers agreed never again to conspiratorily suppress pollution control devices. And, just to show that it was not letting the auto makers get away with anything significant, the Trade Commission on January 9 of this year accepted a consent order whereby Chrysler Corp. agreed to have no more interlocking directorates with General Electric.

If there is any doubt that Federal antitrust enforcers are attacking the fundamental causes of excessive corporate power in America today, consider the following cases, all filed within the last 3 years: *U.S.* v. *Amateur Softball Association of America*, charging a conspiracy to restrain trade in the production and sale of top-grade soft balls; *U.S.* v. *Leggett & Platt, Inc.*, seeking to require the divestiture of two bedspring manufacturers; *U.S.* v. *Overhead Door Distributors Association of Greater Delaware Valley*, charging a conspiracy to fix prices of overhead garage doors; *U.S.* v. *Wayne Corp.*, charging a conspiracy to allocate territories and fix prices for Wayne Corp.'s hearses, flower cars, and ambulances; *U.S.* v. *American Technical Industries, Inc.*, attacking the acquisition of the Nation's seventh largest artificial Christmas tree manufacturer by the largest manufacturer of artificial Christmas trees; and Papercraft Corp., a Federal Trade Commission challenge of the acquisition of a gift wrapping and ribbon company.

I do not mean to suggest that anticompetitive abuses are not involved in each of those cases. However, the economic and social impact of all those abuses combined is minimal when compared with a decision by General Motors alone to increase the weight of its cars by 100 or 200 pounds.

In short, the Government's antitrust enforcers have apparently lost sight of the basic rule, as stated by former Chief Justice Earl Warren:

> An industry which does not have a competitive structure will not have competitive behavior.

The emphasis on punishing anticompetitive corporate conduct, rather than remedying monopolistic structure and its performance—except as to mergers—is deep seated in the institutions which enforce the antitrust laws. This may be due in large part to an historical accident, because both sections 1 and 2 of the Sherman Act are criminal statutes. Thus, the law can be seen as punishing not only predatory conduct like price fixing and market allocations but the structurally oriented offense of monopolization.

Even though the courts have long indicated a willingness to view section 2 as defining a basically structural offense, this was not without some reservation. With the inherent conservatism of antitrust lawyers and the antitrust bureaucracy, it is not difficult to understand their inability to reorient enforcement thinking.

This is especially true when one focuses on the basic principle of bureaucracies, which is to perpetuate their own existence. An attack on major industry structure would probably be viewed as (1) exposing an enforcement agency to a substantial diversion of its limited resources and energy away from the things it views as its raison d'etre and, thereby, (2) jeopardizing its appropriations, especially if the new venture stirs up a political hornet's nest.

Of course, I have confined my analysis to the internal decision-making process within the Antitrust Division, which is presumably immune from overt political pressures. However, the I.T. & T. cases indicate that political pressures can permeate the Justice Department's consideration of antitrust matters. And, if a major shared monopoly case were being seriously considered—especially one involving the auto makers—the political pressures would almost certainly become enormous.

The fact that most Antitrust staff members who worked on the GM matter during my tenure did so with only one eye on the law may largely account for the Division's failure to act. Assistant attorneys general as well as attorneys general, regardless of their background, promptly learn about politics and the risks involved in sticking out their necks.

Moreover, other considerations make it extremely unlikely that Federal law enforcers would use existing law to attack shared monopolies in the foreseeable future. Staff turnover is high, the cost of litigating a major case would be enormous—as is noted in your remarks, Senator Hart, in introducing the industrial reorganization bill—almost certainly requiring something like a doubling of the agency's budget, and the spent energy of the Turner years to at least try to make antitrust relevant is unlikely to be seen again soon.

In short, the enormity of the problems is clear and the need for prompt and successful remedial action is clear. And it is clear that Congress must act if there is to be any action at all.

Thank you very much.

Senator HART. If we do act, it would be in part because of the testimony you have presented this morning. Your statement is one

that should be read—will be read, I think—by everyone with an interest on the subject. How we react to your strong counsel, I just don't know. There are a number of questions here that I shall address to you. Some may require that you file an answer in writing for the record. If they fall on subjects that your memory might require reference outside, we will welcome written response in any of these questions.

You did indicate in your prepared testimony the extent of the Antitrust Division's resource allocation directed toward the auto industry during the time that you were there. Was that effort generated by the Assistant Attorney General in Charge of Antitrust, or did it percolate up?

Mr. ASHER. Well, the efforts have been going on for a number of years. The Department was never unmindful of the fact that the auto industry was around and posed some heavyweight problems.

So there were ongoing investigations. I think it's probably known that there were some grand juries impounded from time to time to gather evidence; that there was always a staff within the Division—usually at a relatively low level, though at times, at a higher level, too—to look into the question of the auto industry's structure.

When Mr. Turner became Assistant Attorney General, he had, I guess, a reputation to live up to as a man concerned with structure and, specifically, the structure of the auto industry. He also introduced an innovation bringing to the Antitrust Division as special economic consultant some very, very brilliant and eminent economists. Each of those economists, especially under Mr. Turner as well as under Mr. Zimmerman and Mr. McLaren in the present administration, worked specifically and substantially on the automobile question.

In addition, Mr. Turner had an evaluation and policy planning section formed within the Division, of which I became a member after serving in the Appellate Section. It was to work on major policy questions, and the top people in that section, as well as lesser persons like myself, worked on automobiles substantially. There were continuous efforts to deal with this, and the memorandum that I will submit to you outlines specifically what those were.

So, the efforts were ongoing, but in terms of some sense of new energy and focus, there was definitely focus on structure from the top which didn't exist—at least, I guess it had existed from time to time previously, but it had not existed in a number of previous years.

Senator HART. Except for that Turner memorandum and the several memorandums you have identified that will be printed in the record—how much of the energy effort was directed to the problem of remedy, because here, over the years, I have developed the feeling that remedy is a big problem, and that that's really what goes up is a stone wall, quite apart from political pressures and economic concerns and all the rest.

Mr. ASHER. I think substantial efforts were devoted to remedy, especially by the economists, who were most knowledgeable, and I think you'll find considerable discussion in Professor Weiss's memo. I should note that remedy has always been a serious problem in the area of monopolization because it should—as I think I've made this clear—deal with the industry structure. Ordinarily, you'd have a

one-company monopoly. One of the cases I worked on at the Division was the *United Shoe Machinery* case which, after we briefed it and won in the Supreme Court, we had to work out some form of divestiture.

Well, there was a company that had a monopoly of an industry, albeit a small one—it had only one plant. On the other hand, the automobile manufacturers all operate with numerous plants, and so the feeling was that, as to the feasibility of remedy, since economists have long worked out what we deem optimum efficient plant size or industry size, remedy would in fact be much easier in an industry like automobiles than in a single-plant monopoly, because you could allocate a number of plants to a number of separate firms, and you wouldn't have to break a single plant into parts.

This may contrast with one of the few structural suits that the Division brought against General Motors, which was the *Bus* case, which I also worked on—though not in the Department, but when I was clerking for Judge Levin in Detroit between 1963 and 1964. The GM bus division was an integral part of its bus and truck plant, and the problems of divestiture there were substantially greater and would have involved ripping the plant in half or taking tools and dies out—much greater problems than would be the case if we were to break up GM's multiplant automobile operations.

Senator HART. At that point, may I interrupt you? Do you know whether or not there has been a memorandum in the Department bearing on the relief remedy at the time the bus suit was filed?

Mr. ASHER. There were numerous memos written on that subject.

Senator HART. On the remedy?

Mr. ASHER. On the remedy. In fact, the remedy question was so severe, the problems it posed were so severe—and Judge Levin had some serious problems with them on which I won't comment further—that the trial staff on that case was composed of the Assistant Chief of the Economics Section as well as the staff attorney. An economist was on hand, I guess in large part, because of the problems of remedy as well as the problems of defining the market.

Just to summarize what I said; I think that the automobile industry, in terms of the type of remedies that were suggested, which were basically fragmentation at the manufacturing level—breaking up GM into three or four or five firms; Ford into two; Chrysler, perhaps, into two—were all much, much more feasible breaking up than almost any other monopoly industry that had been studied.

This is also true of divorcing the relationship between the automobile manufacturers and the dealers. It is also true of getting General Motors out of the business of manufacturing replacement parts. There's a bit of irony connected with that in that we successfully prevented Ford from acquiring Autolite—that's another case that I worked on, at the relief stage. Ford's basic argument was, "Look, General Motors is dominating the sparkplug business; why can't we buy in, too, and then we can compete with them a bit more effectively."

Under the Clayton Act, it was clear that the acquisition of Autolite by Ford was violative of the law, but the irony is huge, because GM, the monopolist, was there controlling not only the automobile market, but the aftermarket for parts. And Ford—not that I'm

shedding any tears for it—was prevented from getting a comparable position by acquisition.

There is tremendous inequity, and it points up once again the fact that the antitrust laws seem to be dealing with potential concentration, future concentration, acquisitions. But they are doing nothing about the entrenched concentration and the entrenched power that that concentration causes. Therein, I think, lies the tale of my testimony and the tale of the legislation before the subcommittee, and the need for that legislation.

Senator HART. You really ought to stop at that point because it does underscore the problem we are always going to have with existing law, in my judgment—the need for more direct action that the bill suggests.

On that *Autolite* case the order required divestiture by Ford; am I right on that?

Mr. ASHER. That is right.

Senator HART. Were you aware of problems for Ford in disposing of its sparkplug plant? Was there any difficulty in obtaining a buyer?

Mr. ASHER. I'm not certain how the divestiture was implemented. I'm relatively certain that it has been completed. The problems very often derive from the fact that the firm that has to divest is often left with control over finding a buyer and bringing about the divestiture. If it doesn't want to divest, it somehow or other manages to find great difficulties coming up with a buyer. If I'm not mistaken, I think Ford, in fact, found one reasonably promptly. I don't know whether it was by means of a spinoff or not, and I apologize for my lack of knowledge on that.

Senator HART. Mr. Chumbris?

Mr. CHUMBRIS. Thank you, Mr. Chairman.

I don't have any questions, but I do recall, Mr. Chairman, we had Dr. Turner here after he left the Department of Justice and returned to Harvard University. He was testifying on a subject of concentration of economic power before the bill was introduced. Mr. Chairman, you might remember that Dr. Turner felt that Congress should legislate. He didn't think he had a full enough authority under existing law to proceed.

It wasn't too long after that when a successor of his, Richard McLaren, did take a chance in the conglomerate field and went ahead and filed a series of conglomerate suits.

Now, how is what I've just related inconsistent with what you said about Donald Turner's position when he left the Department of Justice and as contained in his memorandum?

Mr. ASHER. I would suggest that Mr. Turner's words probably speak for themselves. You can read the memo; it is dated; and see what he says.

I think that in, perhaps, some mitigation of his position, he clearly has come out in support of the need for legislation. That's not inconsistent with the belief that the existing law might attack the problem; whether it could successfully deal with it or not, we don't know.

But he did feel that suit should be brought, and all of us had considerable reservations about whether the courts could deal with

such a suit, about how long it would take, and whether the Department could deal with it.

Nonetheless, he recommended it and believed that the law could deal with it. In terms of Mr. McLaren and conglomerates, I worked on the first conglomerate case and drafted the complaint and the memo with the Attorney General on that and am familiar with his views. On the other hand, Mr. McLaren totally refused to address himself to the automobile industry.

Mr. CHUMBRIS. Well, did the memorandum that Prof. Donald Turner left with the Department of Justics become a public document immediately after when he left?

Mr. ASHER. No, it did not.

Mr. CHUMBRIS. That is probably why we didn't hear about it during the time that he testified before us, because at that time, I recall very clearly that Donald Turner, in answering questions that John Blair put to him, felt that the existing law may not be adequate. But his feeling in the matter was that this is a job for Congress to proceed in these concentrated industries.

Senator HART. For my own information and better understanding of the way this business evolves, that Turner memorandum—which is 1969—to whom did it go, and what kind of discussions were had as a result of it?

Mr. ASHER. It was addressed to Mr. Zimmerman, who was Mr. Turner's successor. My understanding, which I think is accurate, is that as a result of that memo being sent to Mr. Zimmerman there was one meeting held among about five people—I was not included—to discuss those recommendations, and that nothing was ever——

Senator HART. Is the memorandum dated? Is it dated 1969 or 1968?

Mr. ASHER. July 24, 1968.

Senator HART. Can you recall the five who did discuss it?

Mr. ASHER. I believe that they included Donald Baker, who is presently Deputy Assistant Attorney General—at the time he was chief of the evaluation and policy planning section—Mr. Zimmerman, Mr. Turner—and I am trying to recall who the special economics consultant was at that time.

Mr. CHUMBRIS. Was it Sweeney?

Mr. ASHER. No, it was either Professor Mann, or——

Mr. CHUMBRIS. I was thinking of Jim Sullivan, who was a special assistant.

Mr. ASHER. No.

Senator HART. Well, here again this is where the memory problem develops.

Mr. ASHER. There is no way that I can find that out in terms of any other documents that I am not supposed to have.

Senator HART. Well, let's just see if we can establish who the economist is.

Mr. ASHER. It is possible it would be in the committee's best interest to see if someone from the Department in a responsible position can be brought here to explain these matters, because too often matters of high public policy are disposed of behind closed doors, and this was disposed of in a way that the Attorney General didn't even know of it. Mr. Clark had no idea that all of this had taken place—at least I can't speak for him, but I believe that to be so.

And it suggests that major law enforcement and public policy issues are often disposed of by inaction, in a way that the public has no real input, which I think is a very serious problem.

Senator HART. It is one that this committee would have an interest in, and we will make an effort to screen that testimony.

Mr. Bangert?

Mr. BANGERT. Just one question, Mr. Asher. I believe you indicated that in terms of trying to figure out what your remedies would be, you did come at least to some type of conclusions relative to divestitures in the automobile industry itself, is that correct?

Mr. ASHER. Yes, that is true.

Mr. BANGERT. And I would assume that in doing so you would try to take a look at such things as economies of scale and efficiencies and work those into your overall plan of divestiture so that you don't end up with something worse than what you started with.

Mr. ASHER. Absolutely. The reason for the substantial input by economists during this period of time that I was describing was that they had worked many years on the question of what the scale economies are in automobile manufacture. And in fact, Professor Weiss, with whom I worked most closely on this matter, has discussed that at considerable length in his book, as well as Professor Bain and virtually every other student of the automobile industry. They have devoted significant attention to just what are the scale economies.

Are the firms bigger than they have to be in order to produce cars economically? I would suggest that virtually all sound economic thinking on the subject indicates that General Motors is many, many times larger than is necessary to achieve those economies, and I would also suggest that when you compare—as a consumer—the product that you can get from General Motors, and the amout of money that it costs, it doesn't seem to make a very strong case, in fact, that it is the product of a very economical system.

Someplace along the line, economies, if there are any, are not being passed on to the consumer. On the other hand, GM's profits are immensely high.

Mr. BANGERT. How about other areas, such as the effect on stockholders, the effect on labor, that type of thing? Would that be considered ripple, and outside of your consideration, or would it be something that would go into it?

Mr. ASHER. Neither of those factors was plugged into our decision-making. Perhaps in part because all this thinking that went on was really very preliminary. It was a continuous effort to get some sort of commitment to move.

If we were unclear as to whether the move was to bring the Attorney General in and say that this is such a serious problem we have to do something about it, to see if we could get some commitment from on high to go ahead, or whether it was to simply obtain a commitment within the Division to draft up another complaint. The last one that had been done was drafted in 1966 and never was submitted to the Attorney General. I don't think I am revealing a confidence, but Mr. Clark learned about it for the first time when he read about it in the Wall Street Journal some years later, and

then asked to see a copy of the memo and complaint. But we did not deal with these questions.

I should also point out that there have been very few situations of divestiture of major industries where the sum of the parts turned out to be worth less than the whole. This was a subject that considerable attention was devoted to in the A.T. & T.-Western Electric matter, where during the same year there was a considerable effort on the part of the Antitrust Division to reopen that decree, or bring a new case to require A.T. & T. divest itself of Western Electric.

And the feeling generally among all who looked at it, including people in the securities industries, was that the stocks of A.T. & T. and Western Electric, if they were split in two separate companies, would probably be worth more than the companies combined, especially operating under the restraints of the 1953 decree. Even though that decree didn't do much to create competition, it did, probably, slow down the ability of Western Electric to compete in a number of electronics markets.

Mr. BANGERT. Thank you.

Thank you, Mr. Chairman.

Senator HART. As you heard Ramsey Clark say this morning, if all of this had gotten to him he still has the feeling that those concentrations, which are longstanding, would be attacked irrationally if they were attacked at all by the Sherman and Clayton Acts.

Mr. ASHER. Do you want me to make a comment?

Senator HART. Yes.

Mr. ASHER. I don't really know. The way the courts deal with antitrust cases suggests—and obviously the way in which the enforcers deal with it—that there is a built-in irrationality.

At least an effort to break up General Motors or to break up the automobile manufacturers, and to try to establish some competition in the industry would demonstrate several things:

One, that the existing enforcement mechanisms had some commitment toward relevance, and were dealing with the "gut" problems of competition and excessive economic and corporate power in this country rather than with the fringe problems. That is number one.

Now, whether or not that would accomplish anything, I don't know.

Second, it could show that perhaps even if the enforcement machinery is going to move, the courts won't buy it. The courts could have thrown the case out, or could have floundered so badly in trying to formulate relief that nothing would have happened.

Again, that would have been a clear indication to Congress of where the need for the change was.

In fact, what we find happening is a preemption of the issue by inaction, so that it doesn't surface visibly. The public has been given no indication of the enormity of this problem by the enforcement agency that is supposed to keep the public informed, in part, through litigation.

Litigation is a very educational device. It can educate the public, it can educate Congress, and it can educate the courts, and the enforcers themselves. But the paralysis that is taking place, I think, makes it clear that if Congress doesn't act to try to deal with these questions, then no one will.

Now, of course, it is a separate question whether acting along the lines of fragmenting this industry is really the right approach. There is much talk these days, mostly about the oil industry because it seems to be out on the cutting edge of the energy crisis—people are not lined up for 2 hours not at their car dealer but at their gas station, although I would suggest that the energy mess that we are in is at least as much a product of the automobile industry as of the oil industry.

There is a lot of talk today of nationalization, or it's more common euphemisms like "public ownership," and that seems to me to be the basic alternative to relying upon antitrust and trying to establish competition.

I don't really know what the answer is, but I know that those are the two basic avenues, and that something is going to have to be done because the degree of public victimization by excessive corporate power has become so great that we may find an answer to Professor Hofstater's 1964 essay, "Whatever Became of the Antitrust Movement?" It may come back, and the alternative is that we may find it replaced with a movement toward Government ownership of the major industries of this Nation.

But one way or the other, we have to make those industries responsive to the public, and that is not happening now. Clearly, antitrust enforcers are not prepared to wage that battle, and in one way or another Congress must act to remedy that because there is nowhere else for the public to turn.

Certainly, the leadership at the moment isn't coming from the executive branch.

Senator HART. Thank you very much for sobering and wise counsel.

Mr. ASHER. Thank you.

[The following was received for the record. Testimony resumes on p. 2045.]

MATERIAL RELATING TO THE TESTIMONY OF THOMAS R. ASHER

Exhibit 1.—Prepared Statement

PREPARED STATEMENT OF THOMAS R. ASHER, FORMER COUNSEL, ANTITRUST DIVISION, U.S. DEPARTMENT OF JUSTICE

S. 1167, the proposed Industrial Reorganization Act, would make several significant changes in the existing antitrust laws. First, it would prohibit monopoly power, whereas the Sherman Act prohibits monopolization and attempts and conspiracies to monopolize. This change clearly focuses the law's attention upon industry structure and its competitive impact, rather than on the conduct which brought about that structure.

Second, monopoly power is defined to exist in those industries where a few firms dominate the market in a way which closely resembles the market control of a single monopolist—that is, shared monopoly.

And third, S. 1167 creates a new mechanism to dismantle the industrial structures which give rise to monopoly power.

The need for this type of legislation is great. The current energy crisis is proving to every American that the enormous corporations which dominate vital national markets are unresponsive to public needs; that market power has turned economic priorities, and economic theory, upside down. Rather than manufacturers being the servants of consumers, in many industries market power has become so great that the manufacturers are autocrats. Creating competition in these markets is the least drastic and, in the eyes of many, the most reliable remedy available.

My experience at the Justice Department between 1966 and 1969[1] convinces

[1] Attached as Appendix A is a brief summary of the writer's relevant work while an attorney in the Evaluation and Policy Planning Section of the Antitrust Division.

me that, absent some such clear Congressional call for action, the federal law enforcement agencies will continue to devote their resources to marginal indicia of non-competition while leaving essentially intact the major structures giving rise to those symptoms. If you will pardon heavy-handed simile, present governmental enforcement of the anti-monopoly laws is like distributing band-aids to people run over by automobiles. The reasons for this phenomenon are not totally clear, alhtough I hope that my testimony will shed some light on hte spbject. What is clear, however, is that the antitrust laws are not dealing with the most serious problem they were designed to prevent—monopoly power.

My remarks are divided into three basic parts. First, at the risk of stating the obvious, I suggest that monopoly power—shared or otherwise—is the basic concern of the Sherman Act and should therefore be the primary objective of antitrust enforcement. Second, as to shared monopolies in general and the automobile industry in particular, federal law enforcement picks away at the indicia of monopoly power, while leaving the power itself intact. And, third, I will indicate why, in the absence of new and clear legislation, federal enforcement efforts are unlikely to attack the structure of shared monopoly power.

I. THE SHERMAN ACT AND MONOPOLY POWER

The passage of the Sherman Act in 1890 was motivated by a rising public concern about corporate market power which threatened to tyranize the public, politically as well as economically. Thus, Senator Sherman spoke of the need "to preserve not only popular rights in their broad sense, but the rights of individuals as against associated and corporate wealth and power." [2]

The courts early recognized that monopoly could exist in industries where market power was shared by a handful of firms, especially in markets, like the present-day automobile industry, which are asymetrical—with one overwhelmingly dominant firm setting the rules and prices for both its less powerful rivals and for the consuming public. Thus, by changing one letter and thereby making "cars" out of "cans"—perhaps a distinction without a difference—the following statement is as pertinent today as when it was written in 1916:

"One who sells only one-half of the cans that are sold does not, of course, possess a monopoly in the same sense as he would if he sold all or nearly all of them. Yet he may have more power over the industry than it is well for any one concern to possess * * * [O]ne of the designs of the framers of the Anti-Trust Act was to prevent the concentration in a few hands of control over great industries." [3]

Chief Justice White, in the 1911 *Standard Oil* decision, stated that the Sherman Act was designed to protect the public not merely from single-company monopolies, but from acts and structures which, "although they did not constitute a monopoly, were thought to produce some of its baneful effects." [4]

Those "baneful effects"—high prices, poor quality of goods and services, retarded innovation, insurmountable barriers to entry, lack of responsiveness to consumer needs, excessive corporate political power, etc.—are well known to the sub-Committee. Similarly, there is massive evidence that those pernicious effects result from monopoly power regardless of whether it is held by one firm or shared by a few.

Perhaps the most freightening of all the dangers of monopoly power is the perversion of our political process. Woodrow Wilson's words are at least as relevant today as when they were written in 1913:

"If monopoly persists, monopoly will always sit at the helm of the government. I do not expect to see monopoly restrain itself. If there are men in this country big enough to own the government of the United States, they are going to own it." [5]

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[2] *Congressional Record*, 51st Cong., 1st Session (March 21, 1890), p. 2460. See also Justice Harlan's statement that the Sherman Act's prohibition against monopolization was based upon a legislative judgment that, although human slavery had been constitutionally abolished, "the country was in real danger from another kind of slavery . . . slavery that would result from aggregations of capital in the hands of a few individuals and corporations controlling, for their own profit and advantage exclusively, the entire business of the country, including the production and sale of the necessaries of life." *Standard Oil Co.* v. *United States*, 221 U.S. 1, 83 (1911).

[3] *United States* v. *American Can Co.*, 230 Fed. 859, 901–902 (D.Md. 1916), appeal dismissed, 256 U.S. 706 (1921).

[4] *Standard Oil, supra*, 221 U.S. at 54, 60–61.

[5] Woodrow Wilson, *The New Freedom*, (1913).

Politicians, economists and lawyers agree with Wilson's conclusion that the antitrust laws are based primarily on the political decision that excessive market power constitutes a social evil, rather than on the economic notion that competition leads to optimum efficiency and resource allocation. Carl Kaysen and Donald F. Turner wrote recently that antitrust "rests basically on a political judgment . . . In our democratic egalitanian society, large areas of uncontrolled private power are not tolerated." [6]

II. ANTITRUST DIVISION ACTIVITIES VIS-A-VIS SHARED MONOPOLIES

Between 1966 and 1968, when Turner was Assistant Attorney General in charge of the Antitrust Division, considerable attentions were devoted to bringing suit against sharde monopolies. Most efforts were focused on the automobile industry. However, the Division made not one *recommendation* that the Attorney General authorize a monopolization suit against the auto makers, or against General Motors alone, nor did it recommend the bringing of any other shared monopoly case.

This institutional paralysis should be considered in light of the following factors. First, Mr. Turner came to his stewardship of the Division as America's preeminent antitrust theorist, the co-author of *Antitrust Policy*. That work clearly spells out the thesis that shared monopolies represent the major threat to competition in present day America and that they must be broken up if antitrust is to carry out its stated objectives.

Second, since the most conspicuous and most economically pernicious of all shared monopolies is the automobile industry, Turner set his most trusted advisers—legal and economic—working to put together a shared monopoly case against either GM or the big three.

There was virtually unanimous agreement among those who analyzed the situation that the domestic auto industry was not only structured like a shared monopoly but performed like one. Profits over the years were consistently and substantially above the average for manufacturing industries, with General Motors enjoying a wide margin over both Ford and Chrysler. Pricing was "administered" rather than competitive, with General Motors calling the tune. For example, in 1956 Ford led off the announced price increases with an average per car rise of $58. Two weeks later, GM announced Chevrolet prices $180 above the previous year. Ford immediately *upped* its price by $50 and within three months again raised them to within $10 of Chevrolet.

Moreover the automakers turned out strikingly similar products [7] and, what little innovation they exhibited, was virtually uniform among them. Their lockstep refusal to produce small and/or economical cars is a classic example of unresponsiveness to consumer demands which, in light of the current energy situation, can generously be characterized as crass social irresponsibility. Sometimes the industry even resorted to open conspiracy in order to deprive the public of better and less socially offensive products. The classic case involves the suppression of pollution control devices and technology, which the Justice Department attacked in 1969.[8]

Of special concern to the Antitrust Division was General Motors, which appeared to have monopoly power because of its substantially greater size and profits. By reducing its prices to a still profitable level, GM had—and has—the power to drive both Ford and Chrysler out of business. Furthermore, only GM was substantially integrated forward into the automotive accessories like sparkplugs, electrical equipment, and batteries. Its profits on these replacement parts are much higher than on automobiles themselves, enabling GM not only to milk the market but thereby further subsidize any price warfare it might choose to wage against Ford, Chrysler, American Motors, or foreign producers. With such monopoly power it is not surprising that GM called the shots.

And, there was virtually no chance of new entry. Barriers were universally regarded as insuperable, and the relatively recent demises of Nash, Hudson, Packard, Studebaker, and Kaiser were the proof of the pudding.

Third, while their approaches differed, all who worked on the question recommended a major structural suit. One economist suggested limiting the re-

[6] C. Kaysen and D. Turner, *Antitrust Policy: An Economic and Legal Analysis*, 2nd Ed. (1965).

[7] This is still true. The 1974 basic Ford, Chevrolet and Plymouth weights, respectively, are 4,300, 4,300, and 4,315 pounds. *New York Times*, 12/14/73, p. 18.

[8] *U.S.* v. *Automobile Manufacturers Assn., et al.*, D. J. No. 2037, filed January 10, 1969.

quested relief to divestiture of the franchised dealer system, which was perceived as a major impediment to new entry into automobile manufacturing. All the others, however, recommended breaking up GM into several independent automobile makers, and several recommended that Ford, as well, be at least split in half. Some recommendations also included forcing GM to divest its parts divisions.

All agreed that the automobile industry acted like a monopoly, made money like a monopoly, was unresponsive to consumer demands and desires like a monopoly—in essence, that it had been monopolized and suit should be brought to restructure it so that competition might at least have a fighting chance.[9]

Fourth, although the Division's intellectual elite believed that General Motors should be broken up and that an effort to do so would, more than any other single act, prove that antitrust can deal with the ugly realities of mid-twentieth century plutocracy, they all groped for a "legal theory" which comported with judicial precedent. In the absence of a theory which met his high intellectual demands, Turner did nothing, proving Gothe's thesis that "thinking is easy; action is difficult; to act in accordance with one's thought is the most difficult thing in the world."

However, several weeks after he had resigned, Turner suddenly focused on the car makers. After his oft-proclaimed intention to attack shared monopolies, after setting up a task force of lawyers and economists to hunt down the best cases—presumably so that one or two could be brought, after turning virtually all of his closest advisers loose on the automobile industry, and after he himself had resigned without *recommending* the filing of one shared monopoly suit, Mr. Turner wrote a memorandum to his successor, Edwin H. Zimmerman, on July 24, 1968, recommending a monopolization suit against GM and Ford to break the former into three parts and the latter into two and, in addition, to prohibit exclusive franchising. Needless to say, Turner's recommendation, like those which preceded it, was never acted upon.

Fifth, after Turner's departure I inherited the automobile file with instructions to put together a synthesis of all previous work and a recommendation for suit. Blinded by youthful zeal, I did not realize that, if Turner's memo was quietly buried after one relatively brief meeting, anything I wrote would simply be an epitaph.

I worked closely with Professor Leonard Weiss, one of the leading economic experts on the auto industry,[10] who had taken a year's leave from the University of Wisconsin to serve as special economic consultant to the Assistant Attorney General. The results of these efforts were two lengthy memos. The first was written by me and delivered to Deputy Assistant Attorney General Comegys on October 17, 1969, and recommended breaking up GM, Ford, and, perhaps, Chrysler so that there would result a minimum of six to eight relatively comparable firms. In addition, I recommneded that the auto makers be required to sell to all comers and that warranties be unbundled from the sales price of cars, with warranty service to be offered at any garage which could meet objective certification standards.

Professor Weiss's memo was written on October 31, 1969, in response to Comegys' request that he comment upon my recommendations and analysis. Since we had worked closely, Weiss's recommendations were substantially similar to mine. He further suggested that GM be required to disvest its lucrative automotive replacement parts divisions, Relco-Remy and A-C sparkplug. Addressing the "political" question, Weiss made the following statement which, in retrospect, is tinged with irony:

"In terms of winning votes, a big automobile case might be worth a hundred merger cases. Conceivably, it would make Nixon into another Teddy Roosevelt."

To the best of my knowledge, no action was ever taken on Weiss's or my recommendations. Indeed, Assistant Attorney General McLaren would not even schedule a meeting to discuss them.

III. THE NEED FOR LEGISLATIVE REFORM

Today the automobile industry is bigger and badder than ever. The present head of the Antitrust Division talks of "a full-scale mobilization" toward

[9] At the Subcommittee's request I will provide it with a copy of a memorandum dated October 17, 1969, in which I summarize the 1966–68 memos on the automobile industry, as well as making some recommendations of my own. I am also prepared, at the Subcommittee's request, to provide it with copies of the Turner and Weiss memos which I will allude to shortly.

[10] See, e.g., L. Weiss, *Economics and the American Industry* (1966).

the "urgent development of * * * energy conservation measures." [11] Yet the Senate Commerce Committee, after finding that increased automobile economy is one of the most significant and attainable short-run sources of energy conservation and that the *U.S.* auto makers have consistently produced overweight and needlessly energy wasteful cars,[12] suggests a ten-year period in which to attain significant economies. This time frame is based on "the automobile industry's estimates of its lead-time requirements" to implement "technology that is well within the current state of the art." [13]

The Commerce Committee's findings illustrate the immense economic and social costs we are paying for a monopolized automobile industry:

"There are clearly no technological barriers that would prevent American manufacturers from producing fuel efficient, high quality automobiles if they decided to follow some of the basic principles developed within the European market.[14]

However, the Committee concludes, "there seems to be general agreement in this country that some Federal action is needed to achieve significant improvements in automobile fuel efficiency." [15]

Whatever that Federal action might be, it seems clear that it will not be enforcement of the existing antitrust laws. Federal antitrust enforcement has long sought to curb the abuses of the automobile industry, and most specifically General Motors, with an endless string of suits and prosecutions involving "bad conduct"—that is, manifestations of monopoly power—rather than the power structure itself. Thus, GM was criminally convicted in 1939 of conspiring to force its dealers to finance their wholesale puhchases through GMAC, a wholly owned GM subsidiary. In affirming, the Court of Appeals saw through to the root of the problem: "Not only is market control present in the instant case, but a peculiarly pernicious form of it is exhibited. This becomes apparent at once when it is observed that GMC (General Motors Corporation) occupies a dominant position in the automobile industry. * * *" [16]

Nonetheless, both the Justice Department and the FTC have pursued the feckless course of continuing to attack monopolists' conduct rather than their structure. Recently, Justice unsuccessfully charged GM and Ford with conspiring to eliminate price concessions to purchasers of automobile fleets.[17] The 1969 "Smog" case resulted in a settlement whereby the automakers agreed never again to conspiratorily suppress pollution control devices. And, just to show that it was not letting the auto makers get away with anything significant, the FTC on January 9 of this year accepted a consent order whereby Chrysler Corp. agreed to have no more interlocking directorates with General Electric Co.

If there is any doubt that Federal antitrust enforcers are attacking the fundamental causes of excessive corporate power in America today, consider the following cases, all filed in the last three years: *U.S.* v. *Amateur Softball Association of America,*[18] charging a conspiracy to restrain trade in the production and sale of top-grade soft balls; *U.S.* v. *Leggett & Platt, Inc.,*[19] seeking to require the divestiture of two bedspring manufacturers; *U.S.* v. *Overhead Door Distributors Assn. of Greater Delaware Valley,*[20] charging a conspiracy to fix prices of overhead garage doors; *U.S.* v. *Wayne Corp.,*[21] charging a con-

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[11] Assistant Attorney General Thomas Kauper, speech to the Antitrust Law Section, New York State Bar Assn., Jan. 23, 1974.

[12] Senate Commerce Committee, *Report on the National Fuels and Energy Conservation Act of 1973* (Nov. 16, 1973, p. 55).

[13] Id., pp. 57, 56.

[14] Id. p. 55.

[15] Id., p. 58.

[16] *United States* v. *General Motors Corporation,* 121 F. 2d 376, 403 (7th Cir., 1941), cert denied, 314 U.S. 618 (1941).

[17] Indictment and civil complaint filed May 1, 1972. See CCH Trade Reg. Reports, Case 9238, Paragraph 45,072 (2/4/74).

[18] *U.S.* v. *Amateur Softball Association of America, Athlone Industries, Inc., and H. Harwood & Sons, Inc.* 5 CCH Trade Reg. Rep.; ¶53,555 [Civil antitrust suit charging "contriving and conspiring to restrain the production and sale of top-grade *soft balls* in violation of Sherman Act.]

[19] *U.S.* v. *Leggett & Platt, Inc.* 5 CCH Trade Reg. Rep.; ¶53,432 [To require L & P of Carthage, Missouri, to divest itself of two *bedspring* manufacturers.]

[20] *U.S.* v. *Overhead Door Distributors Assn. of Greater Delaware Valley, et al.* 5 CCH Trade Reg. Rep.; ¶53,455 [Charges fo conspiring to fix prices for the sale and installation of *overhead garage doors.*] 9/17/73, consent decree entered; (CCH 1973–2 Trade Cases ¶74,657).

[21] *U.S.* v. *Wayne Corp.* 5 CCH Trade Reg. Rep.; ¶53,475 [Charging Wayne Corporation of Richmond, Indiana, with conspiring with its distributors to allocate territories and maintain resale prices for the sale of company's *hearses, flower cars, and ambulances.*] June 5, 1972 consent decree entered (CCH 1972 Trade Cases ¶73,960).

spiracy to allocate territories and fix prices for hearses, flower cars, and ambulances; *U.S.* v. *American Technical Industries, Inc.*,[22] attacking the acquisition of the nation's seventh largest artificial Christmas tree manufacturer by the largest manufacturer of artificial Christmas trees; and *Papercraft Corp.*,[23] challenging the acquisition of a gift wrapping and ribbon company.

I do not mean to suggest that anticompetitive abuses are not involved in each of those cases. However, the economic and social impact of all those abuses combined is *de minimis* when compared with a decision by General Motors alone to increase the weight of its cars by one or two hundred pounds. In short, the government's antitrust enforcers have apparently lost sight of the basic rule, as stated by former Chief Justice Earl Warren: "An industry which does not have a competitive structure will not have competitive behavior." [24]

The emphasis on punishing anticompetitive corporate *conduct*, rather than remedying monopolistic *structure* and its performance—except as to mergers—is deep seated in the institutions which enforce the antitrust laws. This may be due in large part to an historical accident, because both Section 1 *and* Section 2 of the Sherman Act are criminal statutes. Thus, the law can be seen as *punishing* not only predatory conduct like price fixing and market allocations (Section 1) but the structurally oriented offense of monopolization (Section 2).

Even though the courts have long indicated a willingness to view Section 2 as defining a basically structural offense, this was not without reservation.[25] With the inherent conservatism of antitrust lawyers and the antitrust bureaucracy, it is not difficult to understand the inability to reorient enforcement thinking.

This is especially true when one focuses on the basic principle of bureaucracies, which is to perpetuate their own existence. An attack on major industry structure would probably be viewed as (1) exposing an enforcement agency to a substantial diversion of its limited resources and energy away from the things it views as its *raison d'etre* and, thereby, (2) jeopardizing its appropriations, especially if the new venture stirs up a political hornet's nest.

Of course, I have confined my analysis to the internal decision making process, which is presumably immune from overt political pressures. However, the ITT cases indicate that political pressures can permeate the Justice Department's consideration of antitrust matters. And if a major shared monopoly case *were* being seriously considered—especially one involving the auto makers—the political pressures would almost certainly become enormous.

The fact that most of the Antitrust Division staff members who worked on the GM matter during my tenure did so with one eye on the law may largely account for the Division's failure to act. Assistant Attorneys General as well as Attorneys General, regardless of their background, promptly learn about politics and the risks involved in sticking out their necks.

Moreover, other considerations make it extremely unlikely that Federal law enforcers will use existing law to attack shared monopolies in the foreseeable future. Staff turnover is high, the cost of litigating a major case would be enormous, almost certainly requiring something like a doubling of the agency's budget, and the spent energy of the Turner year to at least try to make antitrust relevant is unlikely to be seen again soon.

In short, the enormity of the problem is clear and the need for *prompt and successful* remedial action is clear. And it is clear as well that Congress must act if there is to be any action at all.

Appendix A

As an attorney with the Antitrust Division of the U.S. Department of Justice (Evaluation and Policy Planning Section), I worked on the following matters pertinent to the foregoing testimony:

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[22] *U.S.* v. *American Technical Industries, Inc.* 5 CCH Trade Reg. Rep.; ¶53,528 [Challenging the acquisition of Masterpiece, Inc., of Blakely, Pennsylvania, by American Technical Industries, Inc., of New York where the latter was the largest, and the former was the seventh largest producer of *artificial Christmas trees* in the United States.]

[23] *Papercraft Corp.* FTC Docket No. 8779 (7/30/71). Charge: Acquisition of gift wrapping paper and ribbon company. (§ 7, Clayton) Order to c. and d. ¶9621.063; 9625.28; 9637.09; 9651.04; 19,725.

[24] *U.S.* v. *E.I. duPont de Nemours & Co.*, 351 U.S. 377, 426 (1956) (dissenting opinion).

[25] See, e.g., *United States* v. *Aluminum Co. of America*, 148 Fed. 416, 425 (2d Cir., 1945) and *United States* v. *Grinnell Corp.*, 384 U.S. 566 (1966).

(1) On September 15, 1967 a task force was organized within the Division to explore and evaluate potential shared monopoly cases. I was a member of this group. We focused primarily on the following industries—tires and tubes, flat glass, steel ingots, automobiles, metal containers, breakfast cereals, and electric lamps.

(2) In 1968–69 I headed an exploration of the breakfast cereal oligopoly,[1] an investigation of the flat glass industry, and an investigation of the commercial bank duopoly in Oregon. My recommendations for suit in the cereal case were, to the best of my knowledge, never acted upon by the Division.

(3) From the Summer of 1968 until my departure in December, 1969, I was the only attorney actively working on the automobile industry shared monopoly matter, discussed above.

(4) I worked on the *Ford* (*Autolite*) case after a judgment of liability had been obtained, but before the Division acted to seek divestiture relief. I prepared the initial memorandum of law to the district court requesting divestiture.

Exhibit 2.—Memo From Donald F. Turner to Edwin M. Zimmerman, Re Section 2 Case Against GM, Ford, and Chrysler

JULY 24, 1968.

File: 6–0–38–52; 60–0–38–53; 60–0–38–54.
To: Edwin M. Zimmerman, Assistant Attorney General, Antitrust Division.
From: Donald F. Turner.

SECTION 2 CASE AGAINST GENERAL MOTORS, FORD, AND CHRYSLER

I

A GENERAL REVIEW

Until last fall, the principal thrust of our investigation of the automobile industry was a possible Section 2 monopolization suit against General Motors alone. Metzger prepared a draft complaint along that line, accompanied and explained by his fact memorandum of June 3, 1966. In essence, the proposed complaint rested (1) on GM's acquisitions, particularly those of up to and including the year 1919, and (2) on GM's policy, adopted around 1926 or 1927, of forcing its dealers to handle only GM lines.

The matter was assigned to Breyer and Comanor for review and comments, with particular focus on the question of whether GM could be shown to possess the requisite degree of monopoly power to support a Section 2 monopolizing charge.

Subsequently, it was suggested (primarily by Williamson as I recall) that it would be more appropriate to bring a case against all three of the leading producers, primarily in order to seek industrywide relief against the franchise system, which undoubtedly played a major role in the disappearance of the smaller automobile producers and which continues to be a major factor in the extraordinarily high barriers to new entry.

On reviewing the matter last fall, we instructed the staff (principally Baker and Shepherd) to proceed to write up a shared-monopoly case against GM, Ford and Chrysler. Two successive drafts of a memorandum to the Attorney General were prepared, together with a revised proposed complaint. As did Metzger's draft, the new proposed complaint cites acquisitions and franchising practices as the kind of "exclusionary" conduct that makes the monopoly power acquired by the three leading companies unlawful under Section 2. In addition, the revised draft relied on the following:

(1) backward integration into parts manufacture;
(2) controls over independent suppliers;
(3) warranty policies;
(4) taxicab pricing; and
(5) model change and standardization policies.

The Baker-Shepherd draft was thoroughly discussed in a staff conference two or three months ago, taking into account the comments of several top staff

[1] The case I recommended was very similar to that ultimately brought by the F.T.C. *Kellogg, et al.* Docket No. 8883.

members who had reviewed it. We tentatively decided to abandon any reliance on conduct factors other than acquisitions and franchising practices.

Briefly, the reasons were as follows. Integration into parts manufacture, controls over independent suppliers, and the warranty policies might well be the basis for an antitrust case alleging monopolization or unlawful restraints of trade in the manufacture and sale of parts, but these practices are substantially irrelevant to monopolizing the production and sale of automobiles unless they could be shown to have imposed substantial handicaps on small automotive producers by, say, making it difficult for them to procure needed components from independent suppliers at competitive prices; and it was tentatively concluded that there was little indication of this. As for taxicab pricing, the issue is one of price discrimination, which is indeed an indication of monopoly power in the auto industry, but which is not "monopolizing" conduct unless the pricing of taxicabs could be shown to be predatory. This does not seem likely, though perhaps further study of the issue is warranted. One of the problems is that the pricing of taxicabs in large part reflects intense competition among the three leading companies themselves, which is quite different from the case of a dominant monopolist competing against small single-line producers.

Nor does it seem reasonably likely that we can successfully rely on the annual model change policy or refusals to standardize as instances of "monopolizing" conduct, however much these policies may have contributed to the decline and fall of the smaller producers. General Motors instituted the annual model change policy at a time when it was challenging Ford for leadership. The policy was highly successful, and Ford and Chrysler were virtually compelled to follow in order to endeavor to protect their market positions. Doubtless, all three were well aware of the obvious fact that this pattern of production changes put small producers at a serious competitive disadvantage, inasmuch as retooling costs (which are quite high) had to be recouped out of a much smaller volume of sales. And it is quite possible, though not certain, that if the industry had been more competitively structured—with, say, eight to ten companies of comparable size—a pattern of annual model changes would never have developed or at least would not have become so pervasive. But it is almost impossible to get around the fact that the annual model change policy succeeded because it gave most consumers what they wanted.

While we might believe that consumers would have been better off in the long run if they had not been subjected to the blandishments of annual style changes, that is a value judgment which cannot be translated into a persuasive charge that the annual model change policy is the kind of "exclusionary" conduct that makes monopoly power unlawful—particularly where, as here, two of the companies charged with shared-monopoly power were compelled to respond as they did. (As for refusal to standardize parts, the point was not fully developed. There might possibly be something in it, but here too we have the problem of criticizing a business judgment as to product.)

To sum up, the proposed shared-monopoly case, like the originally proposed monopoly case against GM alone, comes down to relying on acquisitions and franchising policies.

At this point, I believe it is necessary to review again the question of just what kind of a case should be brought—against GM alone, against all three, or a new alternative that has not yet been considered, namely a combination of the two. Let me summarize the difficulties encountered in each of the two alternatives we have so far been considering.

The difficulties with a suit against GM alone are as follows. First, since GM's share of automobile sales in unit terms has ranged around 50 per cent and has not exceeded 55 per cent in recent years, we would be dealing with a market share well below those attacked in past monopoly cases. Moreover, again in contrast to past cases, GM faces not a number of relatively insignificant competitors, but two very substantial ones. GM's market share undoubtedly understates its position in the industry, because GM has substantially higher profit rates than either Ford or Chrysler, and by lowering its prices to still profitable levels, it could either take over a substantially greater share of the market or put Ford and Chrysler in a much more precarious financial position. But the issue still has difficulties, which I shall endeavor to deal with more fully at a later point.

The second difficulty with suing GM alone is that as a practical matter, a successful suit could be expected to yield only one additional company in the

industry. It is highly unlikely that we could obtain more than a division of GM into two parts, since any further fragmentation would leave Ford as the largest producer. The third difficulty with suing GM alone is that we could not obtain industry-wide relief against franchising practices. Ford and Chrysler would remain free to continue with their franchise systems, unless their franchising practices are directly reachable as antitrust violations in themselves, or unless their franchising systems would be substantially eroded by the growth of new distribution patterns for the sale of cars produced by the two companies created out of a GM divestiture. Moreover, if we sue GM alone, we may well not be able to persuade a court to include prohibition of franchising practices in relief against the newly-created companies, so long as Ford and Chrysler are not subject to such inhibitions.

There are also difficulties with a shared-monopoly case against all three producers. The first, of course, is that we have no precedent for the "shared-monopoly" theory, and if we lose on that it would be extremely difficult then to go forward with a suit against GM alone. Second, the case against the three companies is asymmetrical. Ford's growth involved no significant mergers; and Chrysler made only one significant acquisition, that of Dodge in 1928 (?). Also, there are obvious disparities in the market power of the three companies. Though Chrysler has revived in recent years, it is still relatively weak, certainly as compared to GM, and it would not be easy to persuade the court that Chrysler "shares" monopoly power when Chrysler appears to be playing more the role of a hanger-on, and at times a desperate one at that.

All of these difficulties lead me to suggest that the two proposed cases be rolled together. Such a case would include the following counts:

1. An individual monopolization count against GM;
2. Monopolization counts against GM, Ford and Chrysler on a shared-monopoly theory, and (Probably)
3. A direct attack on the franchise practices as unlawful attempts to monopolize and/or unlawful agreements in restraint of trade.

While the two monopolization counts against GM might appear to be inconsistent, I do not believe they are and I believe our position could be persuasively stated. In brief, it would be this. Individual monopolization under Section 2 does not require a showing of "complete" monopoly or proof that the alleged monopolist is subject to no significant competitive constraints. A fair reading of *Alcoa* seems to make this quite plain. Judge Hand held that Alcoa had the requisite monopoly power for Section 2 purposes, even though its power to raise prices was limited by the threat of foreign imports, which Judge Hand assumed put an absolute ceiling on the prices that Alcoa could charge. Similarly, United Shoe Machinery Corporation was found to have monopoly power even though it faced some competition.

Accordingly, it is in no way inconsistent to contend that General Motors has enough monopoly power to bring it within the scope of Section 2 and at the same time contend that GM, Chrysler and Ford collectively share an even higher degree of monopoly power. Of course, a court might well determine as a factual matter that Chrysler and Ford are such substantial competitive factors that GM does not have individual monopoly power sufficient to warrant a Section 2 charge against it alone. A court might well distinguish *Alcoa* and *United Shoe* on this ground. But that does not mean that the two counts against GM would be logically or legally inconsistent.

With this difficulty overcome, there are several clear advantages to a combined case. First and foremost, it would reflect a more complete and realistic assessment of the automobile industry situation than either a suit against GM alone or a suit against all three. Secondly, it would increase the chances of our obtaining success on some substantial ground. For example, the more a court became convinced that Chrysler and Ford exist more or less at GM's sufferance, the more likely it would be that the court would find against GM on an individual monopolization count. And even if a court were unwilling either to find that GM has been an unlawful monopolist or to adopt a share-monopoly theory, it may well be disposed to give industry-wide relief on the franchising issues, once it has seen the entire industry context. Finally, and incidentally, the combined case might well lead Ford and Chrysler to help in proving a monopoly case against GM.

So much for general considerations. I now turn to discussion of particular legal issues.

II

PARTICULAR ISSUES

A. *GM's Market Power*

As I noted earlier, GM in recent years has had a market share ranging from 45 to 55 percent of unit sales. Its market share in dollar terms would undoubtedly be higher, as GM is particularly strong in the medium and higher priced automotive lines. Unfortunately, we do not know how much because we do not have dollar sale figures, but as a rough guess GM's share in dollar terms probably runs 3 to 5 per cent higher.

As I also noter earlier, the market share figures understate GM's market power inasmuch as GM has persistently had substantially higher relative profits than Ford and Chrysler, and could accordingly take over a larger share of the marget if it cared to do so. Moreover, GM's profit rates have been extraordinarily high, higher than those of any large manufacturing company in the country. If one measures power over price in terms of the range of profitable prices available to the company concerned, it seems highly probable to me that GM has a considerably greater power over price than either Alcoa or United Shoe. Thus, it can fairly be said to have the degree of "monopoly power" that brings it within the scope of a Section 2 monopolization charge.

The difficulty that one runs into in relying upon profit rates to establish monopoly power is that the higher profit rates may simply reflect greater efficiency and it can be argued therefore that the power rests on economies of scale. I do not think this argument refutes the proposition that a company with substantially higher profit rates and an already large share of the market has monopoly power; power is power regardless of what accounts for it. But one does have to meet the argument at the relief stage if not before, inasmuch as economies of scale would normally be urged as a basis for rejecting divestiture.

The problem here may be met in two ways. First, a good part, if not the larger part, of GM's advantage is a function of annual model changes. GM can spread tooling costs over twice the volume employed by Ford and more than twice the volume enjoyed by Chrysler. And while the annual model change policy cannot be classed as "monopolizing" conduct, for reasons set forth earlier, successful carrying on of annual changes may well be a function of the highly concentrated market that has developed. Accordingly, if GM's volume and market position has been obtained to a substantial degree by such conduct as mergers and exclusionary franchising practices, and has some basis for concluding that present economies of scale are not entirely a "natural" phenomenon.

Moreover, a part of GM's advantage is due to economies of scale in advertising and promotion. I vaguely recall that GM spends one-half or less per car for advertising than either Ford or Chrysler, and that the magnitudes are of the order of $40 as against $80 or more; this is not an insignificant difference when measured against profits per unit of sale. Here too, the economy is a function of GM's large market position, and if that position has been substantialy due to "monopolizing" conduct GM should not be permitted to assert this economy as a defense to divestiture.

I would also note Professor Bain's estimate that maximum production economies in the assembly of cars is achieved at an annual output of no more than 600,000 units per year.

B. *Shared-Monopoly Power*

That the three leading companies share a very high degree of monopoly power is demonstrated by the following facts:

1. Their collective market share is around 90 per cent of all automotive sales, including imports, and around 98 per cent if imports are excluded.

2. The automobile industry has been the most profitable of major industries in recent years, with profits exceeding those of the drug industry, the computer industry and industrial chemicals. The average industry rate of 19.4 per cent is approximately double that of manufacturing corporations as a whole. While the average is of course pulled up by GM's extraordinary figures, the profit rates for both Ford and Chrysler are also well above the average.

3. The industry clearly has extremely high barriers to entry; indeed the barriers seem close to insurmountable.

4. There has been an almost total absence of price competition among the manufacturers, even in years of lagging sales.

5. They have also followed a kind of parallel product policy which indicates absence of effective competition, most strikingly shown in the long delayed response to a consumer demand for compact cars.

Of course there has been a considerable amount of competition among the companies in product changes and improvements. And one can find other industries, I suppose, where the behavior has more closely approximated what one would expect of a single firm monopolist. But all of the above facts demonstrate fairly conclusively that the auto industry is characterized by a very high degree of monopoly power.

C. *Shared Monopoly as a Basis for Section 2 Monopoly Charge*

Though I once thought otherwise, I have now concluded that the application of individual monopolization principles to the members of the tight oligopoly requires only a relatively modest extension of existing law.

The reasons which have led the courts to impose stringent checks on individual monopoly power are equally applicable to the tight oligopoly situation. Both situations have much the same adverse economic consequences—absence of vigorous price competition, a probable loss of technological competition, and a misallocation of resources. Severe limitations are imposed upon the conduct permitted to a single company in the process of acquiring or maintaining monopoly power, for the purpose of minimizing the creation of monopoly power and for the purpose of maximizing of a likelihood that lawfully acquired power will eventually be dissipated. The same purposes would indicate similar treatment of companies who are acquiring or who have acquired such positions in their industry that they can collectively, though not collusively, gain the benefits of shared monopoly power by curtailing competition among them.

Moreover, as illustrated by the automobile industry itself, the line between individual monopoly power and shared monopoly power is often a very thin one. The behavior of the auto industry would probably not be significantly different if GM had 60 or 65 per cent of the market instead of the 45 to 55 that it currently enjoys. It would not make much sense to take one approach in the one case, and a much more lenient one in the second. The exclusionary effects of the franchising practices are much the same whether carried on by one firm that takes over most of the market or by three firms who take over most of the market, where in both cases the eventual market structure is significantly noncompetitive. Accordingly, the courts have just as much reason to dissipate monopoly power whether it is held by one firm or several.

Obviously, we will win or lose on this issue not on the basis of culls from past decisions but on whether or not we can convince a court of the force of our reasoning. However, I know of no reasonably live precedents that stand in the way of a shared-monopoly theory, and there are hints in some antitrust decisions that are useful. The Supreme Court has recognized on several occasions the undesirability of oligopoly market structure, in such Section 7 decisions as *Philadelphia Bank*. The collective use of such exclusionary practices as requirements contracts was deemed significant in the *Standard Stations* case and in *FTC* v. *Motion Picture Advertising*, 344 U.S. 392 (1953), where the court stated

> . . . due to the exclusive contracts, respondent and the three other major companies have foreclosed two competitors, 75 per cent of all available outlets for this business throughout the United States. It is, we think, plain from the Commission's findings that a device which has sewed up a market so tightly for the benefit of a few falls within the prohibitions of the Sherman Act . . . .

And in the *Associated Press* case, the court noted that the impact of AP's restrictions on new membership were particularly serious because UP and INS, its only competitors, required extremely high initial payments on those newly entering the newspaper field and wishing to obtain their services.

Finally, and this bears on a point I made above, I believe the law is heading in the direction of making "monopolizing" conduct unlawful in and of itself. This may be implicit anyway; note that Judge Wysanski in *United Shoe* could have held the company's leasing practices to be unlawful under Section 1 but for past cases that had appeared to validate them. With the principle clearly established that the legality of conduct will turn on the market power of the company engaging in it, no good reason would remain for treating tight oligopolists any differently from monopolists insofar as such conduct is concerned, and insofar as extending relief to divestiture.

D. *Past Mergers as a Basis for a "Monopolizing" Charge*

To me, the critical question here is whether GM's acquisitions were or were not a violation of Section 7 at the time they were made. (The same question is relevant to Chrysler's acquisition of Dodge; but in the subsequent discussion I will talk in terms of GM only.) If GM's acquisitions were lawful under Section 7, I find no reasonable basis for subsequently treating them as a basis for a monopolizing charge against a company that later achieved a dominant position. Rather than fully discuss the point, with which you are quite familiar, I will simply say that if the acquisitions were lawful because it could not be said that their effect "may be" to substantially lessen competition or tend to create a monopoly, the subsequent growth must be attributed to internal expansion rather than mergers. This is not because there is in fact no relationship between mergers and subsequent growth, for all acquisitions presumably make some contribution to a company's eventual development. Rather, the point is that it is plainly unfair to charge a company with unlawful monopoly because it once made acquisitions that were beyond criticism at the time; in addition, any such legal rule would be likely to have a serious disincentive effect.

On the assumption, therefore, that we must show GM's acquisitions, individually or collectively, to have been in violation of Section 7, a further question may arise as to whether they were unlawful only under present interpretations of Section 7 or were unlawful under then prevailing law. We would clearly be on far sounder ground if we could establish that the acquisitions were unlawful under the law at the time; this would still leave a laches-type problem, but not a fatal one, particularly in light of *DuPont-GM*.

I have not had time to review the various acquisitions carefully enough to reach considered conclusions as to their legality. It seems to me that a number of the smaller acquisitions cited in Metzger's draft complaint were too insubstantial to be unlawful in and of themselves, although they might be rolled in under an aggregative theory. On the other hand, since the horizontal acquisitions up through 1919 put GM in a position where it accounted for approximately 20 per cent of unit sales—and as Metzger points out, a considerably higher percentage of dollar sales—it seems likely to me that at least the Chevrolet acquisition would have been subject to Section 7 attack. Moreover, the vertical acquisition of the Fisher Body Company (which, incidentally, is not relied on in the most recent of the memos) appears to have been a violation of Section 7. The Fisher complex was the leading producer of car bodies, with a very high reputation, and the acquisition by GM quickly led to foreclosing Fisher Body as a source of supply to independent automotive producers. I also note that apparently all of GM's acquisitions were via purchase or exchange of stock, so that old Section 7 was applicable. Finally, I refer to Metzger's argument that the acquisitions put GM in a much stronger position that [sic] its market share figures would indicate.

E. *Franchising Practices as a Basis for a "Monopolizing" Charge*

As I understand it, we have fairly clear evidence that GM, beginning in 1926 and up until the late 30s or early 40s, pursued a conscious policy of forcing dealers to abandon or not take on competing lines, except in some very small towns. The details are set forth in Metzger's memorandum. Since the main investigation was directed at GM alone, the memorandum does not indicate whether or not Chrysler or Ford followed similar policies; but it is my understanding that they did and I will make this assumption.

It is fairly clear to me that the policy of forcing dealers to handle the particular manufacturer's cars only in monopolizing conduct under Section 2. If the arrangements could be said to involve "agreements", they may well have even violated Section 3 of the Clayton Act, for they significantly raised distributional barriers to competing small producers. Competing small producers could not get comparable access to the ultimate consumer market simply because they could not reproduce the large companies' distribution systems at anything like comparable costs. Efficiency in the distribution of cars is closely related to volume of sales, and the smaller producers did not have the volume of sales necessary to match the large distributors' efficiency in any particular markets. To be sure, the large companies would endeavor to justify exclusive distributorships on the ground that it was a more effective way of selling their cars, but that is no defense. Nor is it any defense to say that exclusive distributorships are a common and normal way of doing business. (For a full discussion see Bok's article on the *Tampa Electric* case.)

I will assume that at some point in time GM and the other leading companies abandoned formal and overt efforts to enforce exclusivity. But this makes little difference for two reasons. First, the policy was carried on for a long period of time and contributed substatially to the growth of the three large companies during that period. Second, there is no indication that the abandonment of overt pressures, if it occurred, has made any difference. Dual-line distributors are still a comparatively rare phenomenon, and this is by no means due entirely to uninhibited free choice on the part of the franchised distributors. With franchises terminable at will, the distributors are under considerable pressure to avoid any courses of action that might cost them the favor of their major supplier. But beyond that, the auto companies' policy of setting sales quotas for their distributors—quotas which they are under heavy pressure to meet—greatly discourages, if it does not completely preclude, a distributor from taking on competing lines.

For these reasons, I believe a good case could be made out for the proposition that the franchising practices are antitrust violations in and of themselves. They certainly qualify as "exclusionary" conduct for purposes of Section 2.

F. *Relief*

I will not go into the problems of divestiture other than to say that it is apparently feasible to break GM into three companies and Ford into two. (Shepherd has written a memorandum on this question.)

Franchising presents more of a problem, inasmuch as complete relief would lead to our asking for a compulsory dealing decree, *i.e.*, a requirement that three defendants sell to any would-be distributor who qualifies as to credit risks and the like. This is an unusual request. But I think it is supportable on a therapeutic basis if no other, namely that such far-reaching relief is necessary, at least for a period of years, in order fully to dissipate the restrictive effects of the franchising practices. An alternative, though less effective, form of relief would be to forbid the companies from imposing quotas or any other requirements on their distributors that have the effect of discouraging them from entering competing lines.

Exhibit 3.—Memo From Leonard W. Weiss to W. B. Comegys, Re Weiss Analysis of Turner Letter (Exhibit 2)

OCTOBER 31, 1969.

File: 60–107–694.
To: Walker B. Comegys,
Deputy Assistant Attorney General,
Antitrust Division.
From: Leonard W. Weiss.

AUTOMOBILE INDUSTRY

You aked me on Friday night to look over Asher's paper, make any comments on it, and prepare tentative answers to two questions: (A) how I would ideally reorganize the industry if I had unlimited antitrust power and no political constraints, and (B) how I could justify the proposed reorganization in terms of possible gains. In dealing with the latter, I will answer a third (C) would such a case be worth the resources devoted to it and the political risks involved?

First, I think Asher's paper is excellent. I went over it with him in great detail while he was preparing it and got most of my points in at that time. I have little to add now. I do believe that there is a good case against the majors based on a collection of restrictive practices plus their clear cut market power. I don't think it would go very far beyond the *Paramount* and *American Can* cases where Section 2 convictions were obtained for tight oligopolies that had engaged in similarly restrictive (though perhaps more formalized) practices. Asher certainly argues forcefully that mere prohibition of those practices, now that the high concentration and barriers have been accomplished, would have little effect. At one point while he was preparing the memorandum I tried to write up a series of conduct orders that might alleviate the situation sufficiently, but he was able to shoot them down very easily. He has convinced me that no case that does not change structure would be worth bringing.

Question A. What is my ideal solution for the automobile industry. Ideally, I would want to see as unconcentrated an industry as possible with all the special

ties to the major replacement parts markets and to distribution cut. This involves several changes.

(1) I would want as much horizontal dissolution as is consistent with full realization of economies of scale and preservation of efficient management organization. The economies of scale are presumably exhausted in the neighborhood of 800,000 to 1,000,000 units per year, hence the common proposal in previous memoranda that we divide General Motors into three firms and Ford into two. I guess that I would start with this as my request for relief, but I would be prepared to back down if the firms could demonstrate unequivocal economies beyond that level. It may well be that the most we could get would be the spin-off of Chevrolet division. Since that is as large as the other companies in the industry, I would think it certain that we could have at least four majors without losing economies.

(2) I think I would want to have General Motors dispose of its main aftermarket parts division as well. These are AC (which makes and markets sparkplugs, fuel pumps, automotive filters) and Delco-Remy (which makes batteries and ignition parts—they are presently distributed by United Motor Services Division). These are all products where aftermarket sales are large relative to original equipment and where GM is a leading—sometimes dominant—seller. The brand name seems to be important in most cases.

GM's inside track on original equipment installations in half the new cars and its control of replacement parts sales to outlets produces much of GM's powerful position in the marketing of many of these parts. It is difficult to see that there are any technical economies in having these divisions in GM. On the other hand, it seems probable that economies do result from the majors operating their own body, engine, and transmission plants. Moreover, the aftermarket sales of these products are minor, so I see no need for vertical divestiture in them. As Asher says, Ford without Autolite and Chrysler are not very significant on the most active replacement parts markets, so no vertical divestiture need be required of those firms.

(3) I would probably want an order requiring all the automobile manufacturers to explicitly permit their parts suppliers to sell on the aftermarket under the parts companies' brands and to produce for the aftermarket using the tools owned by the automobile companies and used by the parts companies in making original equipment parts.

(4) I would want to separate dealerships from manufacturing. I consider the Asher suggestion that the automobile companies be required to sell cars to all comers a very clever solution to a very difficult problem. Before I came here I had recognized the dealership system as one of the main barriers to entry in automobiles but I had not come across such a solution to the problem. I am now convinced of its appropriateness.

(5) I would probably require the "unbundling" of warranty service (*i.e.*, require that it be sold separately from the automobile) and require that standard specifications for warranty parts be set so that parts supplied by any manufacturer which met those specifications could be used. I would expect that in practice this would result in the parts suppliers' catalogue listing several alternative sources for warranty parts which could be challenged by the automobile companies if the parts did not meet their specifications.

Two General Comments: First, as you can see, I have in effect endorsed most of Asher's policy proposals as the best restructuring of this industry that I can imagine, given the technical realities of this industry. Second, some of these policies are workable by themselves—*e.g.*, we could limit ourselves to an aftermarket parts case asking for (b), (c) and (e) for relief or we could limit ourselves to a dealer case asking only for (d) and (e) for relief. Asher has convinced me, however, that we do not want to bring a case where our goal is only unenforceable injunctions against practices since this would tie our hands for a long time to come. Above all, we do not want to reduce the automobile companies' power to press cars upon dealers without at the same time eliminating the dealers' monopoly position. I would expect that to almost certainly mean less competition.

Question B. What would be the economic benefits from such a suit. I will try to answer in terms of the "Ideal" relief outlined above.

(1) Horizontal divestiture would offer several gains. (a) It would probably permit a little more variety than we have now. For instance, I interpret the small car struggle of the last half of the 1950's and its repetition in the last half of the 1960's as the natural behavior of a monopolist who knew that he would

make less money on small cars than big. Any of the domestic majors could have gained a good deal by bringing out a little car, but only so long as the others didn't do the same. Only when they had lost 10% of the market did the majors move in both cases. The larger the number of viable domestic firms, the less likely we are to have this sort of tacit collusion on design. (b) We might also get some more price competition in the areas where price competition occurs now (mainly fleet sales). The difference between three firms and six in fleet sale price competition could be quite substantial, and there might be a difference between three and four to go by the sort of price war that can develop even in such highly concentrated industries as heavy electrical equipment when large buyers are involved. This could conceivably affect retail sales as well, if large scale distributors were to develop as a result of (4). (c) If there is a tendency for GM to pull its punches now because of the weaker position of its rivals, that would be eliminated by the dissolution. We might wind up with a dead American Motors but more competition. I doubt that four or six majors that resulted from a dissolution would be in the same sort of danger that the independents were. They would all be of optimal scale as far as production costs go, and (under (2), (3), and (4)) none of them would have a special advantage in parts and dealerships as has been the case down to the present. Altogether, I think we could gain something substantial from horizontal dissolution, though the payoff ratio may not be as great as for some of the other relief discussed below.

(2) Divestiture of AC and Delco-Remy: The aftermarket parts business is substantial—total sales were about $2.3 billion in 1967. The first five items in the following table account for about $1.3 billion of this. GM is the dominant seller in two of the five markets and one of the three leaders in all but mufflers. Other aftermarket products in which GM is important are listed at the bottom of the table in order of aftermarket importance. The numbers in this table come from a student of mine who is writing a thesis on automotive parts marketing. They are approximatee. Note that concentration on most of these markets is high, often very high. This is true even of batteries, which are often thought of as relatively unconcentrated due to the regional character of the market and the wide availability of distributors' brands. GM's special advantages may contribute to the high concentration. It is clear that the present system gives GM a preferred position in a series of highly concentrated markets worth more than a billion a year in sales. GM may have technical economies of scale or of integration in some of these products, especially those in the lower part of the table where replacement parts are sometimes less than half of total demand. In many lines, however, the persistence of independent manufacturers suggests that independent AC or Delco-Remy Divisions would have no serious disadvantages.

AFTERMARKET SHARES FOR SELECTED PARTS

Product	GM division	Approximate GM market share (percent)	Approximate share of 3 leading firms in 1967 (percent)
Five leading aftermarket products:			
Batteries	Delco-Remy	(10–25)	60
Spark plugs	A-C	(40–60)	95
Ignition parts	Delco-Remy	(40–60)	60
Automotive filters	A-C	(10–25)	65
Mufflers and pipes			75
Other aftermarket products where GM is important:			
Shock absorbers	Delco products	(10–25)	85
Roller and ball bearings	New departure-Hyatt	(25–40)	80
Brake cylinders and parts	Delco Morraine	(10–25)	70
Ignition wire and battery cable	Packard Electric	(10–25)	60
Carburetors	Rochester	(25–40)	65
Fuel pumps	A-C	(40–60)	80
Thermostats	Harrison Radiator	(10–25)	65
Gas, oil, radiator caps	A-C	(10–25)	95
Carburetor parts	Rochester	(10–25)	60
Transmission parts	Several divisions	(10–25)	45

The main gains from the vertical divestiture suit would seem to be: (a) AC and Delco would not be able to force their parts on GM dealers the way GM

could. This is important even if (4) below is undertaken as well, because we can not be sure how greatly the dealership system will change. (b) Without the ability to force parts on dealers, AC and Delco-Remy would have to meet the prices of rival firms. They apparently charge the dealers more now. (c) AC and Delco-Remy would have to compete for original equipment business on GM cars, which should make for more flexibility and efficiency in that part of the business. If we get a decree like that advocated in Autolite which requires gradual withdrawal of GM from AC and Delco-Remy as original equipment suppliers, the increased competition would be very real. (d) Without an inside track on half the OE installations, AC and Delco-Remy would have a less preferential position in the aftermarket where brand preferences based on OE installation seem to be very important for branded parts. (e) Barriers to entry into parts making should be reduced because of the elimination of GM's foreclosure of half the OE market and weakening of AC's and Delco's assured position in the branded parts business. At least this will reduce the ability of parts makers to charge exorbitant prices, and there is a good chance that entry will occur as well. Capital costs and economics of scale do not seem to be prohibitive barriers in most parts markets.

(3) The order requiring the majors to permit parts manufacturers to sell on the aftermarket under their own brands and to supply them with tools for that purpose is in response to the Crandall articles that Asher quotes. Crandall believes that the present practice of the automobile companies retaining ownership of the parts-makers' tools is an important barrier to entry. I doubt that it is terribly important, since the parts involving long lasting, special tools do not seem to be very important in the aftermarket. Most of the important aftermarket sales are of products where original equipment is only a small to moderate portion of total output. Nevertheless, there is no reason why this restriction on supply should not be removed. Where it does exist, the only possible means of competition on the aftermarket would be from OE parts suppliers, since they would be the only ones with access to the economies of scale.

(2+3) Crandall also contends that GM's high profits derive largely from its powerful parts position. The demand for new cars is fairly elastic because we have the option of retaining the old cars or buying second hand cars. The demand for parts is much less elastic. Once we have the car, we are willing to buy the parts even at very high prices since their cost is small relative to the total cost of owning and running the car. The only way around the high parts price is for the consumer to scrap the car, which certainly will not make GM unhappy. This means that on parts markets where concentration is high enough for GM to control the price, we can expect very high parts prices to the general public as well as to dealers. Getting GM out of these markets might result in some reduction in parts prices. In addition, if entry barries into parts and concentration in parts markets are reduced, the result could be sufficiently competitive parts markets that the parts makers could no longer take full advantage of the inelastic demand. Even if this does not happen, GM's special profit position would be reduced.[1] With GM on a more even level with respect to Ford, Chrysler and American Motors, the much talked about tendency for GM to hold back on competition would be reduced.

(4) The sell-to-all-comers rule, which seems to be the only way to eliminate the manufacturers' control over the dealers, would have a wide variety of advantages. (a) It would eliminate the ability of the automobile companies to force parts on dealers and to charge them discriminatory prices for those parts. This gain extends to all parts sold by all the majors, not just the AC and Delco parts discussed in (2) or the certain OE parts discussed in (3). (b) The change would result directly in more competitive pricing, and would reduce barriers to entry into parts making. We should see lower parts prices or lower concentration in many parts markets or both as a result. (c) It would also eliminate the ability of the automobile companies to prevent dualing on the part of the dealers. I presume that at least the dealers with less popular models to sell would take advantage of the new freedom to sell popular cars as well. (d) This should put greater pressure on manufacturers to produce popular designs, even when they are cheap. (e) It should reduce barriers to entry into automobile manufacturing. One of the

[1] Crandall thinks this is the main source of GM's high profits. GM also has a disproportionate share of the high priced cars, however, and Chrysler has a disproportionate share of the "compacts." This difference in product mix probably plays a role in the profit differences as well, and it would not disappear.

main barriers in the past has been the need for an enormous, nationwide distribution system, but new producers could now sell through existing distribution systems. I doubt that there would be much actual entry, in view of the very large scale required and the mature character of the industry today, but there may be some domestic production by foreign producers. (f) More important, the profit rate necessary to attract new entrants into automobile manufacturing will be much lower and this will mean that the automobile companies will be less able to charge very high prices. (g) One clear advantage would be that the monopolistic system of retailing in this business would be broken. This would not necessarily reduce retail margins much, because at the same time, the manufacturers' ability to force cars on the dealers would disappear. However, it would permit the development of new forms of distribution. Most other lines of retailing have gone through one or sometimes several revolutions since the turn of the century—mail order houses, chain stores, supermarkets, and discount houses. But the automobile dealership system has remained largely unchanged for decades. I would expect considerable entry by second hand dealers, perhaps some discount or catalogue stores, and maybe even Sears. Chains could develop, and successful dealers could become multi-brand sellers. Large retailers might be able to bargain for prices the way fleet operators do now. This would be more likely to be successful with horizontal divestiture. (h) Finally, the elimination of the ability of the majors to force cars on dealers would remove the constant agitation for Government intervention to protect dealers from manufacturers. The dealers no doubt are exploited but what they want is for us to let them fully exploit their monopolistic positions. If we remove the monopoly grant instead, they will be more like other retailers, and the unseemly problem should largely evaporate.

(5) The unbundling of warranties is similar to what we have demanded in a number of other cases with implicit ties of product to service. It should loosen up the parts business further and may make repair a little more competitive. It is certainly in the traditions of antitrust, but I doubt that it would accomplish much unless accompanied by at least (2) and (3) and probably (4).

Question C: Is it worth it to us. This would clearly be an enormous case. It would take a very large part of the Division's resources, and it would bring great political pressure. How do the potential gains compare with the potential costs:

I'm sure a big automobile case would be worth a lot compared with our other actions. One reason is that automobiles is an enormous industry. New car sales were $17 billion at the last census, and adding in trucks, buses, and aftermarket parts sales would bring the total to about $23 billion.[2] Last year the big three reported sales of $44 billion (some substantial part of which were abroad or non-automotive). With such huge sales, even a slight price reduction could make a large difference. Last year GM reported profits before tax of $3.5 billion and the big three had $5.4 billion (all from Moody's). If our actions resulted in cutting their profit rates to the average for all manufacturing (about 11%) we would save GM's customers 1.3 billion and Ford and Chrysler's about 150 million each. About half of this would come from the Treasury (through lower corporate taxes) and half from GM, Ford and Chrysler stockholders. The gains may well be understated because a fair part of the profits of the big three and especially of GM disappear into very high executive compensation (not just the dozen or so vice presidents who have half million dollar incomes but also the rest of the administrative staff whose salaries all tend to be higher as a result).

The comparison would be stronger in the average year than in 1968. GM made only 17.8% on equity in 1968 against a long-term average of 20.67. This is partly because of GM's price restraint last year under pressure from the president—a fairly typical behavior for a monopolist in time of open inflation. It may have slowed down inflation then, but it will make inflation drag on longer after the level of output and employment have been reduced. Anyway, in the average year when GM earns about 20%, Ford and Chrysler earn about 14% and the average manufacturer earns about 10%, the possible saving for consumers would be greater, if anything. These numbers are obviously very rough estimates. They are only meant to show that the possible saving to consumers could be in the billions—which you can't show for many of our antitrust actions.[3]

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[2] These are taken from the 1963 Census of Manufacturers shipments of products 37171, 37172, 37173, 37174, and the 2.3 billion figure for aftermarket parts given by my graduate student, Steve Nelson. You would want, and could get much tighter figures for an antitrust case.

[3] Much of the saving for consumers comes out of the pockets of stockholders, automobile company executives, and the U.S. Treasury. The net effect on national income due to more efficient use of resources is much smaller. Exactly the same statement applies to our other antitrust actions, however.

This takes no account of possible improvements in efficiency—of which I presume there would be many, particularly in distribution; nor of possible improvements in the choices available to the consumers; nor of the hopefully superior quality of service that we normally expect with better choices. There is no way to measure these changes, but in describing the gains from the optimal decree I would put as much emphasis on such results as on the price changes.

I doubt that there is any other unregulated industry where increased competition would produce nearly so large a payoff. The only other industries of anything like the same size are far less concentrated. Petroleum refining has a national concentration ratio of 32 (regionally, it ranges from 42 in the Southwest to 65 in the Pacific Coast). We had our big case here, and it was the greatest success in antitrust history. Steel—the national concentration ratio is 51, though it ranges from 45 to 65 for major products. We lost our big case here, and the country suffered from a sluggish industry with an inefficient leader as a result, but there has been regular entry and growth by the smaller firms so that concentration has continuously declined. Meat-packing—national concentration ratio now 30 and falling fast. The last place to look for monopoly profits! I suspect that the country could gain as much by reducing restrictions on some of the regulated fields such as oil import quotas and prorationing or perhaps the rail-truck cartel, but there is no market directly reachable by antitrust comparable to automobiles.

To give some idea of how the automobile industry compares with the other highly concentrated industries I tabulated the large product classes (1963 shipments over $500 million) where concentration is 80 or greater. These seem to be as follows:

Product	1963 4-firm concentration ration	1963 shipments (millions)
Canned soups	84	515
Cereals	82	561
Cigarettes	80	2, 568
Rayon and acetate	[1] 82	731
Nylon	[1] 94	1, 369
Packaged detergents	92	1, 029
Flat glass	[1] 94	549
Copper smelting	89	629
Aluminum ingot	93	947
Aluminum plate and sheet	80	850
Steam, gas, and hydraulic generators	99	[2] 489
Electric lamps (i.e., light bulbs)	89	546
Telephone and telegraph equipments	[1] 92	1, 538
Passenger cars	99	16, 768
Trucks	81	3, 376
Complete commercial aircraft	94	561
U.S. military aircraft engines	97	644
Photographic film	96	604
In addition, on a local basis there would be: Newspapers	[3] 100	4, 484
In mining there would be: Copper ore	[1] 80	762

[1] About.
[2] In 1958, not available in 1963.
[3] Often.

I presume computers belong here, but the census mis-defines the industry and get a low CR of 67. There are about 30 other less important five-digit products that are this concentrated as well.

Automobiles are by far the most important of these very concentrated products, and trucks where the big three plus International Harvester are the leaders, is close to runner up. Moreover, in many of the other very concentrated industries there are offsetting considerations. Some like rayon and acetate have very close substitutes so their market power is mild. Some have clear economies of scale such that we probably cannot do anything to make them less concentrated (flat glass, generators, newspapers on the list and locomotives and diesel engines with less than $500 million in shipments). In quite a number of cases high concentration seems to be associated with heavy, national advertising (soups, cereals, cigarettes, detergents, photographic film, on the list and baby food, chewing gum, flavoring syrups for soft drinks, toothpaste, and razor blades each of which have

less than 500 million in shipments). We are unlikely to accomplish anything by dissolution cases in these fields (though we might get larger advertising outlays) unless we are willing to do something about advertising itself. In a few instances we have brought our case and lost it and are unlikely to bring it again (telephone equipment on the list and cellophane not on the list). In others we have won our cases, the barriers to entry seem to have been lowered as a result, and the concentration ratios are falling (aluminum products, on the list and gypsum products and tin cans off the list—the latter because concentration has now fallen below 80). The high concentration in nylon was due to a patent and concentration is falling there. There are one or two of these industries where we might be able to accomplish a good deal (maybe light bulbs on the list and sulphur where shipments are less than 500), but most of our very concentrated industries are that way for a reason.

Over the long pull, there has been a tendency for concentration to fall in highly concentrated industries. This means that in most industries, if we just keep close watch over mergers, we can expect greater competition ultimately. The automobile industry is almost unique among important oligopolistic industries in having continuously increasing concentration over fifty years. One might suspect that this is due to economies of scale, but most persons who have studied the industry have concluded that many of the advantages of the majors arise from vertical integration into distribution and parts. At any rate, our case does not contemplate horizontal dissolution beyond the point where economies can be shown. I doubt very much that large economies of scale can be shown in all concentrated parts markets, and I see few social (as opposed to private) economies in trying the distributors to the manufacturers.

Altogether, there is no other industry except maybe computers[4] in the same ballpark as far as the amount we could do via a Section 2 case. The negative effect of our merger policy (*i.e.*, the cases we do not have to bring because of the mergers never tried) may have as great an overall effect on competition as an automobile case would, but no individual merger case we have ever brought could compare with a big automobile case in competitive effect. I feel the same applies, a fortiori, to collusion and restrictive practice cases—their main effect is deterrence. I feel certain, therefore, that a big automobile case would be easily worth the large amount of Division resources that would have to be assigned to it.

Question D. Is it worth the political risks? This is the question I can't answer, but I would like to make a few comments. One source of opposition mentioned in the memoranda has been the prospect that a shared monopoly case would open the door to a general attack on oligopoly which means maybe a quarter of American business. This is greatly exaggerated because (a) few industries are as concentrated as automobiles, and (b) many that would not be good candidates for Section 2 cases and (c) the automobile case would be based on a series of very restrictive practices which have few counterparts in other industries. It would seem to offer no more threat to oil or steel than Paramount Pictures did.

The automobile dealers and the big three would be certain to oppose the case I have outlined, and I have the impression that automobile dealers are a very effective political group, especially in the smaller cities. On the other hand, we would have lots of public opinion on our side, to go by the apparent popularity of "punishing" the automobile companies in the smog case. Automobile dealers are not all that popular either. In terms of winning votes, a big automobile case might be worth a hundred merger cases. Conceivably, it would make Nixon into another Teddy Roosevelt.

If the Administration should decide that the big case is not worth the political risks, it might still be interested in a parts case involving divestiture by GM of its main aftermarket parts divisions and an order attempting to let parts suppliers serve the aftermarket. The dealers would probably favor this. We would get relief worth as much as we get in most of our cases. It would seem equitable, in view of our Ford Autolite case. And it would still be a peripheral case, like the locomotive, bus, GMAC, etc., cases we have brought in the past. It would not prevent us from bringing a big case later on if that should seem politically easier.

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[4] The computer industry is still much smaller than automobiles, but it is young and promises to be one of our most important. A Section 2 case now may determine the structure of that industry for the future in much the same way that the two greatest successes of antitrust changed the subsequent structure of the petroleum and aluminum industries.

Exhibit 4.—Memo From Thomas R. Asher to Walker B. Comegys, Dated Oct. 17, 1969

October 17, 1969.

Re Automobile Industry.
File: 60-107-694
To: Walker B. Comegys, Deputy Assistant Attorney General
From: Thomas R. Asher.

The automobile industry is like the weather; everybody talks about it but no one does anything about it. The Department's interest in the industry—especially in the root problem of its basic structure and performance—has increased in the last several years. However, this interest has expressed itself in virtually no litigative or legislative attempts to remedy the many competitive evils, despite their acknowledged importance. The only recent action against the automobile industry was the "smog" case, a conduct oriented suit the resolution of which leaves virtually untouched the basic competitive economic problems posed by the American automobile industry.

To enable the department to make an educated evaluation of the automobile industry's competitive problems and possible solutions to them, it is necessary to first delineate and analyze those problems. The purpose of this paper is to define the economic and competitive problems (Part A); to trace the recent efforts of various persons within the Department to suggest litigative means for dealing with these problems (Part B); and to outline and evaluate the range of alternative actions available to this Division (Part C). While the analysis in this memo must of necessity touch upon questions of the legal theory which might support a particular type of action or relief, an in depth development of the possible legal theories will not be attempted here, but rather in a subsequent memo.

Part A

THE ECONOMIC AND COMPETITIVE PROBLEMS OF THE AUTOMOBILE INDUSTRY

I. *Profits and Concentration*

The automobile industry is one of the nation's largest, by any measure. However, its enormity would probably not be of extraordinary concern to Antitrust absent the very high concentration—the big three domestic producers, General Motors, Ford and Chrysler, account for about 95% of domestic production and 90% of domestic sales.[1] These figures are based on number of cars rather than dollar volume. The latter measure, which is generally used to measure industry concentration, would show the big three with an even greater share of the market since they sell mostly higher priced cars while American Motors and foreign producers sell mostly lower priced cars. For the same reason, GM's share of the market would be higher on a dollar basis because it has a much larger share of the high price market than any of its competitors.

[1] See Table I.

TABLE I.—MARKET SHARES OF U.S. AUTOMOBILE SALES: PERCENTAGE OF UNITS SOLD

	General Motors	Ford	Chrysler	U.S. independents	Foreign makers
1946	37.73	21.97	25.74	14.51	----------
1947	41.89	21.09	21.77	15.25	----------
1948	40.63	18.32	21.45	18.64	0.46
1949	42.89	21.31	21.40	14.15	.25
1950	45.38	24.00	17.60	12.75	.27
1951	42.83	22.16	21.80	12.80	.41
1952	41.74	22.78	21.27	13.51	.70
1953	45.07	25.15	20.30	8.98	.50
1954	50.70	30.83	12.90	5.11	.46
1955	50.75	27.63	16.83	4.09	.71
1956	50.78	28.45	15.48	3.64	1.65
1957	44.85	30.39	18.34	2.96	3.46
1958	46.36	26.44	13.92	5.16	8.12
1959	42.10	28.12	11.30	8.31	10.17
1960	43.63	26.60	14.01	8.18	7.58
1961	46.52	28.53	10.79	7.70	6.46
1962	51.88	26.30	9.61	7.32	4.89
1963	51.04	24.87	12.37	6.61	5.11
1964	49.09	26.05	13.81	5.09	6.01
1965	51.07	25.47	14.87	2.48	6.11
1966	48.13	26.06	15.40	3.10	7.31
1967	49.55	22.17	16.06	2.88	9.34
1968	46.73	23.69	16.25	2.76	10.57

The big three are the nation's first, third and fifth largest firms, in terms of sales, employ about 1.4 million persons, and have consistently ranked among the most profitable firms in the nation. Even American Motors, the number four firm in the industry with about 3% of domestic sales, is the 131st largest industrial company in the nation; it ranks above such leading firms as concentrated industries as Kennecott Copper, Kimberly-Clark (paper), Zenith Radio, Anheuser-Busch (beer) and Time, Inc. (publishing). Yet American Motors is only a marginal competitor in the automobile market whose continued existence is questionable in the eyes of most industry observers.

The automobile industry has, over an extended period of time, been one of the most profitable major manufacturing industries.[2] General Motors, with some 50% plus of automobile sales in the U.S., has led the auto makers with profits yielding an average rate of return on capital from 1946 through 1967 of above 20%.[3] Meanwhile, concentration has risen steadily as independent after independent has dropped out of the market.

[2] See Table 2.

[3] GM's higher profits may derive from its big percentage of the high priced car sales, which are the most profitable, as stressed by White (Ph. D. thesis cited infra), or its highly profitable parts sales, as stressed by Crandall (Ph. D. thesis and articles cited infra), or both factors. In addition, GM may, as GM alone argues, just be more efficient.

TABLE 2.—ANNUAL RATES OF RETURN: NET PROFITS AFTER TAXES DIVIDED BY NET WORTH

	General Motors	Ford	Chrysler	American Motors	Nash	Hudson	Studebaker-Packard	Studebaker	Packard	Kaiser	Crosley	Total auto industry [1]	Total excluding G.M.[1]	All corporations	All manufacturing corporations
1946	6.14	−1.13	5.30		5.22	5.83		2.34	8.22	−56.05	NA	3.25	−1.34	9.90	10.30
1947	18.34	8.27	20.67		28.00	12.55		19.02	6.46	32.62	12.84	16.16	13.65	11.31	13.35
1948	24.47	11.49	23.18		25.76	23.00		30.07	21.61	15.67	28.65	20.98	16.96	11.40	13.35
1949	31.38	17.98	23.05		26.53	15.61		32.33	10.98	−84.75	−24.94	25.75	19.26	8.85	9.80
1950	34.97	22.53	24.86		25.17	16.67		22.54	6.85	−5.88	−25.81	27.47	19.58	11.34	13.43
1951	20.00	10.11	13.81		13.54	−1.61		12.10	7.32	−12.04	−63.55	15.17	9.71	7.68	10.16
1952	20.49	8.78	14.37		10.19	10.91		12.67	7.21	−8.56	−5,502.78	15.60	9.88	7.23	8.02
1953	20.05	11.46	13.12		10.94	−16.08		2.48	6.56	−168.48		15.25	9.32	7.23	8.11
1954	24.14	14.30	3.16	−6.79			−17.69			(2)		16.89	7.05	7.11	7.39
1955	27.95	22.75	15.34	−4.83			−24.98					23.87	17.87	8.53	9.87
1956	18.50	11.67	3.09	−15.89			−661.87					13.24	4.98	7.92	8.85
1957	17.20	12.78	16.38	−10.64			−248.83					15.33	12.42	7.10	7.65
1958	12.63	5.02	−4.89	18.97			−22.16					8.87	2.97	5.53	5.84
1959	16.26	17.26	−.80	31.62			31.86					15.74	14.96	6.46	7.78
1960	16.49	14.86	4.56	21.61			.72					15.10	13.03	5.53	6.41
1961	14.82	13.10	15.65	10.45			2.45					13.14	10.72	5.72	6.31
1962	21.94	14.06	8.50	13.73			2.18					18.22	12.80	6.00	7.07
1963	22.35	13.14	17.55	13.84			−214.52					18.22	12.26	6.11	7.76
1964	22.83	12.61	19.05	9.41			17.49					19.06	13.81	6.96	8.65
1965	25.81	15.66	14.75	1.95			20.61					21.04	14.90	8.36	10.28
1966	20.55	12.99	11.12	−6.17								16.74	11.79	NA	NA
1967	17.57	18.32	10.92	−39.44								11.61	3.24	NA	NA
Qverage [3]	20.67	12.34	11.98	2.70	18.18	8.34	−60.55	16.69	9.40	−35.94	−929.91	16.67	11.41	7.90	9.02
1968	17.8	12.7	14.1	6.2											

[1] Weighted average.
[2] Losses incurred on a negative net worth.
[3] Arithmetic average.

Source: See table 1.

II. *Barriers to Entry*

In addition to, and probably related to, the industry's high profit levels are its extraordinarily high barriers to entry. Virtually every student of competition in the automobile industry has concluded that its barriers to entry are as high as in any manufacturing industry. See, *e.g.*, Bain, *Barriers to New Competition*, Ch. —.

There has been no substantial new entrant into automobile manufacturing since 1925, with the exception of Kaiser-Frazier in 1947 (discussed *infra.*) The number of exits has been high. The last merger of automobile assemblers[4] involving the big three was in 1928, between Chrysler and Dodge. General Motors' last horizontal acquisition was in 1920 when it completed the takeover of the Chevrolet companies. The more recent mergers have been primarily by marginal producers seeking to stave off what in most cases was inevitable demise. Thus, Studebaker merged with Packard in 1954, Kaiser with Willys in 1953, and Nash with Hudson, to form American Motors in 1954.

Perhaps the most graphic example of the virtually insurmountable entry barriers into automobile production or assembly is the experience of Kaiser-Frazier. As described by Professor Weiss in "Economics and American Industry," 338–339 (1961):

> It was another of the Kaiser ventures . . . but, unlike the steel and aluminum companies, it was not successful. It had experienced executives, the backing of a powerful industrial empire, and automobile industry connections through the Graham-Paige organization that it inherited. It acquired a new plant on favorable terms and raised more than $200 million in stock issue and borrowing, much of it from government agencies. It entered when the market was practically insatiable and succeeded in producing a car in record time that proved to be a style leader. Yet is was unable to keep up. It had great trouble financing its 1949 model and had to curtail its advertising program. By 1954 it had withdrawn from production. Its founders concluded that they needed at least $150 million more in equity capital.

In addition to high profits, and as the result of high entry barriers, the automobile industry has exhibited a serious lack of responsiveness to consumer demands. Despite consumers' substantial desire for smaller less expensive cars, the big three have only this year—after over a decade of rapid market penetration by Volkswagen and other imported "sub compacts"—begun to produce cars competitive in price and performance to the little imports. This surely reflects an industry sufficiently insulated from the demands from the market place, or in other words, possessed of sufficient market power, that there is cause for much concern.

The history of the American automobile industry's attempts at producing small cars is set out in considerable detail in "The American Automobile Industry In The Post-War Period," an unpublished Ph.D. thesis by Lawrence J. White (Harvard University, March, 1969), pages 238–252. White points out the solid front presented by the big three in offering only large vehicles.[5] Starting in 1950, all U.S. auto makers other than the big three began to produce small cars. Nash, Kaiser, Willy's and Hudson all offered compact cars between 1950–1954. All failed to achieve substantial market penetration and abandoned their efforts by the end of 1954. However, the reasons for their failure, according to White, were not any lack of consumer desire for compact cars. Rather, it resulted from a variety of quality control difficulties and the inability (or unwillingness) of the minor producers to price their compacts substantially below the bottom of the line of full-sized Fords, Chevrolets and Plymouths.

This conclusion is borne out by the substantial and rapid growth of sales of foreign sub-compacts beginning in 1955, the year after the American independents gave up on small cars. Only American Motors, of the U.S. producers, continued to offer a small car after 1955 and it participated in the strong market demand. White points out that the Rambler was successful during this period not merely because of its size but because American Motors marketed it at a substantially

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[4] "Assembler" is a term which was more meaningful when there was little vertical integration in automobile production. Thus an assembler bought bits and pieces from many sources and assembled them into an automobile. Nowdays, as discussed later in this memo, all of the major automobile producers are sufficiently integrated—i.e., they make a sufficiently high portion of the parts of a car—that the term assembler may be somewhat misleading. However, because of its historical usage, I will use it from time to time.

[5] Chrysler from 1949–1952 did offer a slightly shorter version of its Plymouth and Dodge. However, these cars hardly qualified as competitors of small sub-compact imports.

lower price than the big three's full-sized cars were commanding. Recognizing the significanct demand for smaller cars, Studebaker-Packard reentered that market in 1958.

During the late 1950's, a period which saw sales of imports rise from .46% of the market in 1954 to 10.17% in 1959,[6] the big three were conspicuously absent from the small car scene. Not even Chrysler, which was experiencing tremendous financial difficulties,[7] exhibited any strong desire to disrupt the big three's united front. And when the big three did bring out "compacts" in 1960 they uniformly elected to produce a compromise between the very small and highly economical Volkswagen sized car and the large cars which had been and continued to be their most profitable products.[8] Only this year are the American automobile producers beginning to market small cars comparable to Volkswagens.

White explains the lock-step performance of the Big Three primarily on the basis of oligopoly thinking which prevented one large U.S. firm from modifying its product line until the market could accommodate all three of them at the high profitability levels the industry has come to expect.

III. *Pricing*

Automobile pricing which, of course, is intimately connected with the industry's abnormally high profits, is a classic example of an administered system. Price increases are announced in advance of the marketing of a new year's line and these increases tend to stabilize at the level chosen by General Motors, the industry leader in profitability as well as market share, and thus the company which none of the others can afford to battle with over price. Perhaps the most outrageous example of the automobile industry's pricing behavior was in the year 1956. Ford led off the announced price increases with an average rise of $58 per car. Two weeks later General Motors announced that Chevrolets would be priced $180 above the previous year. Ford immediately upped its price $50 and within three months had raised prices to the point that they were no more than $10 below Chevrolet. Such performance in the nation's largest industry has for years signaled a need for a change to economists, observers of the business scene, and Antitrusters alike; yet little or nothing has been done to ameliorate the situation.

IV. *Vertical Integration*

In addition to, and in large part contributing to, market power of automobile assemblers in the wholesale marketing of automobiles, has been the transferability of market power from automobile assembly into a large number of other markets. The vertical integration, which has steadily risen in the motor vehicle industry in the past forty years, has no doubt raised entry barriers substantially. For example, the Fisher Body Company, prior to its acquisition by General Motors in 1919, stood ready to provide an entrant into automotive assembly with bodies at reasonable prices. However, within a decade after acquiring Fisher, General Motors ceased marketing bodies to independents. Since there are substantial economies of scale in producing automotive bodies, the low volume new entrant was placed at a considerable disadvantage to General Motors since it had to produce its own bodies at greater costs than it could have bought them from an independent Fisher.

However, much of the vertical integration in the automobile industry, especially in bodies and engines, may well have led to substantial economies despite its anticompetitive effects. Perhaps this is illustrated by the fact that the big three automobile producers are vertically integrated in direct proportion to their share of the market and profitability—i.e. General Motors is the most integrated, the biggest, and most profitable, while Chrysler is the least integrated, the smallest, and the least profitable, See Robert Crandall, *Vertical Integration in The United States Automobile Industry*, unpublished PhD. dissertation, Northwestern University, 1968, pp. 54–56. Integration has also enabled the large automobile assembler to extend its market power into a large number of important, substantial, and profitable repair parts markets. As stated by Professor Candall before the Senate Antitrust and Monopoly Subcommittee (April 24, 1969), "it is the effect of such integration upon competition in repair parts manufacturing which provides the primary basis for criticizing it" (p. 15). The automobile maker's power in parts in discussed, *infra*.

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[6] Virtually all of this growth came in small cars, with Volkswagen in the vanguard.

[7] Chrysler's share of the U.S. market had declined to 11.3% in 1959 from over 20% in 1953.

[8] Profits on automobiles correlate quite closely with resale price.

V. *Automobile Distribution*

Perhaps the most widely discussed example of the automobile producers' (assemblers) ability to transfer market power has been forward into retail distribution. This has been accomplished without complete integration, but rather through a system of franchised dealers. The automobile franchise system has been subject to considerable scrutiny and analysis.[9]

As noted in Part B, infra, many of the suggestions by Department personnel made within the last several years hinge upon modifying the franchise system, primarily because that method of distributing automobiles operates as an exclusive dealing system.[10] Closed dealerships were long a formal requirement for obtaining a major-maker franchise. They remain a practical, though informal, requirement today. There are only 655 intercorporate duals (i.e. carrying cars of two U.S. manufacturers) out of 17,486 franchised dealers carrying U.S. cars in 1969.[11]

This exclusive dealing effectively prevents a new entrant or smaller producers from gaining access to the established channels of distributing automobiles.

Professor Bain [12] also stresses that the tightly controlled dealership system serves to entrench the market power of the big assemblers by rigidifying consumer preferences for their brands. Thus:

The importance of dealer systems in maintaining product preferences is generally twofold. First, there is considerable allegiance of buyers to individual dealers, based on their reputations for fair dealing and for provision of satisfactory service, and on the relative probability of their remaining solvent and in business while the car being purchased is in use. Second, there is an observed tendency for buyers to consider it an advantage to purchase a brand of auto offered nationally by a relatively large group of dealers with a high density of locations, regionally or nationally. This is because access to service from specialized mechanics and to replacement parts becomes easier, especially "out of town", as the dealer system becomes larger and geographically denser.

The Big 3 generally or on the average have significant advantages over the independents in both respects. On one hand, their larger volume permits them to obtain a substantially greater density of dealer outlets across the country. This density is attractive *per se* to the buyer who contemplates the relative convenience of obtaining service on his car; also it permits somewhat more intensive sales promotion in large cities, and representation in small towns where most or all of the independents have none. Ford and General Motors are able to obtain this density while generally restricting dealers to the distribution of a single brand—especially in the case of the Ford car and the Chevrolet. Chrysler has more or less equalled their performance in the case of the Plymouth by having that brand carried by the dealers in each of the larger cars made by the firm: Dodge, DeSoto, and Chrysler. In addition, the Big 3 have been able over time to develop a "stronger" and perhaps more effective group of dealers than the average of the independents. This ability is apparently attributable mainly to two things. First, with large national sales volumes, the Big 3 can on the average offer dealers the prospect of larger annual volumes than they could get with independent brands, and at the same time maintain a relatively high density of outlets. In consequence, there is a larger and perhaps better selection of "bidders" for Big 3 dealers franchises, and the Big 3 have been in general able to select and hold financially stronger dealers who are likely to stay in business and build their local reputations for longer periods of time.

The better financial status (and higher profits) of the Big 3 dealers in turn tends to be reflected in better locations and more attractive and ample sales and service facilities. Second, in critical times, the financial resources of the Big 3 have better enabled them to maintain adequate dealer systems, either because of the initial greater financial strength of their dealers or through assistance or subsidy to dealers. The last dramatic change in the structure of the industry

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[9] See for example B. Peter Pashingian, *The Distribution of Automobiles: An Economic Analysis of the Franchise System,* (1961).

[10] Pashigian, op cit., p. 122.

[11] *Automotive News,* p. 72 (4/28/69); c.f. Senate Small Business Subcommittee hearings, *Automobile Industry*—1968, p. 744, showing that of 14,035 GM car and truck dealers, 1,662 carried vehicles from other manufacturers. Trucks and foreign cars must account for the apparent disparity with the *Automotive News* figures.

Automotive News, p. 4 (8/25/69), reports that there were on July 1, 1969, 3,187 duals between U.S. makes and captive imports, and 1,217, duals with non-captive imports. In addition, there were 3,680 dealerships carrying imports only.

[12] Joe S. Bain, *Barriers to New Competition,* 300–302.

came with the great depression of the early 1930's. In 1929 independents supplied about 28 per cent of all passenger cars sold; by 1933, they were down to about 12.5 per cent, and by 1937 down to about 11.5 per cent—a position they have not systematically bettered since, and are not even attaining at the moment. Though the Chrysler acquisition of Dodge played a strong role in this increasing concentration, it was also evidently attributable in good part to the fact that the members of the Big 3 dealer systems survived bankruptcy on the average much better than the dealers of the independents.

I should like to stress, however, that while opening up the dealerships would certainly lower entry barriers into automobile assembly (manufacture), it would probably not lower them enough to bring any new domestic assemblers into being. This conclusion is supported by virtually every student of the U.S. automobile market, including Professors Weiss, Crandall and Bain. Effective elimination of the exclusive dealing system is likely to enhance the ability of foreign producers to market in the U.S. and may well enable the marginal domestic producers—American Motors, Willys, Checker, and some tiny specialty car producers—to gain greater market penetration. The alternatives and their relative merits are discussed at greater length in Part C, infra.

VI. *Tied Sale of Parts to Dealers*

One effect of the franchise system is a type of full line forcing of replacement parts and accessories by the automobile producers. This bears many similarities to an oil company coercively selling TBA (tires, batteries, and accessories) to its gas stations, a practice held to be illegal in the recent *Texaco* decision.[13] That case held that coercion was inherent in the great power the oil company-seller held over the gas station-buyer. The automobile maker-dealer relationship involves probably even greater power by the former over the latter, in large part because automobile franchises have a more substantial investment and a much more valuable operation than do gas station operators. It thus poses the same coercion struck down in *Texaco*.

Certainly, since automobile dealerships constitute an important, albeit declining, market for replacement parts and accessories, the effect of the coercive selling of parts by automakers to dealers is foreclosure of a substantial market for replacement parts.[14]

Another indication of the power manufacturers possess over dealers is that the dealers pay somewhat more for their manufacturers' parts than do independents for the same parts and considerably more than independent repair firms pay for parts and accessories made by independent producers. See Charles Davidson "The Marketing of Automotive Parts", *Michigan Business Studies*, Vol. XLL No. 1, (1954); Crandall, "The Decline of The Franchise Dealer in The Automotive Repair Market", *Journal of Business*, Fall, 1969 (to be issued shortly).

VII. *Warranties.*

A major problem in the automotive parts markets caused by the power of the assemblers over their franchised dealerships derives from the new automobile warranty system. Until this year, when for the first time Ford elected to "sell" a portion of its new car warranty, the warranty came as part of the purchase price of the car. New car warranties have, since 1961, been fundamentally similar and apparently require that warranty repairs be made with "genuine" repair parts by a franchised dealer.[15] There are three separate anticompetitive effects which this warranty system creates in the automotive parts market:

(a) only franchised dealers are permitted to perform warranty service;[16]

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[13] In the *Texaco* case the Supreme Court held that overwhelming power of the oil company over its gas stations rendered any buyer-seller relationship between them "inherently coercive" and thus constituted unfair competition with other sellers of TBA, in violation of § 5 of the FTC Act.

[14] Professor Crandall has ascertained that over 80% of all parts retailed or wholesaled by automobile dealers are sold to them by their vehicle manufacturers. This compares with the vehicle manufacturers 45–50% share of the Nation's entire repair part market. In contrast, independent outlets in the aftermarket, which accounted for 73% or all automotive repair in 1963, obtained only some 31 to 38% of the parts from vehicle manufacturers. See Crandall's testimony of April 24, 1969, *supra*, at 17. The only conclusion that can be drawn from the fact that franchised dealers take more than twice the percentage of their parts purchases from vehicle manufacturers than do private repair facilities is that the automobile manufacturers possess coercive selling power over the former which they lack over the latter.

[15] Leonard Burke, Staff memo Mar. 1, 1967, File 60–197–0.

[16] An additional restrictive element has been added this year by Ford which requires that warranty service performed in the geographic area where the car was bought must be performed by the dealer from which it was bought.

(b) the parts to be used in warranty service are restricted to those authorized by the manufacturer, which are almost invariably the manufacturer's own; and

(c) the public, in routinely servicing its new cars, is subjected to some coercion to use "genuine" parts and also to use the dealer's service department. There is a veiled threat that the warranty maybe declared invalid if "non genuine" parts or accessory items are utilized.

The closed market for warranty service also serves to cement the automaker's control over his dealerships. It "justifies" the requirement that "genuine" parts be stocked by the dealer and that the auto producer have access to the dealer's books.

VIII. *Assembler Power in Parts Market*

The automobile manufacturers' strength in the parts after-market is also evidenced by the fact that some 25% of all automotive parts are distributed solely by them. See *Wards Automotive Year Book*, (1966), p. 13. These include large body panels, types of body trim, and various transmission, engine, axle and ignition parts.

The primary reason for this situation is that the cost of tools and dies needed to manufacture certain automotive parts is often so great that they must be amortized over a large number of usings in order to achieve production economies. As to such products the automobile producer has an often insurmountable advantage over his independent competitor because he has two major captive outlets, (1) original equipment uses and (2) sales to his dealers. It should be noted that the annual model changes, which require expensive retooling every year, operate to give the assembler an additional advantage over the independent parts producer as to this type of product.[17]

Another anticompetitive situation[18] involves the automobile manufacturers' control over independent parts producers from whom they buy. This thesis is developed at some length by Professor Crandall in his PhD. thesis and his article, *Verticle Integration and the Market for Repair Parts in the United States Automobile Industry.*[19]

Crandall suggests that the auto companies employ overt restrictive practices, as well as benefiting from structural intimidation of parts supplies. The practices involve the "ownership [by the assembler] of all special jigs, dyes, tools and fixtures: used to manufacture parts which they purchase, thereby preventing their use by the supplier to produce for the aftermarket.[20] The second phenomenon derives from the supplier's fear that selling in competition with its car manufacturer customer might jeopardize its status as a supplier.

A final aspect of the automotive assemblers' ability to transfer or extend their market power into some high volume replacement parts markets is closely related to the "I better use 'genuine' parts to protect my warranty" thinking—i.e., a fear created by sellers of differentiated replacement parts, such as spark plugs, that for safety's sake replacement should be with the brand that came with the car as original equipment because that brand is best suited to the car. This marketing approach, as we have learned in the *Ford-Autolite* case, has given GM over 40% of the sparkplug aftermarket and attracted Ford's entry by acquisition. The original equipment brand tie has also contributed to the very high profit margins in many parts markets.

The high return in replacement parts, according to Professor Crandall[22], is a primary reason for GM's high profitability. He maintains that profits from parts sales enable the automobile producers to price their cars at levels which discourage new entry. Whether or not this is true—and certainly the pricing patterns in automobiles give evidence to the contrary—it is clear that the integrated automobile makers are able to utilize their original equipment status to promote

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[17] The model changes also favor the high volume auto producer vis-a-vis his lower volume competitors because the latter may not be able to get the maximum number of usings out of expensive tool and dies in only one year.

[18] I refrain from the use of the word practice because so many of the anticompetitive problems in the automobile area derive from structure or "effect" rather than from overt practices.

[19] XVI Journal of Industrial Economics p. 212 (July, 1968).

[20] This phenomenon is disputed on factual grounds by Steven R. Nelson, a student of Professor Weiss presently working for the F.T.C. where the auto producers do own tools and dies, he maintains it involves slow moving parts which probably are a small part of the market.

[22] Ph. D. thesis and "Vertical Integration" article (Journal of Industrial Economics), *supra.*

the sales of high volume branded replacement parts and to reap above average profits therefrom. GM's dominance of the sparkplugs market, which has troubled us so much in the *Ford-Autolite* case, is the clearest illustration.

PART B

SELECTED[23] PROPOSALS BY ANTITRUST DIVISION PERSONNEL SINCE 1966

I. *Metzger Fact Memorandum (File No. 60-107-69A) and Complaint, June 3, 1966*

Metzger assembled a massive complaint (106 pages) and fact memorandum (61 pages). He was concerned solely with General Motors and recommended an action based on the "kitchen sink" approach—i.e. he threw in every bit of anti-competitive conduct he could locate, including mergers, vertical restraints, and price-fixing. The complaint sought an adjudication of violation of Sections 2 and 7 and to undo virtually all of General Motor's mergers and acquisitions, both horizontal (such as Chevrolet) and vertical (such as Fisher Body and Remy Electric Company).

The primary value of Metzger's complaint is that it catalogues, in considerable detail, most of the acquisitions and mergers made by General Motors. It is interesting to note for example that in 1953, when Kaiser-Frazier was going under, General Motors purchased its large Willow Run, Michigan plant from the Government, Kaiser's lessor (page 94).

Metzger's fact memorandum contains a lot of interesting history of the development of General Motors' marketing system. There is considerable documentation of GM's antipathy to its dealers carrying cars manufactured by others ("dualing"), at pages 8–15, and to their diverting cars to others for the purpose of resale ("bootlegging"), pages 15–16. Metzger also traces the other controls General Motors built up and has retained over its dealers, including the auditing of their books and the forcing of replacement parts upon them, pages 15–18. Another source of General Motors' control over dealers was through financing their inventory ("floor planning") through its GMAC subsidiary, pages 23–24, which resulted in the 1939 conviction of General Motors for criminal monopolization of that market, 121 F 2d 376.

Metzger stressed the enormity of General Motors' financial and physical resources which, he believed, gave them tremendous market advantages over both dealers and competitors. His basic thesis was that any firm as big and powerful as General Motors must be rotten to the core and, therefore, should be atomized into all the parts which went into it. Metzger does not think through the question of what would constitute meaningful relief in the various markets effected by General Motors market power.

II. *Steven G. Breyer and William S. Comanor memorandum to Donald F. Turner dated July 26, 1966 Titled General Motors Case*

Breyer and Comanor proposed a monopolization case against General Motors grounded upon its monopoly power in automobiles. They would prove the existence of monopoly power by first demonstrating the high concentration in the automobile market, dominated by General Motors' 50-odd per cent of domestic sales and nearly 55 per cent of domestic production. They recognize, however, that General Motors' market share does not rise to the level found to indicate monopoly power in past monopoly cases such as *Alcoa* and *United Shoe*, and therefore, they seek to demonstrate GM's power to exclude competitors from the market based upon its substantially and consistently higher profits.[24]

The memo makes a telling statistical demonstration that General Motors could substantially reduce the prices of its cars and continue to operate profitably, while forcing all of its competition to sustain consistent losses in order to stay in the market. This would of course drive the others out. Thus they conclude that General Motors has monopoly power.

Breyer and Comanor trace General Motors' monopoly power to two basic sources:

(1) Its substantial vertical integration resulting from a series of mergers, and
(2) its franchised dealer marketing system.

They acknowledge that the vertical integration is for the most part ancient his-

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[23] On the basis of aptness, originality and usefuless.
[24] See Table 2 *supra*.

tory since General Motors' last major acquisition was in 1919 (Fisher Body). However, unlike Metzger's, this memorandum does not seek to attack the mergers as such but rather the ensuing integration as one element of monopolization.

The exclusive franchise system, which General Motors built up to be the largest automobile marketing system in the country, is subjected to considerable analysis. Most of the evils of the franchise system discussed in part A of this memo are touched upon. Breyer and Comanor conclude that "the franchise system constitutes a major barrier to the entry of new firms into the automobile industry" which "has contributed to the growth of monopoly power in the automobile industry . . ." pages (15–16).

They acknowledge that General Motors is the most efficient firm in the industry and that some of the efficiencies may be due to scale economies but conclude that General Motors' monopoly power "does not appear to rest on the realization of economies of scale in the production of automobiles" (page 22).

They recommend a § 2 suit against General Motors which would seek to break it "into two or three separate companies", while partially sharing Professor Weiss' pessimism over whether that would create a substantial competitive improvement.[25]

III. *Oliver E. Williamson's Memoranda to Donald F. Turner dated May 16, and July 6, 1967, "General Motors Case"*

Williamson's first memorandum examines the desirability of seeking dissolution and/or francising restrictions in a monopolization suit against General Motors. In looking at the structural approach Williamson suggests that liability ought to be grounded upon the simple possession of monopoly power which does not result from scale economies. He rejects any reliance upon past vertical mergers. While acknowledging "that vertical integration has made entry into the automobile industry more difficult," Williamson maintains it has also "resulted in significant efficiencies". He argues that acquisition was merely a convenient means to achieve those efficiencies and, had it been prevented, the automobile producers would have integrated internally with much the same ultimate result.

Williamson rejects any horizontal dissolution of General Motors into two or three parts on the ground that it would not be economically significant and that, in any event, obtaining authorization to bring such a case would be almost impossible.

Williamson suggests that abolition of the franchising system, which he characterizes as "the principle barrier to entry into this [automobile manufacturing] market", would be more likely to improve industry performance than merely breaking GM into three parts. His objections to the francising system are essentially those outlined in Part A, *supra*.

Williamson's second memorandum discusses the vertical structure of the automobile industry and relies heavily upon Crandall's PhD. thesis. He makes the same points about vertical integration and restrictive distribution practices which I discuss earlier in this memo. In analyzing relief alternatives, Williamson makes the following evaluation of dissolution, at page 8:

> To require GM to split out the Chevrolet Division is not likely to have significant effects. Unless coupled with an attack on vertical integration and contracting practices, I would think that perhaps 7 to 10 firms might have to be created to get real significant relief (which is to split GM three ways and divide Ford in half). Inasmuch, however, as even a Chevrolet case appears to me to be politically unacceptable, a dissolution effort of these dimensions is quite out of reach.

Williamson recommends a suit, presumably against only General Motors although it should logically be brought against each or all of the big three, which would put an end to the franchising system. He does not explore the mechanics of such a prohibition and makes the following statement:

> To prohibit franchising need not upset established assembler-dealer relations in any significant sense. Existing connections not only could but, in the short-run at least, should probably continue. Such a prohibition would, however, prevent the assembler from forcing "genuine" parts onto the dealer, and would in the larger cities afford opportunities for new marketings forms (discount housing and such) eventually to take hold. (p. 9)

Williamson also suggested that manufacturers be required to sell warranties in-

[25] See Weiss, op. cit., p. 376.

dependently of selling cars and that they be prohibited from preventing their parts suppliers from entering the aftermarket.

IV. *Baker, Shepherd, and Hunter Memorandum, undated (c. April 1968), "Proposed Shared-Monopoly Automobile Case"*

This memorandum represents the first serious attempt to formulate a theory of Section 2 violation based upon monopoly power shared nonconspiratorially by more than one firm. The theory, in sum, is that the members of a tight oligopoly (i) who collectively possess a monopoly share of the market, (ii) who have performed similarly to what one would expect from a single monopolist, and (iii) all the members have nonconspiratorially engaged in exclusionary conduct of the type which would render a monopolist in violation of Section 2, are themselves guilty of such a violation.

In support of their contention that the big three automobile producers jointly hold monopoly power, Baker and Shepherd cite their aggregate 90% market share and several ways in which they have "behaved in a manner approximating a traditional monopolist". These include long and short run pricing policies, high profitability, and retarded innovative performance (page 15–23).

The exclusionary conduct Baker and Shepherd would rely upon includes:

(*a*) vertical relationships, such as backward integration into parts manufacturers, control of independent suppliers, franchising practices, frequent model changes, and price discrimination in direct fleet sales;

(*b*) acquisitions, noting that GM, far more than Chrysler and Ford, achieved its substantial vertical integration by means of a large number of acquisitions.

They recommend a degree which would split GM three ways and Ford two ways. The resultant structure of the industry is outlined on page 37 of their memo. In addition Baker and Shepherd would seek extensive injunctive relief designed to remove franchise exclusive-dealing restrictions and the forcing of parts upon dealers. They would also require that warranties be sold independent of the car itself, that the manufacturers be prohibited from restraining their parts suppliers from entering the aftermarket, and that they not be permitted to discriminate (presumably against their dealers) in fleet sales.

V. *Donald F. Turner, memorandum to Zimmerman dated July 24, 1968 (File No. 60–0–38–52, 53, 54) Section 2 case Against General Motors, Ford, and Chrysler*

Turner suggests a suit to break up GM three ways and Ford two ways and, in addition, a prohibition of restricted franchising via "a requirement that (the) three defendants sell to any would-be distributor who qualifies as to credit risks and the like."

Turner rejects most of the "exclusionary" conduct catalogued by Baker and Shepherd, such as integration into parts manufacture, restraints upon independent parts suppliers, and warranty policies, on the ground that "these practices are substantially irrelevant to monopolizing the production and sale of automobiles . . ." (p. 2). He also would forego any reliance upon annual model changes, because this practice was competitively generated by General Motors, and Ford and Chrysler were forced to follow suit in order to survive. Turner would rely upon acquisitions and franchising policies as the basis of his monopolization suit.

Turner's complaint would have three counts: "1. An individual monopolization count against GM, 2. Monopolization counts against GM, Ford and Chrysler on a shared-monopoly theory, and (probably) 3. A direct attack on the franchise practices as unlawful attempts to monopolize and/or unlawful agreements in restraint of trade" (pp. 4–5).

Turner's analysis of General Motors' monopoly power and the big three's shared monopoly power is similar to that of Baker and Shepherd.[26] He believes that restrictive franchising practices are sufficient in and of themselves to prove monopolization, as they must be in the case of Ford which has no history in major acquisitions.

VI. Memorandum from Gordon Spivack to Zimmerman dated September 9, 1968, File No. 60–107–694

Spivack proposes a monopolization suit against GM alone based upon monopoly power and General Motors' failure to attain it solely through efficiency. In de-

[26] See Turner, The Scope of Antitrust and Other Economic Regulatory Policies, 82 Harvard L. Rev. 1207 (April, 1969), advocating a rule which would permit dissolution under § 2 of persistent oligopoly power not caused purely by efficiencies.

fining General Motors' monopoly power Spivack notes that, whereas General Motors has some 50% of the market, it accounts for about 70% of the industry's profits. He cites the same exclusionary conduct as do Baker and Shepherd.

Spivack disagrees with Turner, Baker, and Shepherd, however, on whether to bring a shared monopoly case. He agrees that "oligopolies often have the same effects on price, quality, services and innovation as monopolies, a fact the law has come to recognize in the merger field, so oligopolies should be treated like monopolies under § 2" (page 8). However, Spivack then goes on to express such profound and basic difficulties with applying Section 2 to oligopolies that I suggest that the statement just quoted does not state his position. Spivack maintains that he does "not believe that we should attempt to establish a shared monopoly theory except in a case in which the facts cry out for relief with such clarity that the case could clearly be distinguished from what would instantly and widely be denounced as an attack on all industry and free enterprise in general" (page 10). In applying this standard to the facts we know about the automobile industry, Spivack finds that they fail to measure up. I believe that if the automobile industry fails to measure up to that standard then no industry will be able to and that Spivack's endorsement of applying Section 2 to oligopolies is ephemeral.

Spivack recommends a monopoly suit against General Motors seeking to break it into three companies, with a requirement of "compulsory dealing" for the three successor companies. He also would bring a separate suit against Ford to correct whatever franchising restraints subsequent investigations reveal.

Part C

RELIEF ALTERNATIVES

It should be remembered that we are seeking to remedy competitive problems in three distinct, albeit interrelated, product markets: (a) automobile assembly or manufacturing; (b) automobile retailing; and (c) automotive replacement parts. The interrelationships between these markets are both profound and complex and derive primarily from the tremendous market power of the automobile manufacturers and the structural and conduct oriented transferability of that power into the other markets. Thus, it is not likely that any relief limited to either the parts or automobile retailing markets is likely to substantially improve the competitive situation in automobile manufacture. On the other hand, relief which will create a substantially more competitive automobile manufacturing market will probably serve to eliminate many of the competitive restraints in the other markets which are discussed in Part A, *supra*.

Another variable in attempting to formulate meaningful relief concerns which firm or firms it would affect. A decree which applied only to General Motors might suffer from several defects: (1) it could create inequities by putting G.M. at a competitive disadvantage to Chrysler and Ford;[27] (2) breaking up G.M. so that the parts would be about the same size as Ford and Chrysler would leave five firms with 90% of the market, which is probably still too concentrated to cure most of the poor performance; and (3) if we seek to put an end to such bad practices as exclusive dealing and full-time forcing, all the auto makers are guilty and a decree against G.M. will cure half of the problem at most.

On the other hand, the biggest problems in seeking relief against Ford and Chrysler, along with General Motors, are: (1) if we rely upon a structural violation, we can probably show that G.M. possesses monopoly power in the automobile market, whereas it would be difficult, as pointed out by Spivack, to include Ford and Chrysler in the structural offense; and (2) while G.M. is a fully integrated producer of all the differentiated high turnover replacements parts through its AC spark plug and Delco-Remy divisions, neither Chrysler nor Ford (assuming we achieve the divesture relief sought in *Ford-Autolite*) is nearly as powerful in parts. Thus, a suit designed to get the assemblers out of, or alternatively reduce their power in, these parts markets would be directed primarily at G.M.

Finally, I suggest that a relatively innocuous suit—i.e., one seeking only mild relief—is likely to accomplish little or nothing and will probably have serious

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[27] The courts have exhibited considerable reluctance to put one automobile producer at a competitive disadvantage or advantage to the other(s). See *Chrysler Corporation* v. *United States*, 316 U.S. 556, and *Ford Motor Company* v. *United States*, 335 U.S. 303.

adverse consequences. If we sue to cure a fundamental economic evil and obtain only cosmetic relief,[28] we have created a serious obstacle to future antitrust action in that area.

This obstacle derives from the presumption that a suit and a decree have cured the problem complained of. See, e.g., the copious memoranda seeking to reattack AT&T's control of Western Electric since the ineffectual settlement of that case in 1956.

In addition, any suit against the automobile manufacturers is likely to raise public hopes that it will do something substantive to alleviate their many legitimate grievances against the industry. The strength of the public's expectations for thoroughgoing redress is probably the major cause for the broad-based, albeit wrongheaded, criticism of the smog decree.

1. Automobile Assembly

Clearly the most effiicacious means to recreate competition in the automobile manufacturing market would be to break up G.M. and Ford, and perhaps Chrysler as well, so that their present 90% of the market woud be divided among six to eight equal-sized firms. Divestiture relief short of this is less likely to substantially improve industry performance. As Professors Weiss and Williamson note, a four-company oligopoly, which would result from breaking only Chevrolet away from G.M., would probably perform only slightly better than the present three-company oligopoly. Perhaps breaking G.M. into three equal parts, thereby creating five relatively equal-sized firms, with each having between 16% and 23.7% (Ford's share) of the market, might result in a moderate improvement.

As noted by the Baker-Shepherd-Hunter memo (p. 38), Weiss, *op. cit.*, Bain, *op. cit.*, and R. F. Lanzilotti, The Automobile Industry in W. Adams ed., *The Structure of the American Economy*, 1961 edition, any firm with over 10% of the U.S. market[29] will be well above the size needed to achieve optimum productive efficiencies. The most thorough analysis of economies of scale in auto manufacturing is in White's Ph.D. thesis, *op cit.*, pp. 53–76. White concludes that a manufacturer should have two brands and that 400,000 cars per year per brand achieve optimal efficiencies. The 800,000 figure falls within the conservative 10% guideline I have chosen.

Short of atomizing the major assemblers, or imposing serious diseconomies which would flow from forced vertical disintegration,[30] the relief most likely to invite entry into automobile assembly would involve a forced restructuring of the method of distributing automobiles discussed below.

2. Automobile Retailing

It seems clear, both to lower entry barriers into automobile production and to achieve more competition in automobile retailing, that the franchise system, as it is presently constituted, must be substantially revised. The primary object of any such revision, I would suggest, should be to sever all control of the assemblers over their retailers as to the following closely interrelated matters: (a) whether the retailer desires to service automobiles, for warranty purposes or otherwise; (b) whether the retailer carries cars of other manufacturers; (c) whether the dealer stocks, for his own use or for resale, any replacement parts; (d) whether, if the dealer does stock such parts, he carries those made or sold by the assembler; (e) whether the dealer sells any given volume of cars in any period; (f) whether the dealer stocks any inventory of cars; (g) whether the dealer sets prices or promotes the sale of cars in any way; and (h) whether the dealer sells to any particular types or classes of persons. These factors collectively state the sources of assembler power over dealers and the most dangerous competitive effects of that control.[31]

It seems clear that the only way to dissolve manufacturer ability to control the dealers' purchasing and marketing decisions is by removing all of the manufacturer's strong economic leverage. This leverage derives from the dealer's

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[28] Such as an injunction against GM forcing parts upon its franchised dealers unaccompanied by any great weakening of GM's power over its dealers.

[29] 9.4 million new automobiles were registered in the United States in 1968, 8.85 million of which were domestically produced, *Automotive News*, p. 7 (4/28/69).

[30] A form of relief no one, including me, believes to be desirable except as to a limited number of products. See Part C, 3, *infra*.

[31] I do not mean to suggest that prohibiting some of these phenomena, alone, would constitute sound relief. In fact, prohibiting (e), (f), and (g), above, while leaving the rest of the franchise system intact, might well have a net adverse effect by pushing retail prices up, especially in markets with few dealers.

substantial capital investment, which will yield large profits only if he retains his franchise with its territorial protection, tied warranty service, and assured profits on some parts. So long as the leverage remains, and I suggest that it is germane to any franchising system, no injunction against coercive practices on the part of assemblers is likely to work because coercion, just as in the *Texaco* case, will automatically flow into any buyer-seller relationship between the auto manufacturer and his dealer.

The only way which seems reasonably likely to break the leverage of manufacturers over dealers is by requiring the manufacturers to sell automobiles and parts on nondiscriminatory terms to all persons desiring them. This would eliminate the "special relationship" between manufacturer and dealer by destroying inherent value in a franchise. It would, in turn, deprive the manufacturers of any power to coerce a dealer to carry its brands exclusively, purchase its parts, or service its warranties. Such a decree would bring large numbers of low-cost automobile retailers into being and would probably result in a large increase in the number of multiple brand dealerships. It would create far more competition both in the purchasing of automobiles for resale and in the retailing of them.

The primary victims of such a decree would be the existing franchise holders who would be deprived of the inherent value a major brand automobile dealership now possesses. They would no longer be assured of the limited intra-brand competition caused by the limited number of outlets in their community. Most dealerships would suffer a loss of sales as new retailers spring up in their markets. In addition, they could lose the tied warranty and parts sales they now enjoy. On the other hand, the dealers might benefit by being relieved from the forced overstocking which they often complain of.

As noted above, such a decree ending the exclusive dealing relationship imposed upon retailers which would open a large number of retail outlets to the smaller automobile producer (notably American Motors) and foreign manufacturers. Since the cost of establishing a retail distribution network is probably the greatest barrier to entry into automobile assembly, any decree which would open up the existing distribution network to new entrants would be highly salutary.

Finally, a "sell to all comers" approach should dissolve the power of assemblers to force replacement parts and accessories upon dealers. Since this tying power derives from dealers' dependence upon an assembler, the removal of that dependence should place the assemblers, in selling parts to dealers, on a relatively equal footing with other parts producers. This should invite new entry into many of the parts markets which are presently subject to the auto makers' power.

As part of this relief it may be necessary to bar the auto manufacturers from offering dealers tied warranty service, for it alone, if made profitable enough, could permit continued manufacturer power over retailers. This could be accomplished by requiring the manufacturers to set up objective standards for certifying garages to do their warranty work. Clearly those standards must deal only with competence to do work and not require the purchasing of automobiles or parts from the manufacturer.

Further, the concept of "genuine" parts for warranty work should be prohibited. The manufacturers should be required to publish reasonable objective standards or specifications for replacement parts to be used on warranty work and the certified garage should be free to use any parts meeting those standards. Since the garage's certification would be based on meeting objective performance criteria, there could be no manufacturer threat of cutoff (i.e., decertification) for failure to buy parts or automobiles from the manufacturer. These proposals should eradicate all tying or forcing power.

The big danger in the "sell to all comers" approach is that it might push the big manufacturers into retailing cars themselves. Two possible means of handling this problem come to mind: (a) prohibiting such forward integration or (b) requiring that sale to resellers be at a reasonable discount (perhaps a fixed percentage) below the manufacturer's retail prices. The difficulty with (a) is that it has anticompetitive implications. However, since the auto maker's power in retailing has given rise to many of the industry's problems, it may be wise to keep them out of retailing, especially if we do not reduce concentration at the manufacturer level. Alternative (b), on the other hand, may involve us in an ugly, Robinson-Patman-like price regulation which is not only undesirable, but may be unworkable. A third alternative, which appeals to both Len Weiss

and me, is to specifically leave this issue open in the decree, to deal with when, and if, problems develop.

While I do not maintain that the "sell to all comers" approach, coupled with warranty standards, is the only method of ending the franchise system, I am unable to perceive of any other method which is likely to work. Injunctions against exclusive dealing are not likely to work. In fact, the automobile producers claim that they have no exclusive dealing agreements at present. Injunctions against trying or forcing, because of the inherently coercive relationship between the assemblers and dealers, are also likely to prove fruitless, cf. *Texaco*. Doing away with dealers' quotas and assembler auditing of a dealer's books is likely to have only moderate success in diminishing dealers' dependence and might well reduce competition among dealers.

Requiring the assemblers to offer warranty service by persons other than the dealers should be easily frustrated when it comes time to certifying repair houses; for taking warranty service away from otherwise franchised dealers would probably increase rather than decrease their dependence upon their supplier of an automobile.

The abolition of restricted distribution will probably not lower entry barriers to the point that new entry into automobile manufacture will come about. However, foreign producers might enter and, even if there is no new entry, the threat of new entry created by lower barriers would lessen the auto makers' power to openly disregard consumer preferences. In addition, it will make for more effective relief, if and when we seek dissolution of G.M. (and Ford), by assuring that each auto maker will have access to a nationwide system of retail outlets.

Senator HART. Our next witness is the very distinguished and official representative of the German Government; we welcome Dr. Christain Woelker.

Doctor, may I inquire, as to your own convenience, we can either recess now and return, or take your testimony now. Do you have any preference?

STATEMENT OF DR. CHRISTIAN WOELKER, ASSISTANT SECRETARY, FEDERAL MINISTRY OF TRANSPORT, FEDERAL REPUBLIC OF GERMANY, ACCOMPANIED BY KARL-HEINZ NEUMANN, GERMAN EMBASSY

Dr. WOELKER. If you are disposed to continue this meeting, I would be glad to stay here.

Senator HART. And if you would care to have your colleague join you.

Dr. WOELKER. Thank you very much.

Senator HART. First let me, for the record, identify our distinguished guest.

In an effort to gain some perspective from the experiences of other developed countries, the subcommittee has invited Dr. Christian Woelker, the Assistant Secretary of the Federal Ministry of Transport in West Germany.

As compared with the United States, Germany has a more competitively structured and balanced ground transport manufacturing segment. There are a dozen or more rival auto, truck, bus and vehicle, rail vehicle manufacturers, and no one firm in Germany, as I understand it, dominates the competing modes of transportation.

This raises the question of whether a balanced group of competing ground vehicle manufacturers can assist a nation in achieving a balanced system in transport.

We are honored to have Dr. Woelker here to describe Germany's

efforts and success in providing its citizens with a diversified and attractive menu of highway and rail transportation alternatives.

Dr. Woelker will be accompanied by Mr. Karl-Heinz Neumann, of the German Embassy, who will assist in both the language and questions.

Dr. WOELKER. Thank you very much for your kind introducing words.

May I add that I feel most honored and thankful to be given the opportunity to appear before you today.

I have made the voyage to acquaint you with some of our transportation problems and solutions, knowing that circumstances in the United States and Germany may be related, if not similar.

It is an odd feeling, to come to the new world, which had held the role of the dynamic leader in the world for centuries, knowing that this country is looking back to its European origins, if I may say so, in order to find contributions, if possible, for the solution of its most pressing transportation needs.

Senator HART. Doctor, I think in part it comes from a realization, perhaps inexcusably late, that once upon a time we thought that God had a special province for this country, and a special purpose, and hence whatever we did was right. We no longer operate on that theory.

Dr. WOELKER. And I am glad to oblige, Senator Hart, because it is the conviction of my government that the challenges of modern society, and among those, the changes of modern transportation, can best be met by the highest possible level of international cooperation, and I am glad to state here for the record that the cooperation between the United States Department of Transportation and the German Ministry of Transport has been growing steadily.

Furthermore, I would consider my goal to be achieved if this hearing could lead to a constant dialog and exchange of views between lawmakers in the United States and competent corresponding personalities in the old world.

Before beginning my statement, I wish to point to the fact that according to your kind letter of invitation for today, I have submitted to the committee a comprehensive report on German transportation policy, including all modes of transport, as well as medium- and long-distance traffic.

I would like to propose to include this paper in the record.

Senator HART. It will be printed in the record.

Dr. WOELKER. Thank you.

[The paper appears at the end of Dr. Woelker's testimony as exhibit 2.]

Dr. WOELKER. And furthermore, I have distributed a collection of statistical data, maps, and factsheets on urban mass transit. This will be at the disposal of your subcommittee and your secretariat.

Perhaps one could add to the written statement three annexes which are before you, giving more and better information as far as the Federal Republic of Germany is concerned, the transport system, and the most important, constitutional bases.

Senator HART. We welcome them, and they will become a part of our record.

[The annexes referred to appear at the end of Dr. Woelker's oral statement appended to exhibit 1.]

Dr. WOELKER. Senator Hart, I don't intend to read through the oral statement before you, but to mention the most important points.

After having listened with greatest interest to the statements pronounced here this morning in the discussion, it is perhaps as well interesting to see what is going on and what will be done in our country.

Germany's general transportation philosophy is defined by the statement of Federal Chancellor Brandt. It contains several highlights.

First, public short-distance passenger transport—that means commuter or urban mass transportation—has preference over private transport. The necessary programs in this respect are costly and have to be set up on a long-term basis.

Second, revenue from mineral oil taxes should, in the future, not only be used for road construction, but also for public transport facilities.

Third, the importance of rail traffic will grow again. Rail traffic is more beneficial to the environment, in many instances it is more efficient from the national economy point of view, and it is indispensable to the community.

Since there is existing rail infrastructure, it would mean wasting taxpayers' money if we would not make the best possible use of this facility.

These focal points are touching a number of problems which are of topical interest today in many industrialized countries.

Their solution within the framework of a rational and consistent transport policy which is guided by the interests of society should be based on some major principles.

First, the aim to meet transportation demands by maximizing benefits for the overall economy is to be achieved mainly through the free competition on the market.

The second principle, regulatory interference by the state should only be considered if free competition as the only instrument of control will lead to results undesirable from a general economic point of view, or if there is no room for free competition since there is no balanced market situation and no free choice of alternatives. This is, we think, the case in the relationship between public short-distance passenger transport and private transport with individual vehicles.

Third, investment policy and regulatory policy must be oriented to a greater extent to create systems of public transport, rather than subsidizing singular modes of transport.

The fourth point: In Germany there is no intention of regulating or directing the production or the sales of vehicles for various transportation modes by direct government intervention.

An indirect influence is intended to be exerted on automobile ownership by making owners pay all costs which they cause to the community. The costs for the use of the traffic routes, the costs of the impairment of the environment, exhaust gases, noise, the cost of congestion, and the costs of accidents have to be taken into account.

The fifth principle: In goods transport a controlled framework of free competition is best suited for establishing an equilibrium between the requirements of the shippers, which differ greatly in quality and quantity, on the one hand, and the services provided by the different modes of transport, on the other.

Sixth, the main instruments of the administration for influencing the distribution of the total transport volume to the individual traffic sectors are investment policy in order to influence the use of the different means of transportation—I will come back to this point later on—taxes and public subsidies; regulations influencing the access to the market and the capacity of carriers in freight transport; and rate-price policy, which has a clear tendency to deregulation.

Transport policy is no isolated action. Its interdependence with other policies, above all with the environmental, the regional planning, and the regional policy, must be taken into account in planning and implementation. Only by such a process can a balanced transportation system be achieved eventually. This applies both to the national transport policy and to the Common Market transport policy of the European Economic Community.

As far as I understood, the most important subject you have discussed as far as transportation is concerned is the organization of public short-distance passenger transport, and I may add that in our country, and also in most European countries, this sector of transportation urgently needs solution.

The problems of short-distance transportation are often considered as the symptom of the crisis of the big city, or rather, as its cause.

At any rate, in Germany urban mass transit facilities have been owned by the communities, and were since operated in accordance with the public interest. Only since the 1950's, when, in our country and other countries of Europe individual motorization on a large scale started, are we confronted with a declining ridership on public facilities, and major traffic congestion by the individual automobile.

But public ownership and the relatively late individual mobility by "everybodies own wheels" prohibited a major decline in urban mass transportation and serves as the starting point for urban transportation needs in the 1970's and 1980's. We do not have to start from scratch. We can lean on our well-experienced systems.

But one word of caution: It is not so that we do not have your kinds of problems in our cities. It is somewhat the same situation with which we are confronted.

We came, as far as short-distance transport is concerned, to the following conclusions:

The attractiveness of public short-distance passenger transport must be enhanced. This can only be achieved by economically sound enterprises.

Since there is no general pattern for urban mass transit each local authority has to find the best suited means to be employed for its specific and multifaceted functions of short-distance transport. That means creation of whole systems in which also private transport will find its place, such as "park and ride."

The restricted traffic area in the inner cities makes optimal utilization of the traffic space, including parking places, mandatory. We

have, for instance, exclusive pedestrian zones or areas in the main shopping districts of many cities.

The complexity of the problems makes intensive research and development in the field of advanced short distance transport systems and technologies necessary.

The measures taken by the German Government in this respect are directed to a better method of financing.

Part of the revenue from the mineral oil tax is earmarked for urban mass transit.

In my statement I gave some figures about that. We could, perhaps, leave that aside for the moment. But the philosophy is interesting in that no longer the oil tax is given to highway construction exclusively, but partly goes to mass transportation needs in the towns.

Giving one figure, for instance, in 1973, this portion was $800 million, and when we compare this $800 million with the budget of the Federal trunk road construction, which is $4,300 million, then we find that one-third of the Federal highway budget is today invested for town traffic. That is a new orientation in our transportation philosophy and practice.

These $800 million, coming in part from the mineral oil tax, go into urban mass transit investment. In public short distance passenger transport that means construction and development of urban rail mass transit in the big cities, investments until now only for the infrastructures of underground railways, rapid urban railways, maintenance depots, and park and ride systems.

Another part of this portion is given to urban road construction, but only in those areas with lesser population density where it is not profitable to construct subways or rapid urban railways, but where in reality other problems in urban transportation exist.

We think that one must have a balance of funds between those areas where the density is very high and those areas which are less populated.

The German Government had set up some other measures to promote urban mass transportation: Tax relief for buses, refunds of diesel oil tax, and financial contributions to cover the social costs in the transportation of the German Federal Railway.

We think that this system which is now developing in a very promising way will help us in the long run to overcome the difficulties in our towns.

Due to the fact that our country is not very large, we see these problems narrowly connected with the financing of the traffic infrastructure as a whole.

The Federal Government has developed integrated traffic infrastructure planning.

Perhaps it would be interesting here to point out two figures. In the time 1966 to 1970, the financial volume for investment by the Federal Government was, for the railways, 26 percent; and for the Federal trunk road, 64. The other percentage goes to inland waterways and to air traffic control. We have the tendency to change these proportions so that investment for the German Federal Railways

goes up from 26 to nearly 35 percent, and the construction of Federal trunk roads goes back from 64 to nearly 54 percent.

From these figures you will see that we try to give our investment policy in our whole country a clear orientation.

As far as competition between the different modes of transportation is concerned I may state that this question is very difficult in all European countries and that we have the philosophy that all modes of transport should bear the costs they cause.

That means that when we think of the roads, that the users are to be charged for the costs of utilization, roadwear, maintenance, resurfacing, security, operation, and they should bear the costs which nowadays in their main part are paid by the general budget.

That means the effects of the environment, noise, exhaust gases, the effects of accidents, and traffic congestion.

This philosophy is now being developed in our country, and we endeavor to qualify these costs on the European and German level, but this qualification is accompanied with very complicated problems. But these short remarks may explain the direction of our policy to regulate the competition between the different modes of transport.

As far as I learned from your letter and your paper, I saw that one of the most important topics here is the integration of the passenger transport services.

May I say that we can perhaps divide it into different aspects.

As far as long distance passenger transport is concerned, in a country like the Federal Republic of Germany the regular bus lines play only a minor part, and our regional air transport network, due to the small dimensions of our country, is judged very cautiously. So that the long distance transportation system would be best fitted by the railways, and we have developed a long distance railway transportation system, the so-called trans-Europe express trains, and intercity trains.

The rail has naturally a part to play in short distance passenger transport.

Since all big cities are connected with their outskirts by a more or less dense railway network the idea imposes itself to make use of and develop the existing railway infrastructure.

From the economic point of view it would therefore be sensible for many cities to make use of this possibility, rather than to build other transport systems; for instance, urban mass transport networks.

It goes by itself that such urban railway networks of a big city must be planned and operated not separately but in connection with the network of the other transport enterprises.

For that reason the special form of the integrated transport system has been developed.

In my written statement I mentioned as an example such an integrated transport system, a pool founded in Hamburg, where you can see that the different modes of transport in the bigger area of the town of Hamburg were not merged but became partners of the pool, where a common operation and a joint fare system has been developed.

The effect is that the passenger is permitted to change the means of transportation as required for reaching his destination. All fare barriers hitherto existing between the different operating branches and modes have been eliminated.

All services of the integrated transport system are offered to the passengers under a unified fare system, and this method of cooperation in big cities is accepted by the population in a very promising way.

At last, Senator, I come back to the question of the influence of industry on the decisions of the Government in the field of transportation.

May I try to point it out this way: In the Federal Republic of Germany, like in other countries, the interests of industry, trade, et cetera, are protected by associations.

There is a regulation in existence providing that these associations must be heard before important decisions regarding transport policies are taken. This applies in particular to legislative projects.

It is obvious that the associations try to exercise a certain influence, but they do not hold any dominant position. The same applies to large manufacturers, and there is only very little infleunce on the decisions in the infrastructure investments.

Thus, the motor vehicle associations have requested for years that mineral oil tax revenue be used 100 percent for road construction. Since 1966, however, the policy has been steadily that only 50 percent is used for this purpose.

The motor vehicle associations have increasingly shown understanding for the funds provided from the mineral oil tax being used for the improvement of the traffic conditions in the communities. They have been convinced that this also serves the interests of the motor vehicle owners since it will decongest the urban traffic pattern.

As in other countries, the advantages and disadvantages of the motor vehicle are being extensively discussed in the Federal Republic of Germany. Global opinions are more and more differentiated in the sense that in densely populated areas public short distance transport should be given priority whereas in the rural districts private transport cannot be dispensed with.

As far as the topic mentioned this morning—namely the competition in the automobile industry—may I add that in Europe this problem perhaps does not exist in such a sharp manner because in the nine countries of the Common Market there is very sharp competition between the different automobile production industries so that the buyer has not the impression that the automobile industry in one country or the other has too big an influence.

Another point is we try to influence the choice by the user of the mode of transport by influencing the development of the infrastructure. That means switching over investment capital from road to rail. One should perhaps add that the public is relatively not reluctant in accepting this differentiation.

We may perhaps state that psychology, education, convincing processes, and so on, play an important part in this long-term development. Naturally, all these developments have to be realized in a democratic process.

May I conclude that it is the goal of our transport system to make it balanced, both in passenger and in goods transport, for a long time to come, which will benefit the community.

Thank you very much.

Senator HART. Thank you very much, Doctor, for your oral testimony and the data that you have supplied the committee. We appreciate it very much.

If in our exchange you would like to have Mr. Neumann join or translate, by all means feel free to do that.

Very early in your statement, you say that in your country a wide diversification of producers makes it impossible to favor one mode of transportation against another.

Would you elaborate on that?

Dr. WOELKER. Yes, thank you.

Perhaps I should explain this problem, not only on the level of one country but on the European level, as far as the European Common Market is concerned; that is, as everybody knowns, a very important aspect.

And so, I may say that in most countries there are several automobile firms, taking them as a whole, as I pointed already out, this is enough to create competition, and even more so, because as you know, there are no barriers for trade within the Community, and therefore the diversification of producers in the automobile industry has good effects.

On the other hand, we do have many firms who construct buses, trolley buses, and rolling stocks for mass transit transportation; for instance, rolling stock for subways, railways, and so on. These firms are, with some minor exceptions, independent. That means they don't belong to the automobile industry, but they cooperate often very closely among themselves.

So I will say that concentration as far as the automobile industry is concerned is not very powerful; for the other means of transportation, the rolling stock, the concentration is even less, and therefore competition is assured.

Senator HART. Very good.

I know that you have some slides. Would you prefer to have us see them before we continue the questions?

Dr. WOELKER. Yes. These are some modest slides. I am not an engineer; I only want to give you a picture of what is going on in our producing industry. It would perhaps be useful.

Senator HART. I think it would be, yes, and we would enjoy it.

[The following colloquy took place during a slide presentation.]

Dr. WOELKER. This is a streetcar from a company in Hanover.

This is Hamburg.

Senator HART. Is that the interior?

Dr. WOELKER. Yes, the interior.

Mr. NEUMANN. This is the rapid rail system operated by the German Railroad.

Dr. WOELKER. This is Munich. Perhaps you have already seen this the other day from our colleague more competent for the technical questions.

This is the product used in Dusseldorf for the rail system.

Senator HART. Is all the equipment we are seeing made in Germany?

Dr. WOELKER. Yes, and the equipment is produced by cooperation. Different firms contribute, for instance, as far as electric equipment is concerned, and so on.

This is the interior of a streetcar in Dusseldorf. You see they have the ticket automat here at the entrance of the car so that they can reduce personnel on these cars.

This shows the trolley buses.

This is rapid rail.

Senator HART. Do you know whether you use gas or diesel?

Dr. WOELKER. No, this is a trolley bus, electric.

Senator HART. All electric? Even the engines we saw just a moment ago?

Dr. WOELKER. Yes, they use electricity.

Mr. NEUMANN. This is the engine compartment.

Dr. Woelker, as he said, is no technician. Neither am I. But these buses operate by taking the electricity from overhead lines, as you can see. They have an advantage over the streetcars since their movability in the road is greater than the streetcar, but we don't have many of this system, I should say.

Dr. WOELKER. But this is a comprehensive system used exclusively by a German system, as pointed out by Mr. Neumann. To answer your other question, the most part of our bus system is diesel.

These last slides are in Cologne and Bonn, the capital. They are somewhat dark, but I hope you will see the streetcars.

This technique is very well accepted by the public.

[End of slide presentation.]

Senator HART. You say that most of these buses are diesel. How about rail, the locomotives, is that largely diesel or is that electric?

Dr. WOELKER. This is electric, most parts electric.

Mr. NEUMANN. Almost exclusively.

Senator HART. Yes.

Mr. NEUMANN. That concerns the streetcars. You saw the systems in Bonn and Cologne. In the outskirts, or in the fringe areas, these streetcars run on their own right of way, or in their own lanes. In some areas in Germany they are now starting to build underground tunnels for streetcars in the city centers. That has been a new development in order to avoid congestion, because you are apparently aware that a streetcar is a hindrance to traffic since it is riding on rails.

So, in the city centers, in Bonn, for instance, we are putting these underground. It is not a subway, it is something in between the streetcar system and the subway, not as expensive as a subway and almost as efficient.

Senator HART. You described the allocation of fuel taxes. You said that 50 percent of the Federal funds went to highways and 50 percent for urban transit.

Dr. WOELKER. This question is fully justified, Senator. It is a little complicated and I was, perhaps, a little too short.

In general, it is the following model. The fuel tax is a tax which

goes to the Federal budget. Fifty percent of this income of fuel tax goes into the general budget, and 50 percent to transportation.

Formerly, this 50 percent was given exclusively to highway and trunk road construction.

And since the development I pointed out concerning help to the communities, a part of the fuel tax is subtracted before coming into the general budget and before this income is split, 6 pfennigs, are allocated to urban mass transportation; that is, as pointed out in my prepared statement, 0.54 cent per gallon.

So, we have a rather complicated system of three parts. One part goes to urban mass transportation, and the bulk is divided into 50 percent to the general budget and 50 percent to road construction. I hope I explained this right.

Senator HART. Very good. We do understand that.

Some of those slides showed urban rail systems. It has been suggested in this country that urban rail systems are practical only in cities of very large populations. Some transportation planners have told us that it requires a population of about a million people.

Do you know whether this has been your experience or not?

Dr. WOELKER. Yes, thank you. This is, I must say, a very complicated problem. The figure, the famous figure of 1 million, is contested by some experts.

The major argument is the traffic during the rush hours. If, for instance, between 5 and 9 o'clock more than 5,000 people per hour have to go in one direction, and in the afternoon back, then this would justify the construction of such subway or railway transit system.

It means that the question of the million, which is often heard, is not applicable in all cases.

On the other hand, we must admit that in many towns it is a question of prestige to have a subway, and the State must be very cautious with its financial aid in order not to give to projects which will be nonprofitable.

I must admit that it is not always easy, because the local authorities think everybody must have one, and the only method is to have a cost/benefit analysis, in this respect. But these analyses are very difficult to implement.

I handed over to your secretary a brochure, and this is perhaps interesting for those concerned. This is translated into English in the second part. You have it before you.

Senator HART. Yes.

Dr. WOELKER. And so this planning has done something to make the decision more rational. The financial means in our country are not so great that we, the Federation and the Federal Government, could give money to everybody who wishes to construct a subway. So, in this respect, there is a compelling argument.

Senator HART. I am sure that from this brochure we will be able to develop a better understanding of the factors that you have built in in determining what is feasible and what isn't.

Earlier this week, we had testimony from MBB, the Messerschmitt-Bolkow-Blohm firm.

Dr. WOELKER. Yes.

Senator HART. And they also had a film and slides, and we were struck that Germany has a mass transit commuter intercity rail that we don't find in our country.

Do you know how many firms there are in Germany, excluding the Common Market, that are in competition with MBB?

Dr. WOELKER. The representative of MBB is here and he indicates six or seven.

Senator HART. And when we were receiving his testimony, we asked some questions that sought to get some idea of the number of jobs which were generated by the mass transit and commuter and intercity services. They told us that the assembly of propulsion systems, the cars, and the like, were really representing a small portion of the jobs, and that tunnel construction and track construction and maintenance, and so on, would generate even more.

Does your Ministry have any figures as to how many jobs are involved in this whole industry?

Dr. WOELKER. No. For the time being, I am not quite sure if there exists such statistics at all, because so many firms are involved. With the automobile industry, it is simpler.

Senator HART. There was one other item that I made a note in our record that we should try and get, and it had to do with your testimony that you have in Munich and in Hamburg an integrated system of passenger transportation.

Why did you identify that as justifying some particular reference? How does that work moving people back and forth to work?

Dr. WOELKER. Mr. Chairman, in the first place this perhaps is a question of history. In our towns have existed and exist companies for transportation, railway, tram, bus, local railways, and so on. And may I add that the Federal Railways has a bus system, that the Postal Service has a bus system, and so on.

So we have found in the big cities a great deal of enterprises, assuring transportation in the towns. But this was not satisfying, because every enterprise tries to develop, and sometimes this competition led to damage and financial losses for the whole of these enterprises.

In general, these transportation enterprises are on their own feet; in most cases the capital belongs to the community, or to the Federal Government.

And the ratio was that in big towns it was quite obvious that the mass transit system would function far better if one could come together, but not in the form that one merges these enterprises. This would prove very difficult, because the German Federal Railways is the owner of, for instance, the mass transit system in many towns.

And so the solution found was to cooperate very closely, as I have tried to point out; for instance, introducing joint fares and timetables.

On the other hand, there is the problem of how to split the revenue the different companies get in these towns, and therefore, in Hamburg and Munich a relatively sophisticated system has been developed.

But one can conclude that this system of cooperation, we call it an integrated transport system, operates very well and efficient in our big towns.

Senator HART. Thank you.

Mr. Bangert.

Mr. BANGERT. Just one area, Dr. Woelker.

As I understand your statement, the majority of your long disdistance trains are electrified as opposed to diesel; is that true.

Dr. WOELKER. Yes.

Mr. BANGERT. Yesterday there was some testimony regarding the relative efficiency of diesel versus electric. I am wondering whether or not studies that were made in Germany that led you ultimately to go to electric have statistics with respect to efficiency of electric versus diesel?

Dr. WOELKER. Yes. May I give the following answer. We must include, in judging this question, not only passenger but freight traffic, as far as the railway is concerned, and it has been proved that above a certain big volume of traffic, electrification would be profitable.

If such a volume is not reached it would be more profitable to have diesel trains. This is the general approach. That means that on our main railway routes we have 100-percent electrification. These routes are sometimes even overcharged; their capacity is not sufficient to accept new traffic, freight, and passenger traffic as well.

With these remarks I want to state that on all those lines and routes where a great volume of traffic has to be moved electrification has proved to be the best way.

But we are flexible on branch lines; steam is nearly extinct, diesel is preferable. It is not a question of philosophy, it is a question of efficiency.

Mr. BANGERT. If there are any studies that you have had in this area, it might be helpful if we could have them for our information.

Dr. WOELKER. Yes.

May I add that the German railway network consists of 33,000 kilometers, of which 8,800 kilometers are electrified. That means one-fourth of our railway network is electrified.

Mr. BANGERT. Thank you.

Senator HART. Does that mean that the balance is diesel, or is there still steam?

Dr. WOELKER. The balance is mainly diesel. There are some steam trains, but these are disappearing.

Senator HART. Doctor, thank you and Mr. Neuman. I thank both of you very, very much for the effort you put into this, and for the material you have given us.

We are adjourned, to resume tomorrow morning in this room at 10 o'clock.

[Whereupon, at 2 p.m., the subcommittee adjourned, to reconvene at 10 a.m., Friday, March 1, 1974, in room 2228, Dirksen Senate Office Building.]

[The following was received for the record.]

[The following was received for the record. Testimony resumes on p. 2107.]

MATERIAL RELATING TO THE TESTIMONY OF DR. WOELKER

Exhibit 1.—Prepared Statement

PREPARED STATEMENT OF DR. CHRISTIAN WOELKER, ASSISTANT SECRETARY, FEDERAL MINISTRY OF TRANSPORT OF THE FEDERAL REPUBLIC OF GERMANY

THE STATE, THE PROBLEMS, AND THE FUTURE DEVELOPMENT OF TRANSPORT POLICY IN THE FEDERAL REPUBLIC OF GERMANY

The present report gives a comprehensive survey of the problems of *German transport policy*, the measures taken for their solution, and the future plannings.

Comparative figures on the Federal Republic of Germany, her transport economy, and the constitutional competences in traffic as well as maps for the purpose of explanation will be distributed as *annexes* during the hearing.

I. The Principles of a Balanced Transport System

Germany's general transportation "philosophy" is defined by the Statement of Federal Chancellor *Brandt*. It contains several highlights:

Public short-distance passenger transport (commuter or urban mass transportation) has preference over private transport. The necessary programmes in this respect are costly and have to be set up on a long-term basis.

Revenue from mineral oil taxes should in future not only be used for road construction but also for public transit facilities. Until now 50% of gasoline taxes are earmarked for highway construction.

The importance of rail traffic will grow again. Rail traffic is more beneficial to the environment, in many instances it is more efficient from the national economy point of view, and it is indispensable to the community. Since there is existing infrastructure it would mean wasting taxpayers' money if we would not make the best possible use of this facility. In view of the difficult economic situation of the German Federal Railways, in addition to an intensive rationalization of the enterprise, the Government will have to help with public funds in the development and the modernization of the rail network.

These focal points are touching a number of problems which are of topical interest today in many industrialized countries. Their solution within the framework of a rational and consistent transport policy which is guided by the interests of society should be *based on the following principles*:

1. The aim to meet transportation demands by maximizing benefits for the overall economy is to be achieved mainly through the free *competition* on the market.

2. Regulatory *interference by the State* should only be considered if free competition as the only instrument of control will lead to results undesirable from a general economic point of view; there is no room for free competition since there is no balanced market situation and no free choice of alternatives.

This is the case, for example, in the relationship between public short-distance passenger transport and private transport with individual vehicles.

Where the free play of market forces and *private transport* leads to excessive impairment of the environment, however, and where traffic congestions cannot be eliminated by reasonable investments in the infrastructure, *restrictive measures* are necessary. The impact of the energy problem on traffic has to be taken into account also.

3. Investment policy and regulatory policy must be oriented to a greater extent to create *systems of public transport* rather than subsidizing singular modes.

4. In Germany, there is *no intention* of regulating or directing the *production or the sales of vehicles for various transportation modes by direct Government intervention.*

Production has been left to the industry to meet the demands of the market. There are no indications that the industries involved and their interest to maximize profits has led to an unbalanced transportation market. The wide diversification of producers made it impossible to favour one mode of transportation against another.

In urban mass transit, facilities have been owned for decades by the communities and were since in accordance with the public interest. Only since the 1950's when individual motorization on a large scale started in Germany.

are we confronted with declining ridership on public facilities and major traffic congestions by the individual automobile. But public ownership and a relatively late "individual mobility by everybody's own wheels" prohibited a major decline in urban mass transportation and serves as a starting point for urban transportation needs, in the 70's and 80's. We do not have to start from scrap, we can lean on our well-experienced systems. But one word of caution: it is not so, that we do not have your kind of troubles in our cities. Our urban systems have been designed half a century ago for the needs of a community for less urbanized than today. The automobile is starting to choke the functions of the city centers. We have to reverse this trend.

An indirect influence is intended to be exerted on automobile ownership by making owners pay all costs which they cause to the community. The costs for the use of the traffic routes, the costs of the impairment of the environment (exhaust gases, noise), the costs of congestion, and the costs of accidents have to be taken into consideration.

5. In *goods transport* a controlled framework of free competition is best suited for establishing an equilibium between the requirements of the shippers, which differ greatly in quality and quantity, on the one hand and the services provided by the different modes of transport on the other.

6. The *main instruments* of the administration for influencing the distribution of the total transport volume to the individual traffic sectors are investment policy; taxes and public subsidies; regulations influencing the access to the market and the capacity of carriers; and rate policy, which is gradually being deregulated.

Transport policy is no isolated action. Its *interdependence* with other policies, above all with the environmental, the regional planning, and the regional policy, must be taken into account in planning and implementation. Only by such a process can a balanced transportation system be achieved eventually. This applies both to the national transport policy and to the common transport policy of the Euorpean Economic Community.

II. Public Short-Distance Passenger Transport

A. The Situation

The situation in public short-distance passenger transport calls most urgently for a solution. The problems of short-distance transport are often considered as the symptom of the crisis of the big city or rather as its cause.

As indicated above, the urbanization in Germany has been growing rapidly. City functions are becoming more and more difficult to operate, as the accessibility of the city declines. It seems that these functions heavily rely on a viable transportation system which also is a precondition for a suitable environment to make city living acceptable.

A few explanations will illustrate this situation:

(1) In the Federal Republic of Germany more than 50% of the population live on 7% of the territory;

(2) In 1985 presumably 75% of all inhabitants will live or work in towns or urban areas;

(3) Passenger cars: 1965—9.3 million; 1973—17.0 million; and 1985—23.0 million with 65 million inhabitants =one care for every 2.82 inhabitants. Towards the end of the eighties, a degree of saturation of about 380 passenger cars per 1,000 inhabitants will be reached in the Federal Republic of Germany. 352 passenger cars per 1,000 inhabitants are assumed for 1985;

(4) The passenger car density related to one square kilometre is ten times higher in the big cities than on the average in the Federal Republic;

(5) Average yearly performance of passenger cars: 1960—16,300 km approximately 10,000 m); 1970—14,400 km (approximately 9,000 m); 1985—13,800 km (approximately 8,500 m). The decrease is to be accounted to more difficult traffic conditions in urban agglomerations and accordingly a backward trend to pubilc transport;

(6) The economic and financial situation of the enterprises of urban mass transit (including the German Federal Railways) has deteriorated continually; the main causes begin: Public mass transit is labor intensive (between 60 and 70% of the total costs are personnel costs; the development of productivity and automatization could not keep abreast of the increase in personnel costs; and the rise in costs could only be absorbed to a very limited

extent by increases in fares and rates, actually break-even fares would be prohibitive. (In some US cities, you have made the experience that declined fares increase ridership.)

CONCLUSIONS

The attractiveness of public short-distance passenger transport must be enhanced.

This can only be achieved by economically sound enterprises.

Since there is no general pattern for urban mass transit, each community has to find the best suited means to be employed for its specific and multifaceted functions of short-distance transport (creation of systems in which also private transport will find its place, f.i. park and ride, pp.).

The restricted traffic area in the inner cities makes optimal utilization of the traffic space including parking places mandatory (we have f.i. exclusive pedestrian zones in the main shopping districts of many cities. Deliveries by trucks are only allowed during the night or early morning hours).

The complexity of the problems makes intensive research and development in the field of advanced short-distance transport systems and technologies necessary.

B. Measures

Introduction.—The Federal Government has, according to the federal constitutional structure of Germany, only limited authorities in the field of urban mass transit. These limits result from the division of legislative and administrative authority between the Federal Republic and the eleven Laender (Federal States). The cooperation in the field of urban mass transportation and the implementation of new projects are therefore somewhat complicated.

After first federal steps in the urban area have been taken as early as 1966, *measures of promotion* were adopted to an increasing extent since 1971 when the Act on Federal Aids to Improve Traffic Conditions in the Communities came into force.

1. *Financing.*—Part of the revenue from the mineral oil tax, namely 6 pfennigs per litre (approx. 0.54 cents/gallon) were earmarked for urban mass transit. The overall tax amounts for gasoline to 44 pfennigs/1 (approximately 4 cents/gallon); for diesel fuel to 41 pfennigs/1 (approximately 3.75 cents /gallon).

In 1973 the 6 pfennigs/1 for urban investments amounted to a total of 2,200 million DM (=800 million $).

(For comparison: the budget of the Federal Republic in 1973 for trunk road construction =6 billion 400 million DM (=2 billion 327 million $)).

For the years 1974X1978 a total amount of 11,700 million DM (=4 billion 255 million $) is expected from tax revenue, earmarked for urban transportation. I am talking only of federal funds here, which are made available to the communities.

2. *Subjects of promotion.*—In urban transportation the emphasis is put on:

(a) Public short-distance passenger transport construction and development of urban rail mass transit in the big cities: underground railways (subways), rapid urban railways (high speed ground level or elevated tracks), urban railways (streetcars on their own exclusive right of way or lane—partly underground in city centers), maintenance depots and central workshops; central bus stations (like f.i. the Bus Terminal at 42nd Street in Manhattan, but used for commuter traffic); and park-and-ride systems.

(b) Urban road construction with the emphasis on special lanes for buses, feeder roads connected to the urban public traffic network, and urban highways in smaller cities.

3. *Use of Federal funds.*— (6 pfennigs/litre on gas) 50% for public short-distance passenger transport and 50% for urban road construction.

NOTE.—(a) Aside from direct Government funding for investments, the urban mass transit enterprises get refunds for fuel taxes paid for fuel consumption in public short-distance passenger transport by road and rail. From 1974 to 1978 this will amount to a total of about 1,500 million DM (=545 million $).

(b) The Federal Laender have the right to allocate as much as 10% of the federal funds earmarked for urban road construction for public short-distance passenger transport. They have taken advantage of this possibility especially in cases where costly subway construction work is in progress.

4. The *share in the financing* of the individual projects: Federal funds 60%, and State and communities: 40%.

5. *Further measures.*—(a) Road regulation privileges for public short-distance passenger—transport (e.g. priority when leaving a bus stop, establishment of bus lanes); (b) financial contribution of the Federal Republic to cover social costs in the transportation of the German Federal Railways (the Railways' short-distance passenger transport by rail).

Historically the German Federal Railroads still run a variety of urban rail commuter systems. In these systems special non renumerative fare are used (see above: break-even fares are considered prohibitive). Since these operations are considered to be run in the public interest and as a public utility, the Federal Railroads are refunded for losses in this field.

1973: 1,550 million DM (=565 million $);

(c) The Federal Government pays refunds to public mass transport to equalize revenue shortfalls due to reduce social fares for students' tickets and commuter traffic for all public transport enterprises, including private enterprises.

C. *Procedures for the Allocation of the Government's Financial Aids*

1. *Financial Aids for Public Short-Distance Passenger Transport* (subjects see paragraph B, item 2 (a)).

(a) The communities or transport enterprises apply for financial aid for projects to the Transport Ministries of the Federal Laender.

(b) The Federal Laender examine, whether the projects are worthy to be subsidized, set priorities, and apply to the Federal Ministry of Transport for inclusion of the selected projects in the promotional program.

(c) The Federal Ministry of Transport drafts the final promotional program. In a working group, which is composed of representatives of the Federal Republic, the Laender, and the associations of the communities, the program is negotiated and finalized.

2. *Criteria for decision.*—The precondition for the granting of financial aids to any project by the Federal Government is that the project is contained in a "*general traffic plan*".

III. FINANCING OF THE TRAFFIC INFRASTRUCTURE (INTERCITY TRAFFIC)

1. *The framework of the planning.*—The financing of the traffic infrastructure by the Federal Republic comprises the rail network of the German Federal Railways, the Federal trunk roads (Federal autobahns and Federal highways), the Federal waterways, and the flight safety installations.

A *Federal traffic infrastructure plan* which was established by the Federal Ministry of Transport serves as the basis for the financing. Pipelines, seaports and inland harbours as well as airports serving regular air traffic have been included in this infrastructure plan.

The immediate objective of the overall traffic infrastructure planning is the *co-ordination* of the plannings of the various traffic routes in the Federal Republic. The long-range objective is the *integrated Federal traffic infrastructure planning.* It means integration of the traffic systems railway transport, road traffic, inland waterway transport, ocean traffic, and air traffic into an overall traffic system; integration of the overall traffic system into the whole national planning, e.g. in the sectors of regional planning, economic development, town construction, and environment protection. Particularly complex tasks are furthermore; the coordination of the traffic infrastructure plannings of the Federal Republic, the Laender, and the communities; and the harmonization of traffic infrastructure plannings on the intrenational level.

2. *Highlights of the orientation of the future financing policy.*

(a) The *appropriation of 50% of the mineral oil tax* should in the future not be limited to the construction of Federal trunk roads but should be extended to other investment projects as well.

(b) *Priority* should be given for public short-distance passenger transport *in the communities.*

(c) *The share of the traffic routes in the investments for the Federal infrastructure 1966–70:*

	Percent
German Federal railways (including investment subsidies of the Government)	26. 2
Federal trunk roads	64. 0
Federal waterways	8. 5
Air traffic control and airports	1. 3
Total	100. 0

(d) *Intended volume of investments for the Federal infrastructure 1976–85:*

	Percent
German Federal railways (including investment subsidies of the Government)	34. 9
Federal trunk roads	53. 9
Federal waterways	8. 7
Air traffic control and airports	2. 5
Total	100. 0

(e) The *Laender and communities* are financing their road infrastructure from their own financial resources.

The *motor vehicle tax* (comparable to US registration fee) goes to the Laender. It is not earmarked, for any special purpose, but the Laender use this tax almost exclusively for investments in the road infrastructure.

(f) *The German Federal Railways.*— (a) Pursuant to legal regulation the German Federal Railways have to operate on a self sufficient basis. The Government as the owner has to give it the financial backing to achieve this goal.

(b) The focal points of the Federal Railways' investment policy are the modernization of the railway network, particularly the *construction of four new railway lines* until 1985 (a total of 630 km =1,014 miles in length at a cost of 11,200 million DM =4,073 million $).

IV. EQUAL CONDITIONS OF COMPETITION FOR ALL MODES OF TRANSPORT

1. *Objective.*—The most important objective of a rational transport policy is to harmonize as far as possible the starting positions for the competition between the various modes of transport. This applies particularly to the allocation of *infrastructure costs.*

2. *Infrastructure costs—General.*—As has already been emphasized that the users of the traffic routes are to be charged for the infrastructure costs which they have caused. Exceptions are made, however, especially in public short-distance passenger transport.

(a) *Roads.*—The users are to be charged for the costs of utilization (road wear, maintenance, resurfacing, security, installations, operation) other costs not charged to the users but to the general public are: Impairment of the environment (noise, exhaust gases), accidents, and traffic congestions.

Endeavours are being made to quantify these costs on the German and the European level, but this quantification is accompanied with complicated problems.

The principle set out for the roads applies basically also to all other traffic routes.

(b) *Railways.*—The German Federal Railways are obliged to include the infrastructure costs in their calculation of fares and rates. Exception: short-distance passenger transport.

3. *Subsidies of the Government to the German Federal railways*—(1) *Principle.*—The State is to relieve the railways of such "extraneous" burdens, which are not compatible with the nature of a commercial enterprise and therefore would mean a distorsion of competition vis-a-vis competitors.

(2) On the whole, *Government* subsidies granted to the German Federal Railways in 1973 totalled approximately 8,300 million DM (=3,018 million $), to be broken down as follows:

a. Equalization of social functions not related to commercial operations and financing of which 1 billion 500 million DM ($564 million) for reduced promotional fares in urban areas: 4,188 million DM ($1,523 million).

b. Investment subsidies: 525 million DM ($191 million).

c. Investment subsidies for local traffic routes: 261 million DM ($95 million).

d. Interests for loans taken up by the German Federal Railways to improve their capital structure: 194 million DM ($67 million).

e. Subsidies to insure liquidity: 3,150 million DM ($1,145 million).

THE INFLUENCE OF INDUSTRY ON THE DECISIONS OF THE GOVERNMENT IN THE FIELD OF TRANSPORATION

1. In the Federal Republic of Germany, like in other countries, the interests of industry, trade, etc., are protected by associations.

2. There is a regulation in existence providing that these associations must be heard before important decisions regarding transport policy are taken; this applies in particular to legislative projects.

3. It is obvious that the associations, try to exercise a certain influence, but they do not hold any dominant position. The same applies to large manufacturers.

4. There is only very little influence on the decisions in the sphere of infrastructure investments. Thus, the motor vehicle associations have requested for years that the mineral oil tax revenue be used 100% for road construction. The federal policy, however, has been that only 50% are used for this purpose.

5. The motor vehicle associations have increasingly shown understanding for the funds provided from the mineral oil tax being used for the improvement of the traffic conditions in the communities. They have been convinced that this also serves the interests of motor vehicle owners, since it will decongest the urban traffic pattern.

6. As in other countries, the advantages and disadvantages of the motor vehicle are being extensively discussed also in the Federal Republic of Germany. Global opinions are more and more differentiated in the sense that in densly populated areas public short-distance transport should be given priority, whereas in rural districts private transport cannot be dispensed with.

7. Finally, it can be said that the citizens to an increasing extent wish to participate in traffic and transport planning, especially as far as urban transport is concerned. It is the primary objective of these so-called impairment of the environment, especially noise nuisance and safety risks. Experience shows that these initiatives are capable of exercising a considerable influence on traffic and transport planning.

VI. THE INTEGRATION OF PASSENGER TRANSPORT SERVICES

A. Long-Distance Passenger Transport

Long-distance passenger transport by *regular bus lines* plays only a minor part in the Federal Republic of Germany.

The prospects for a successful development of a tight *regional air transport network* within the Federal Republic of Germany are in view of the aircraft available and, among other things, also on account of the relatively small dimensions of the country—judged very cautiously at the present moment.

The main efforts are concentrated on providing effective and attractive *long-distance railway transport.* Since June 1973 there exists an integrated network (first class) with the following services:

1. 30 "Trans-Europ Express" trains (TEE) and 67 Intercity trains.

Routes with a total length of 3,700 kilometers (=2,400 miles) provide connections betweeen 32 cities at two-hour intervals and up to eight times a day.

Special connections link another 16 cities up with this system, so that a total of 48 big cities are served by this network. This traffic carries 70% of the passengers who are using fast trains.

2. Moreover, 16 supplemental or terminating lines with a length of 3,000 kilometers (=1,870 miles) serving another 73 cities are linked up with this network (first and second class).

3. Thus 121 cities producing 80% of the total number of fast train passengers are served several times a day.

B. The Role of the Railways in Short-Distance Passenger Transport (Rapid Urban Railway)

1. Since all big cities are connected with their outskirts by a more or less dense railway network, the idea imposes itself to make use of and *develop*

the *existing railway infrastructure.* From the economic point of view, it would therefore be sensible for many cities to make use of this possibility rather than to build other transport systems, i.e. urban mass transport networks.

2. For the decision concerning the construction of a rapid urban railway network, it will also have to be taken into account that the *housing structure* of the cities—just as in most countries—has greatly changed. While the residential population in the centers of the cities has considerably decreased, there has been an overproportional increase in the fringe areas. The reasons for this change are chiefly as follows: The conception of the townplanners that a separation in space of the functions must be made; industrial area, business area, and residential area.

However, doubts have now been raised whether this theory is the only reason for these developments: Rising standard of living; the desire for a house of one's own in the countryside; the wish for environmental improvement; and higher real estate prices in city centers, lower price in the outskirts have accelerated the exodus out of the city. This kind of low density development makes it very difficult to serve the fringe areas of the cities by public facilities: the question must be raised whether it is not necessary to coordinate urban and transportation planning more closely than up until now.

3. A typical *example* for a rapid urban railway system is the design of the rapid urban railway network in *Munich.* In 1972, after a construction period of six years, a network with a length of 400 kilometers was put into operation. The costs amounted to 1,200 million DM (=436 million $). In comparison with that, it was only possible to build, for about the same amount of money and during the same period of construction, 16 kilometers of underground railway in the city center of Munich. It should be remembered, however, that urban underground railways which are built in the center of a city have to meet high prices and construction difficulties.

4. The *new construction of further rapid urban railways* is in progress in other important areas of mass transport: Hamburg, the Ruhr Territory, Cologne, Dusseldorf, Frankfurt, Stuttgart.

5. It is quite obvious that the urban railway networks of a big city must be planned and operated not separately but in *connection with the network of the other transport enterprises* (subways, streetcars, buses). For that reason, the special form of the *integrated transport system* has been developed in the Federal Republic of Germany, above all in Munich and Hamburg.

6. The *arrangement of the tariff system* for public short-distance passenger transport has been the subject of a great many discussions. In the Federal Republic of Germany, reductions are granted in general, especially in computer traffic and for students' season tickets.

In this way public transport is intended to be made more attractive than private transport with passenger cars. This of course will necessitate financial compensation. The so-called "zero fare", however, is not considered a suitable control instrument as this will cause a shortfall in revenue, the compensation of which will render the financial aspect of promoting the attractiveness of public transport even more difficult. Moreover, it has been noticed in Germany that a general reduction of the fares in short-distance transport, and even the introduction of the "zero fare", have not been so attractive to the users of private cars that a considerable relief in road traffic and thus in road construction expenditure would have taken place.

C. The Hamburg Integrated Transport System as an Example of Coordination and Integration in Public Transport

1. In order to achieve a fundamental and lasting improvement in public transport, the transport enterprises operating in the Hamburg area have, of their own accord, formed a transport and tariff community.

2. The partners of the system are the Hamburger Hochbahn Aktiengesellschaft with underground railway, streetcars, buses, the German Federal Railways with the rapid urban railway (S–Bahn) and bus services operating in Hamburg, various other private local railway companies, the Federal Post Administration with two bus routes, and in addition, the Hafen-Dampfschiffahrt Aktiengesellschaft with its ferry and regular boat services in the port of Hamburg has been included in the community's joint fare system.

The members of the integrated transport system provide about 99% of the transport services in the area which extends about 50 x 60 km (=31 x 37 miles) and has a population of more than 2.5 million.

3. The main duties of the system are: (a) transport research and transport planning, (b) preparation of timetables and allocation of services, (c) drafting and further development of the joint fare system, and (d) distribution of the revenue taking into account the capacities and services (revenue pool).

In accordance with the above duties the system is divided into four main departments: (a) rapid transit system, (b) streeetcars, buses, and shipping, (c) fare system and distribution of revenue, and (d) accounts and administration.

4. *The joint fare system.*—The essential prerequisite for the desired integration of transport was a passenger fare system with uniform rules of price calculation and tariff provisions for all services included in the transport system.

The joint fare system permits passengers to change their means of transport as required for reaching their destination. All fare barriers hitherto existing between the different operating branches and modes have been eliminated. All services of the integrated transport system are offered to the passengers under a unified fare system.

A special problem is the distribution of the transport revenue for which a sophisticated system has been developed.

5. In *summing up* the results of this system, the following points—as a member of the Directorate of the Hamburg integrated transport system formulated it—can be made:

(a) The state of splitting in local public transport has been overcome. The integrated transport and tariff system offers the public an optimum of local transport services beyond the areas of individual transport enterprises and municipal boundaries. This range of services gives a new impetus to public transport.

(b) As an integrating planning body, the integrated transport system makes it possible to achieve better efficiency also in terms of profitability of transport. Undesired developments in transport services and in the provision of installations are no longer imaginable in the future.

(c) As a coordinating body, the system is a suitable partner for collaboration with various urban and regional planning authorities.

(d) The competition between undertakings has been replaced by genuine collaboration in the transport system.

The orientation of German transport policy may be summed up as follows: the whole sphere of transport must be considered as an integrated and dynamic factor of the national economy and must be developed in this sense; within the framework of this conception the forces of competition shall always be brought to bear, but the State must interfere where this is necessary in the interest of society; and the goal is a transport system balanced both in passenger and in goods transport for a long time to come, which will benefit the community.

Annex

THE MOST IMPORTANT CONSTITUTIONAL BASES OF THE FEDERAL REPUBLIC OF GERMANY IN THE FIELD OF TRANSPORT

1. The Federal Republic of Germany is, as her name says, a federal state. This means that the legislative and the administrative competences lie, *as a principle, with the Laender.* The Federal Republic herself has own competences only in so far as this has expressly been stated in the Constitution. Besides, the principle is laid down in the latter that the competence of financing is always tied to the administrative competence.

2. The *Federal Republic* is competent for the German Federal Railways, the Federal trunk roads (Federal autobahns and Federal highways), the Federal waterways, and air navigation administration.

3. In the field of *passenger transport*—apart from the German Federal Railways and the Federal Postal Administration—the Federal Republic has only legislative competence and no administrative competence. The consequence is that the Federal Republic can, as a matter of principle, not finance any projects in this field.

4. For all other matters of transport only the Laender are competent. This applies particularly to the *traffic routes* of the communities (towns and administrative districts). The Federal Republic has, as a matter of principle, no possibility of financing projects in this field, either.

5. The increasing traffic density and the rapidly growing need for the development of communal traffic routes gave rise to the necessity of a *participation of the Federal Republic in the financing*. The Constitution was amended accordingly. A special provision makes it possible for the Federal Republic to grant financial aids to the Laender for particularly important investments of the Laender and the communities. The Federal Republic makes use of this new constitutional provision in the sphere of the communal traffic infrastructure.

General figures concerning the Federal Republic of Germany (including West Berlin), 1972

1. (a) Area	248,600 square kilometres.
(b) Population	61.8 million.
(c) Population density	249 per square kilometre.
2. Gainfully employed persons	26.5 million.
Trade and transport	4.8 million.
Agriculture and forestry	2.0 million.
Manufacturing trade and industry	12.8 million.
Other sectors of the economy	6.9 million.
3. (a) Import	128,700 million DM.
(b) Export	149,000 million DM.
4. (a) Public expenditure	250,000 million DM.
(b) Gross national product	828,500 million DM.
(c) Gross fixed capital formation	214,500 million DM.

GENERAL DATA TRANSPORT SYSTEM IN THE FEDERAL REPUBLIC OF GERMANY

I-1. Goods Transport by the Individual Modes of Transport

	(a) Volume of goods					
	Million tons (metric)			Percent		
	1963	1973	1985-90	1963	1973	1985-90
Railways	316	370	472	51	40	34
Inland waterway transport	168	241	397	27	26	28
Long-distance goods transport by road	114	216	301	18	23	22
Pipelines	28	101	221	4	11	16
Total	626	928	1,391	100	100	100
plus maritime transport	89	140				

	(b) Ton-kilometres,					
	1,000 million			Percent		
	1963	1973	1985-90	1963	1973	1985-90
Railways	61	67		45	36	
Inland waterway transport	40	46		30	25	
Long-distance goods transport by road	28	55		21	29	
Pipelines	5	19		4	10	
Total	134	187		100	100	

I-2. Average Distance of Carriage in Goods Transport, 1972

	Kilometres
Railways	184
Inland waterway transport	221
Long-distance goods transport by road	255
Pipelines	194

II. Passenger Transport

II–1. Number of persons carried

	1,000 million			Percent		
	1963	1973	1985–90	1963	1973	1985–90
Public transport	7.4	7.6	9.3	38	27	27
Private transport	12.0	20.5	25.2	62	73	73
Total	19.4	28.1	34.5	100	100	100

II–2. Passenger-kilometres

	1,000 million			Percent		
	1963	1973	1985–90	1963	1973	1985–90
Public transport	90	112	150	30	20	20
Private transport	211	450	600	70	80	80
Total	301	562	750	100	100	100

II–3. Development of Motor Vehicle Population

[Vehicles in millions]

	1963	1973	1985–90
Passenger cars and station wagons	7.3	17.0	23.0
Trucks	.8	1.1	1.3

II–4. Average Kilometre Performance, 1972

	Kilometres anually
Passenger cars	14,400
Trucks	22,500

III. Traffic Infrastructure

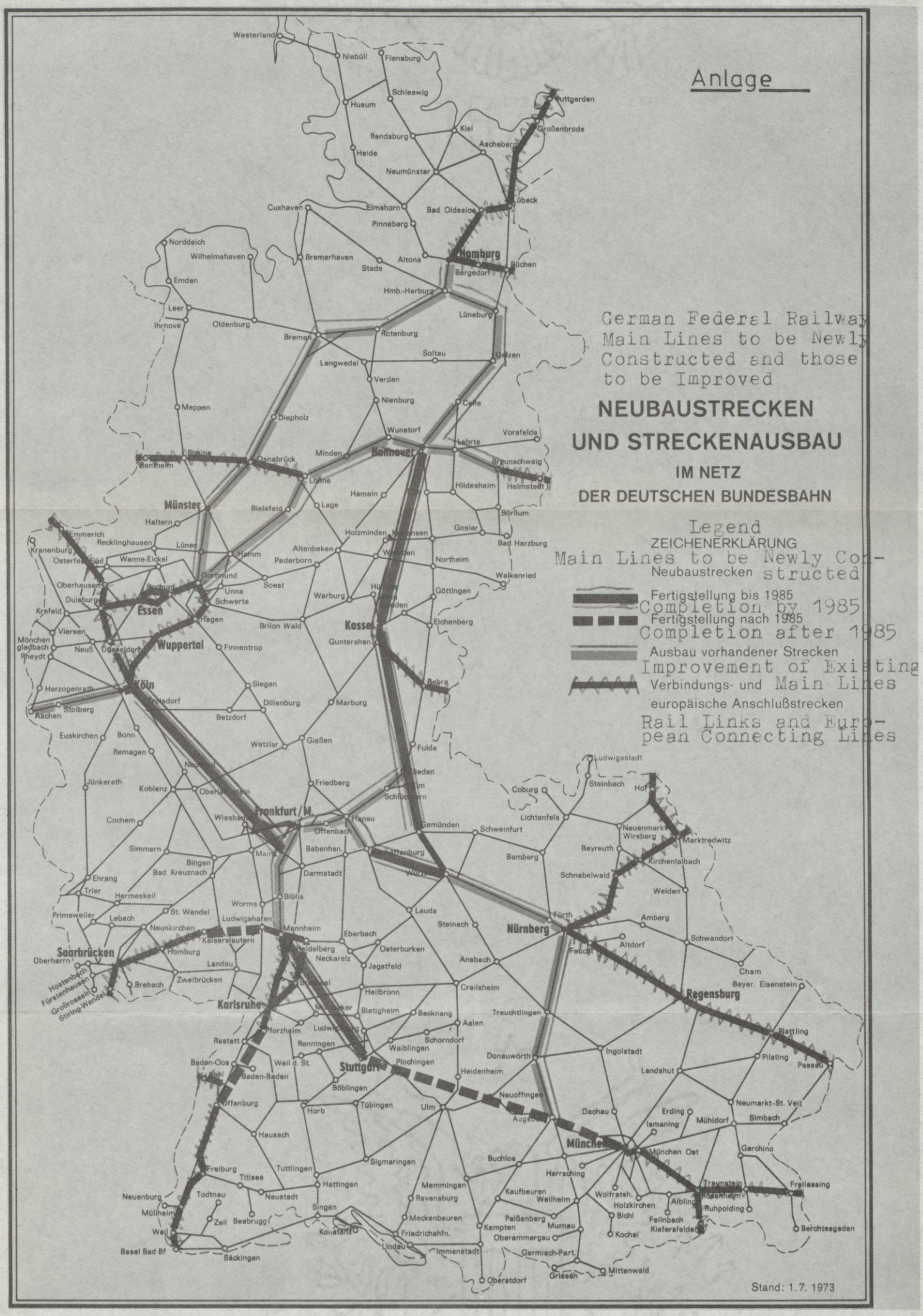
	1961	1971
Railways:		
Routes in operation (in kilometres)	35,828	33,123
Of Which electrified	4,611	8,883
Roads (in kilometres):	371,070	440,844
Federal autobahns	2,671	4,461
Federal highways	25,262	32,616
Other public roads	343,137	403,767
Of which: in built-up areas	204,280	221,298
Outside built-up areas	138,857	182,469
Inland waterways (in kilometres) in so far as they are used regularly by inland navigation	4,441	4,393

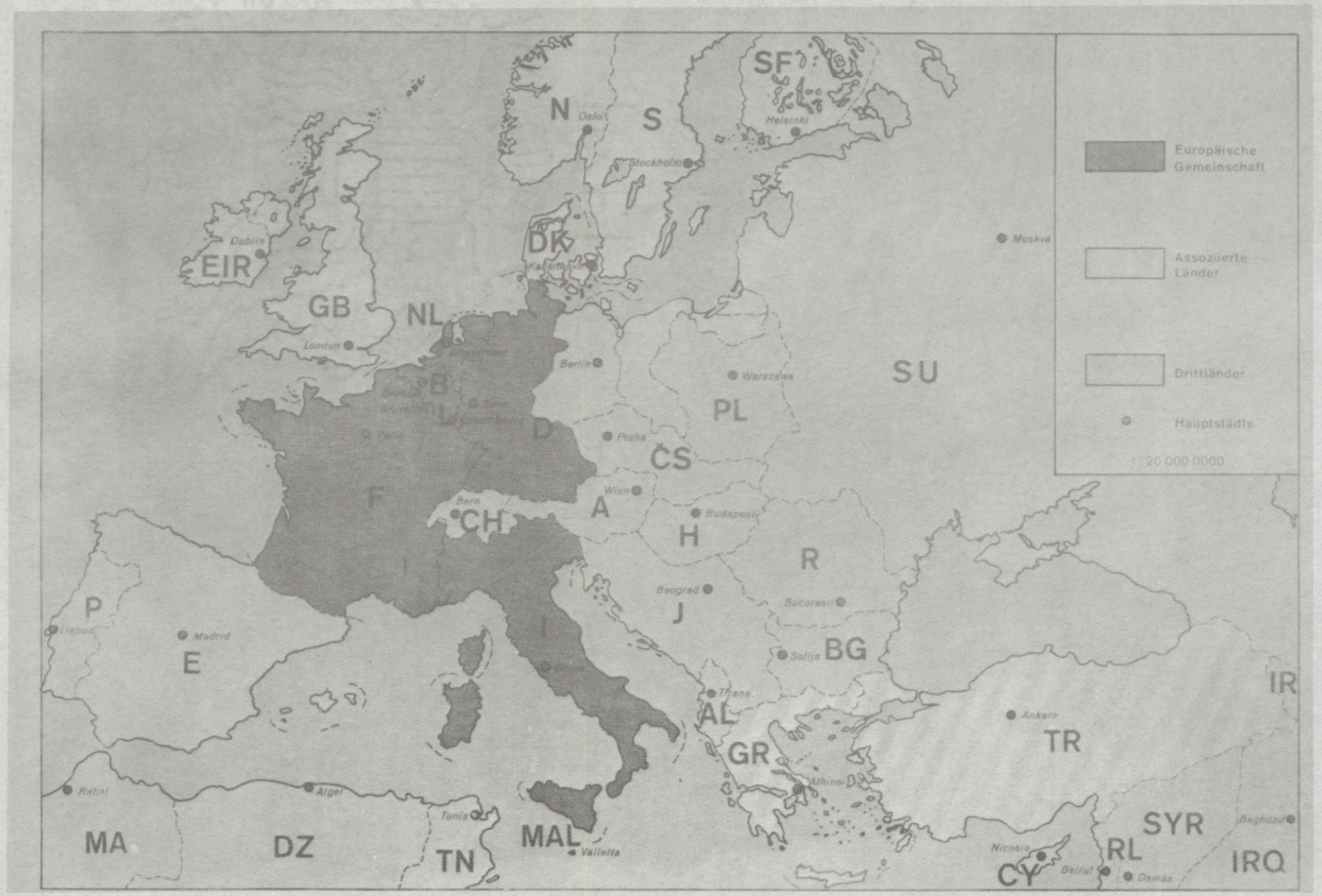
IV. Number of Persons Employed in Transport Economy

1970	1,010,000
For reasons of comparison the total number of gainfully employed persons	26,668,000

Number of Persons Employed in Motor Vehicle Production

Automobile production and production of vehicle parts, 1970	593,000


Anlage
German Federal Railway Main Lines to be Newly Constructed and those to be Improved
NEUBAUSTRECKEN UND STRECKENAUSBAU
IM NETZ DER DEUTSCHEN BUNDESBAHN
Legend
ZEICHENERKLÄRUNG
Main Lines to be Newly Constructed
Neubaustrecken
Fertigstellung bis 1985
Completion by 1985
Fertigstellung nach 1985
Completion after 1985
Ausbau vorhandener Strecken
Improvement of Existing Main Lines
Verbindungs- und europäische Anschlußstrecken
Rail Links and European Connecting Lines
Hamburg
Hannover
Münster
Essen
Wuppertal
Köln
Kassel
Frankfurt/M.
Saarbrücken
Karlsruhe
Stuttgart
Nürnberg
Regensburg
München
Westerland
Niebüll
Flensburg
Schleswig
Husum
Rendsburg
Kiel
Heide
Neumünster
Puttgarden
Großenbrode
Ascheberg
Lübeck
Bad Oldesloe
Cuxhaven
Elmshorn
Pinneberg
Norddeich
Wilhelmshaven
Bremerhaven
Stade
Altona
Bergedorf
Büchen
Emden
Hmb.-Harburg
Leer
Ihrhove
Oldenburg
Lüneburg
Bremen
Rotenburg
Soltau
Uelzen
Langwedel
Verden
Nienburg
Celle
Meppen
Diepholz
Wunstorf
Vorsfelde
Lehrte
Bheine
Bentheim
Osnabrück
Minden
Braunschweig
Löhne
Hameln
Hildesheim
Helmstedt
Bielefeld
Lage
Börßum
Haltern
Emmerich
Holzminden
Goslar
Bad Harzburg
Kranenburg
Recklinghausen
Lünen
Hamm
Altenbeken
Osterfeld Süd
Wanne-Eickel
Paderborn
Northeim
Walkenried
Oberhausen
Dortmund
Soest
Bochum
Unna
Duisburg
Schwerte
Warburg
Göttingen
Krefeld
Hagen
Brilon Wald
Eichenberg
Viersen
Mönchengladbach
Neuß
Düsseldorf
Finnentrop
Guntershan
Rheydt
Herzogenrath
Siegen
Bebra
Aachen
Stolberg
Dillenburg
Marburg
Betzdorf
Euskirchen
Bonn
Wetzlar
Gießen
Fulda
Remagen
Friedberg
Ludwigsstadt
Jünkerath
Koblenz
Steinbach
Hof
Coburg
Cochem
Wiesbaden
Hanau
Offenbach
Gemünden
Schweinfurt
Lichtenfels
Neuenmarkt Wirsberg
Marktredwitz
Simmern
Babenhsn.
Bamberg
Bayreuth
Bingen
Bad Kreuznach
Darmstadt
Kirchenlaibach
Ehrang
Schnabelwald
Trier
Hermeskeil
Worms
Biblis
Weiden
Primsweiler
Lebach
St. Wendel
Lauda
Steinach
Fürth
Amberg
Neunkirchen
Ludwigshafen
Mannheim
Eberbach
Altdorf
Schwandorf
Kaiserslautern
Heidelberg
Homburg
Osterburken
Neckarelz
Ansbach
Feucht
Cham
Landau
Jagstfeld
Zweibrücken
Brebach
Heilbronn
Crailsheim
Bayer. Eisenstein
Bietigheim
Backnang
Treuchtlingen
Aalen
Pforzheim
Ludwigsburg
Schorndorf
Plattling
Rastatt
Renningen
Waiblingen
Ingolstadt
Weil d. St.
Plochingen
Donauwörth
Pilsting
Baden-Oos
Baden-Baden
Heidenheim
Landshut
Passau
Böblingen
Neuoffingen
Offenburg
Tübingen
Ulm
Dachau
Erding
Neumarkt-St. Veit
Horb
Augsburg
Ismaning
Mühldorf
Simbach
Hausach
Garching
Freiburg
Titisee
Tuttlingen
Sigmaringen
Buchloe
Herrsching
Hattingen
Memmingen
Kaufbeuren
Wolfratsh.
Freilassing
Neuenburg
Todtnau
Neustadt
Ravensburg
Weilheim
Holzkirchen
Albling
Rosenheim
Ruhpolding
Müllheim
Singen
Meckenbeuren
Bichl
Zell
Seebrugg
Konstanz
Friedrichshfn.
Kempten
Murnau
Kochel
Berchtesgaden
Weil
Lindau
Oberammergau
Basel Bad Bf
Säckingen
Immenstadt
Garmisch-Part.
Griesen
Mittenwald
Oberstdorf
Stand: 1.7. 1973



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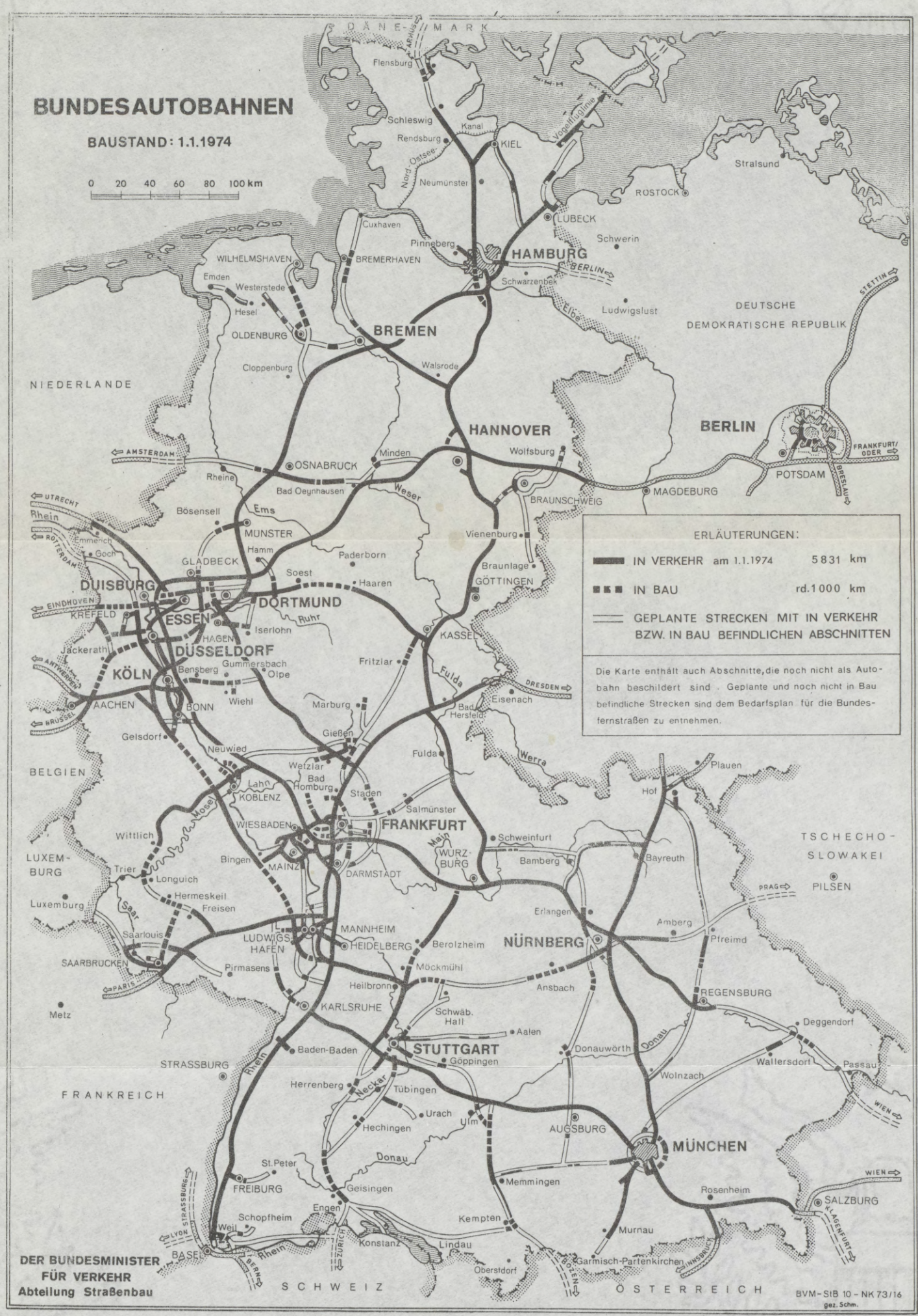

Exhibit 2.—Presentation of Dr. Woelker of February 1974

The State, the Problems, and the Future Development of Transport Policy in the Federal Republic of Germany

(Paper presented by Dr. Christian Woelker, Assistant Secretary, Federal Ministry of Transport of the Federal Republic of Germany)

PREFATORY NOTE:

1. The present report gives a comprehensive survey of the problems of *German transport policy*, the measures taken for their solution, and the future plannings.
2. The regulations and the tendencies of the common transport policy of the *European Economic Community* are also included.
3. Comparative figures on the Federal Republic of Germany, her transport economy, and the constitutional competences in traffic as well as maps for the purpose of explanation will be distributed as *annexes* during the hearing.

I. THE PRINCIPLES OF A BALANCED TRANSPORT SYSTEM

The *Government Statement* of 18th January, 1973, of the Federal Chancellor *Brandt* constitutes the basis of the transport policy of the Federal Government. It contains four focal points:

Public short-distance passenger transport has precedence over private transport. The necessary programmes in this respect are costly and were set up on a long-term basis.

The employment of the earmarked portion of the revenue from the mineral oil tax (50%) is to be extended and the money to be used also for other aims of transport policy.

The importance of rail traffic will grow again. Rail traffic is more beneficial to the environment, it is more efficient from the national economy ponit of view, and it is indispensable to the community. In view of the difficult economic situation of the German Federal Railways, in addition to an intensive rationalization of the enterprise, the Government will have to help above all in the development and the modernization of the rail network.

Particular attention must be given to traffic safety, above all in the spheres of research and industry and as far as the behaviour of the road users and the development of the emergency medical service are concerned.

These four focal points are touching a number of problems which are of topical interest today in many industrialized countries. Their solution within the framework of a rational and coherent transport policy which is guided by the interests of society should be *based on the following principles*:

1. The aim to achieve an optimal satisfaction from the overall economic point of view of the transport needs is to be striven for as far as possible through the *competition* on the market.

2. Regulatory *interference by the State* can only come into question where either competition as the sole instrument of control will lead to results undesirable from the economic ponit of view or the preconditions for this regulatory principle to be applied at all are lacking.

This is the case, for example, in the relationship between public short-distance passenger transport and private transport with motor vehicles.

3. The principle of the *free choice of the means of transport* in long-distance goods and passenger transport is maintained.

Where *private transport* leads to excessive impairment of the environment, however, and where traffic congestions cannot be eliminated with justifiable investment expenditure, *restrictive measures* are necessary. The effects of the energy problems on traffic have to be taken into account too lately.

4. Investment policy and regulatory policy must be oriented to a greater extent to *systems of public transport.*

5. There is *no intention* of influencing, which means checking, the *production or the sales of motor vehicles* by *direct Government intervention.*

An indirect influence is intended to be exerted by allocating all costs to the users of motor vehicles which they cause. This refers apart from the costs for the use of the environment (exhaust gases, noise), the costs of congestion, and the costs of accidents.

6. In *goods transport* a controlled order of competition is best suited for establishing an equilibrium between the requirements of the shippers, which differ greatly in quality and quantity, on the one hand and the services provided by the different modes of transport on the other. Here a difference is to be made between short-distance transport and long-distance transport as well as between commercial transport and transport on own account.

7. The *chief instruments* for influencing the distribution of the total transport volume to the individual traffic sectors are investment policy, taxes and public subsidies, regulations concerning the access to the market and capacity, and rate policy.

8. Transport policy is no isolated action. It is on the contrary the *interdependence with other policies*, above all with the environmental, the regional planning, and the regional policy, which must be taken into account in the plannings and in their realization. It is only by means of such a process that a balanced transport system can be achieved in the longer term. This applies both to the national transport policy and to the common transport policy of the European Economic Community.

II. PUBLIC SHORT-DISTANCE PASSENGER TRANSPORT

A. The Situation

The situation in public short-distance passenger transport calls most urgently for a solution. The problems of short-distance transport are often considered as the symptom of the crisis of the big city, and what is more, even as its cause. A few explanations will illustrate this:

In the Federal Republic of Germany more than 50% of the population live on 7% of the territory;

In 1985 presumably 75% of all inhabitants will live or work in towns or urban areas;

Passenger car population: 1965, 9.3 million; 1973, 17.0 million; 1985, 23.0 million with 65 million inhabitants.

Towards the end of the eighties a degree of saturation of about 380 passenger cars per 1,000 inhabitants will be reached in the Federal Republic of Germany. 352 passenger cars per 1,000 inhabitants are assumed for 1985;

Even today the passenger car density related to one square kilometre is ten times as high in the big cities as on the average in the whole Federal Republic;

Average yearly performance of passenger cars: 1960, 16,300 km; 1970, 14,400 km; 1985, 13,800 km.

Decrease on account of more difficult traffic conditions in urban agglomerations and therefore use to a greater extent of public transport;

The economic situation of the enterprises of public short-distance passenger transport (including the German Federal Railways) has deteriorated continually;

The main causes are: High personnel intensity (between 60 and 70% of the total costs are personnel costs); the development of productivity could not keep abreast of the increase in personnel costs; and the rise in costs could only be absorbed to a very limited extent by increases in fares and rates.

CONCLUSIONS

The attractiveness of public short-distance passenger transport must be enhanced.

The precondition for that are economically sound enterprises.

The best suited means must be employed in each case for the multifarious functions of short-distance transport (creation of systems in which also private transport will find its place).

The restricted traffic area in the inner cities compels us to optimal utilization of the traffic space including parking places.

The complexity of the problems makes intensive research and development in the field of novel short-distance transport systems and technologies necessary.

B. Measures

PREFATORY NOTE

The Federal Government has, owing to the federative character of the Constitution, only limited competences in the field of public short-distance passenger transport. The limits of its scope of action result from the division of competences for legislation and administration between the Federal Republic and the eleven Laender. The measures and their implementation are therefore rather complicated.

After first steps had been taken as early as 1966, *measures of promotion* were adopted to an increasing extent since 1971 when the Law on Financial Aids of the Government to Improve Traffic Conditions in the Communities came into force.

1 .Financing

Earmarking of part of the revenue from the mineral oil tax, namely 6 pfennigs per litre (approx. 2.2 cts/1) [1]).

The tax amounts for gasoline to a total of 44 pfennigs/1 (approx. 16 cts/1), and for diesel fuel to a total of 41 pfennigs/1 (approx. 15 cts/1).

In 1973 these 6 pfennigs/1 amounted to a total of 2,200 million DM (=800 million $).

(For the purpose of comparison: budget of the Federal Republic in 1973 for trunk road construction =6,400 million DM (=2,327 million $)).

For the years 1974 to 1978 a total amount of 11,700 million DM (=4,255 million $) is expected.

2. *Subjects of Promotion*

(a) Public short-distance passenger transport construction and development of the traffic routes of rail-bound transport in urban agglomerations underground railways, rapid urban railways, urban railways (tramways on own track formation); maintenance depots and central workshops; central bus stations; and park-and-ride systems.

(b) Communal road construction, Construction and development of local main roads, special lanes for buses, feeder roads to the supra-local traffic network, roads betweeen places in economically underdeveloped areas, roads in connexion with the closing down of railway lines.

3. *Distribution of Government funds*

50% for public short-distance passenger transport (subjects under item 2 (a)).

50% for communal road construction (subjects under item 2 (b)).

NOTE

(a) Out of the Government funds for investments the enterprises are refunded the fuel tax paid for the fuel consumption in public short-distance passenger transport by road and rail, before the distribution of the funds takes place. From 1974 to 1978 this will amount to a total of about 1,500 million DM (=545 million $).

(b) The Federal Laender have the right to appropriate as much as 10% of the means earmarked for communal road construction for public short-distance passenger transport. This possibility is made use of above all, for example, where costly underground railway construction work is in progress.

4.*The share in the financing of the individual projects*:

Federal republic, 60 percent and Laender and communities, 40 percent.

NOTE:

In certain areas where economic development has lagged behind the subsidy of the Government amounts to 75%.

5. *Further measures*

(a) Exemption of motor buses and coaches employed in regular line service from motor vehicle tax.

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[1] Rate of exchange: 1 U.S. $ = 2.75 DM.

(b) Refund of the mineral oil tax for public short-distance passenger transport by road and rail.

(c) Privileges for public short-distance passenger transport (e.g. priority when leaving a bus stop, establishment of bus lanes).

(d) Financial contribution of the Federal Republic to reduce the cover shortage of costs in the social transport of the German Federal Railways (the Railways' short-distance passenger transport by rail) by virtue of EEC law. 1973: 1,550 million DM (=565 million $)).

(e) Bills of the Federal Government concerning the equalization of receipt shortfalls due to the rates for students' season tickets and buisness traffic for all public transport enterprises, that means also for private enterprises .

C. Procedures for the Allocation of the Government's Financial Aids

1. *Financial Aids for Public Short-Distance Passenger Transport* (subjects see paragraph B, item 2(a)).

(a) The communities or transport enterprises apply for the financing of projects to the Transport Ministries of the Federal Laender.

(b) The Federal Laender examine, in the light of the legal criteria, whether the projects are worthy to be subsidized, set priorities, and apply to the Federal Ministry of Transport for inclusion of the selected projects in the promotion programme.

(c) The Federal Ministry of Transport draws up the promotion programme. In a working group, which is composed of representatives of the Federal Republic, the Laender, and the communal head organizations, the programme is co-ordinated with the Laender.

(d) The final decision on the programme is rendered by the Federal Ministry of Transport.

2. *Financial aids for communal road construction* (subjects see paragraph B, item 2 (b)).

(a) In a different way than with public short-distance passenger transport, the means for communal road construction are distributed to the Laender according to a "key". This key is based on the development of the car ownership in the individual Laender.

(b) The communities apply to the highest road construction authorities of the Laender for the financing of communal road construction projects.

(c) The Laender examine, in the light of the legal criteria, whether the projects are worthy to be subsidized.

(d) Each Land draws up its own programme.

(e) The inclusion of projects involving costs of more than 5 million DM (=2 million $) is subject, however, to the approval by the Federal Government.

3. *Criteria for decision*

(a) The precondition for the granting of financial aids by the Government is that the project is contained in a "*general traffic plan.*"

(b) The Law on the Principles of Budget Economy determines that with important investment projects which are being promoted with Government funds *cost/benefit analyses* have to be carried out.

The compliance with these conditions as far as traffic projects in urban agglomerations are concerned raises considerable difficulties in practice, however.

NOTE.—The integration of passenger transport services is dealt with in chapter VIII.

III. FINANCING OF THE TRAFFIC INFRASTRUCTURE

Prefatory Note.—The financial promotion of public short-distance passenger transport has been dealt with in chapter II and is therefore not included in this chapter.

1. *The framework of the planning*

The financing of the traffic infrastructure by the *Federal Republic* comprises the rail network of the German Federal Railways, the Federal trunk roads (Federal autobahns and Federal highways), the Federal waterways, and the flight safety installations.

A *Federal traffic infrastructure plan* which was established by the Federal Ministry of Transport serves as the basis for the financing. Pipelines, seaports and inland harbours as well as airports serving regular air traffic have been included in this infrastructure plan for information purposes, although the Federal Republic is not responsible for these areas.

The immediate objective of the overall traffic infrastructure planning is the co-ordination of the plannings of the various traffic routes in the Federal Republic. The long-range objective is the *integrated Federal traffic infrastructure planning*. It means integration of the traffic systems railway transport, road traffic into an overall traffic system into the whole national planning e,g. in the sectors of regional planning, economic development, town construction, and environment protection. Particularly complex tasks are furthermore the co-ordination of the traffic infrastructure plannings of the Federal Republic, the Laender, and the communities; and the harmonization of traffic infrastructure plannings on the international level.

2. *The orientation of the future financing policy*

(a) The *traffic infrastructure investments* must be *co-ordinated* with other tasks of the State and must be secured financially. As the means of the State are not unlimited, they must be employed as effectively as possible. Cost/benefit analyses must be made in this connexion—as was already mentioned in chapter II above.

(b) The *appropriation of the mineral oil tax* should in the future not be limited to the present extent (50%) to the construction of Federal trunk roads but should be extended to other investment projects as well.

(c) Measures of rationalization and concentration within the *German Federal Railways* are to reduce the personnel intensity and thus enable equalization payments of the Government to be used for investment purposes.

(d) *Priority* for public short-distance passenger transport *in the communities.*

(e) *The share of the traffic routes in the investments for the Federal infrastructure 1966–70:*

	Percent
German Federal Railways (including investment subsidies of the Goverment)	26. 2
Federal trunk roads	64. 0
Federal waterways	8. 5
Air traffic control and airports	1. 3
Total	100. 0

(f) *Intended volume of investments for the Federal infrastructure 1976–85:*

	Percent
German Federal Railways (including investment subsidies of the Goverment)	34. 9
Federal trunk roads	53. 9
Federal waterways	8. 7
Air traffic control and airports	2. 5
Total	100. 0

3. *The traffic routes in detail*

A. Federal trunk roads (Federal autobahns and Federal highways)

(a) The main source of financing is the *mineral oil tax*. Furthermore, loans are taken up, which make about 5.8% of the trunk road budget.

(b) On the strength of a legal arrangement of 1963 *half* of the mineral oil tax revenue is *earmarked* for the construction of Federal trunk roads.

(c) Since 1966 funds are being appropriated to an increasing extent from the *total* revenue from the mineral oil tax for the improvement of the traffic conditions in the communities (public short-distance passenger transport and communal road construction—see chapter II).

(d) On the basis of the 1973 budget we get the following *model calculation*:

Total mineral oil tax revenue	15,400 million DM ($5,600 million).
Of which are deducted 6 pfennigs/1 (2.2 cents/1) for local traffic.	2,200 million DM ($800 million).
1 pfennig/1 (.36 cents/1) for trunk road construction.	400 million DM ($146 million).
Total	12,800 million DM ($4,654 million).

These remaining 12,800 million DM ($4,654 million) are allocated

50 percent to the general budget	6,400 million DM ($2,327 million).
50 percent to the construction of trunk roads and other transport policy purposes.	6,400 million DM ($2,327 million).

(e) This helps to realize the above-mentioned *orientation* towards a more flexible utilization of the revenue from the *mineral oil tax*, that is to say, to employ it *also for other priorities.*

(f) The *Laender and communities* are financing their road infrastructure from their own financial resources. The *motor vehicle tax* goes to the Laender. It is not earmarked for any special purpose, but the Laender make investments in the road infrastructure of about the same amount as they receive from the motor vehicle tax. The Laender and the communities receive subsidies as mentioned in chapter II for the improvement of the traffic conditions in the communities.

B. The German Federal Railways

(a) Pursuant to legal regulation the German Federal Railways have to provide the means necessary for the fulfillment of their tasks themselves. If they are not in a position to do so, then the Government is to strengthen their equity capital or to grant a credit from budgetary means.

(b) Sources of financing are depreciation, investment subsidies of the Government for capital increase (to be used for capital goods and rolling stock) (1973: 525 million DM =191 million $), investment subsidies of the Government for public short-distance passenger transport (see chapter II) (1973: 260 million DM =97 million $), subsidies to building costs of third parties (e.g. subsidies of the Laender for electrification and rapid urban railway projects), and outside capital (loans).

(c) The focal points of the Federal Railways' investment policy are the modernization of the railway network, particularly the *construction of four new railway lines* until 1985 (a total of 630 km =1,014 miles in length at a cost of 11,200 million DM =4,073 million $).

C. Federal waterways

(a) The Federal Republic meets the expenses for investments and maintenance as well as for the operation (locks) and the administration out of the general budget (Federal budget 1973: total expenditure for Federal waterways: 737 million DM (=268 million $), of which 233 million DM (=85 million $) were spent on investments).

(b) In some cases the Laender as well as third parties are participating in the financing of the investments in the Federal waterways.

(c) To some extent also financing on credit is being made use of.

(d) The proceeds of the Federal Republic from the shipping dues in 1973 amounted to 80 million DM (=29 million $).

D. Air traffic

1. The role of air traffic in the Federal Republic of Germany can, on account of the short distances, hardly be compared with the conditions prevailing in the United States of America. A comparison on the European level is more appropriate here (for more details see chapter VIII.).

2. Owing to the State's responsibility for *air traffic control*, the Government meets the costs incurred in this field. Their focal point lies in radar technology and automation. The expenditure for 1973 amounted to 116 million DM (=42 million $). Furthermore, the Federal Republic is participating, in the form

of contributions, in the organization Eurocontrol in which several European states are co-operating.

3. A system study has been carried out with respect to the requirements that will be made on air traffic control in the eighties.

4. The airports do not belonw to the Federal traffic routes. Their costs are met to one third from Laender funds, one third from borrowings (loans), and one third from other sources. The Federal Republic is participating in the construction and the extension of five big airports with an average share of 14%.

IV. CAPACITY AND TARIFF POLICY

1. *Capacity regulations*

(a) As a general principle, maintenance of a restriction of the access to the market in *long-distance goods transport for hirt or reward* (more than 50 km radius); reasons; protection of the railways; improvement of traffic safety.

No restrictions of the access to the market in *inland waterway transport.* Introduction of a system of voluntary, temporary putting out of commission of river ships on a European scale, particularly on the Rhine.

(b) Transport on own account by road is unrestricted. There exists a hearing procedure in transport on own account, which gives commercial transport the possibility to take over an intended transport on own account.

(c) Capacity regulations are the subject of the common transport policy of the European Economic Community.

(d) The Commission of the European Communities is striving for the "final goal" of a complete liberalization of the access to the market, as soon as the *harmonization of the conditions of competition* (taxes, allocation of infrastructure costs, social conditions, technical regulations) has been achieved.

(e) The maintenance until such time of the German quota system in long-distance goods transport by road (determination of a maximum of authorizations) can be made more flexible, in order to achieve a smoother adaptation of the capacity to the needs.

2. *Tariff regulations*

(a) With progressing harmonization of the conditions of competition *further liberalization* of tariff policy.

(b) Tariff regulations are the subject of the common transport policy of the European Economic Community.

(c) The Commission of the European Communities is striving for the "final goal" of a complete liberalization of tariff policy, as soon as the harmonization of the conditions of competition has been achieved.

(d) *The individual modes of transport.*—The initiative for the fixing and the alteration of tariffs lies with each mode of transport, and the approval and the determination of the tariffs lies in the competence of the State.

(d1) *The railways.*—Development of the normal freight tariff with the exception of changes in the general level of rates and fares by the "Standing Tariff Commission" together with the shippers' committee in a consultative capacity.

Approval by the Federal Minister of Transport. The approval is deemed to have been granted, unless a decision is rendered contrary to the application within a period of two months.

The Federal Minister of Transport has *authorized* the German Federal Railways to increase or to reduce rates and fares within a scope of 20% at their own discretion. The Federal Minister of Transport can, for reasons of the common weal, request modifications of rates and fares. In such a case the Government is obliged to compensate the German Federal Railways for shortfalls in the proceeds.

(2d) *Road traffic.*—In passenger transport fixing of tariffs by the operators. Approval by the transport authorities of the Laender, with the state-owned enterprises German Federal Railways and Federal Postal Administration by the Federal Minister of Transport.

Long-distance goods transport.—As a principle, tariffs are binding on all transport operators as so-called "mode of transport tariffs".

Tariffs are fixed by tariff commissions, which shippers' committees are co-operating with in a consultative function.

Approval by the Federal Minister of Transport in agreement with the Federal Minister of Economics.

In long-distance goods transport for hire or reward bracket rates are being applied with an average margin of 17%, in international transport between the member States of the European Communities of up to 23%.

Short-distance goods transport.—Tariffs are fixed by tariff commissions, in which operators and shippers have equality of votes. Approval by the Federal Minister of Transport in agreement with the Federal Minister of Economics.

Bracket rates are being applied with a margin of up to 50%.

(d3) *Inland Waterway Transport.*—Tariffs are fixed by freight committees, in which operators and shippers have equality of votes.

Approval by the Federal Minister of Transport.

About 25% of the traffic are carried at bracket rates with a margin of up to 40%.

FINAL REMARK

1. In inland transport *special arrangements* outside tariffs are permitted under certain conditions only in goods traffic to and from the German seaports for the railways and long-distance goods transport for hire or reward.

2. In international transport special arrangements of the railways as well as in road traffic of the EC member States permitted under certain conditions.

3. As long as the tariffs of the individual modes of transport are approved of by the State, they are *exempt from the provisions of the Cartels Law.*

V. EQUAL CONDITIONS OF COMPETITION FOR ALL MODES OF TRANSPORT

1. *Objective*

The most important objective of a rational transport policy is to harmonize as far as possible the initial conditions for the competition between the various modes of transport. This applies particularly to the allocation of *infrastructure costs.*

This problem can be solved only within the framework of the common transport policy of the European Economic Community. This does not preclude temporary measures taken on the national level, however.

2. *Infrastructure costs*

General.—As has been emphasized in the principles under chapter I, the users of the traffic routes are to be charegd for the infrastructure costs which they have caused. Exeptions are made, however, especially in public short-distance passenger transport (see chapter II).

(a) *Roads.*—The users are to be charged for the costs of utilization (road wear, maintenance, resurfacing, security installations, operation) other costs not charged to the users but to the general public are: impairment of the environment (noise, exhaust gases), accidents, and traffic congestions.

Endeavours are being made to quantify these costs on the German and the European level, but this quantification is accompanied with complicated problems.

The principle set out for the roads applies basically also to all other traffic routes.

(b) *Waterways.*—In Europe a special situation prevails, since, according to international treaties, transport movements on the *Rhine* are free of charge and the application of the principle of infrastructure costs is therefore not undisputed. On German canals and canalized waterways the users have to pay dues which, however, are just covering operating expenses. In the member countries of the European Economic Community dues are imposed only in a few cases, so that a regulation on the European level will be necessary.

(c) *Railways.*—The German Federal Railways are obliged to include the infrastructure costs in their calculation of fares and rates. Exception: Short-distance passenger transport.

(d) *Air transport.*—Dues are levied for route air navigation facilities. They are being increased step by step in order to attain the objective of cost-covering. The present regulation of charges does not yet comprise, however, the approach and take-off climb areas of air traffic control.

3. *Harmonization of Taxation Systems in Motor Vehicle Traffic*

In the European Economic Community efforts are being made to establish a uniform system of taxation, taking into consideration the aspects of infra-

structure costs. This is a difficult problem since there are considerable differences in the motor vehicle tax and the mineral oil tax of the individual member countries (e.g.: tax on diesel fuel Federal Republic of Germany: Netherlands =41 : 18).

4. *Further domains requiring harmonization of conditions of competition*

The *technical provisions*, in particular those relating to the weights and dimensions of motor vehicles.

The *social provisions* for the various modes of transport (e.g. driving and rest hours in motor traffic).

5. *Subsidies of the Government to the German Federal Railways*

(a) *Principle.*—The State is to relieve the railways of such "extraneous" burdens which are not compatible with the nature of a commercial enterprise (normalization of accounts on EEC level) and therefore would mean a distorsion of competition vis-a-vis competitors.

(b) *Example: the 1973 budget* (important items only).

In order to provide a basis for financial compairson with the competitors (EEC law):

(b1) Contribution to old-age pensions (similar to that for government officials).	1,200 million DM ($436 million).
(b2) Compensation for children's allowances to be paid by the Federal Railways.	110 million DM ($40 million).
(b3) Old-age pensions for workers and employees	165 million DM ($60 million).
Total	1,475 million DM ($536 million).

This means that, in addition to their personnel expenses (more than 70% of their total expenditure), the German Federal Railways are granted Government subsidies to the amount of approximately 1,500 million DM ($545 million).

(b4) Contribution of the Federal Republic to reduce the cover shortage of costs in short-distance passenger transport. The total cover shortage of costs amounts to 2,700 million DM ($982 million).	1,500 million DM ($564 million).
(b5) Compensation for the operation and maintenance of level crossings with roads under EEC law.	335 million DM ($122 million).
(b6) Interests to be paid for loans for the elimination of war damage.	837 million DM ($304 million).

On the whole, *Government* subsidies granted to the German Federal Railways in 1973 totalled approximately 8,300 million DM ($3,018 million), to be broken down as follows:

1. Payments under EEC law (the most important items are specified above).	4,188 million DM ($1,523 million).
2. Investment subsidies	525 million DM ($191 million).
3. Investment subsidies for local traffic routes	261 million DM ($95 million).
4. Interests for loans taken up by the German Federal Railways to improve their capital structure.	194 million DM ($67 million).
5. Subsidies to insure liquidity	3,150 million DM ($1,145 million).

VI. THE INFLUENCE OF INDUSTRY ON THE DECISIONS OF THE GOVERNMENT IN THE FIELD OF TRANSPORT

1. In the Federal Republic of Germany, like in other countries, the interests of industry, trade, etc., are protected by associations.

2. There is a regulation in existence saying that these association must be heard before important decisions regarding transport policy are taken; this applies in particular to bills.

3. It can be clearly recognized that the associations, with good reason though, try to evercise a certain influence, that they do not hold, however, either direct or indirect, any dominant position. The same applies to large manufacturers.

4. There is only very little influence on the decisions in the sphere of infrastructure investments. Thus, the motor vehicle associations have requested for years that the mineral oil tax revenue be used for road construction at 100%. Since 1966, however, the policy has been that only 50% may be earmarked for this purpose.

5. The motor vehicle associations have increasingly shown understanding for the funds provided from the mineral oil tax being used for the improvement of the traffic conditions in the communities. They have been convinced that this also serves the interests of motor vehicle drivers.

6. As in other countries, the advantages and disadvantages of the motor vehicle are being extensively discussed also in the Federal Republic of Germany. Global opinions are more and more differentiated in the sense that in densely populated areas public short-distance transport should be given priority, whereas in rural districts private transport cannot be dispensed with, not even with respect to business traffic.

7. Finally, it can be said that the citizens to an increasing extent wish to participate in traffic and transport planning, especially as far as urban transport is concerned. It is the primary objective of these so-called "citizens' iniatives" to provide for protection against impairment of the environment, especially noise nuisance and safety risks. Experience shows that these initiatives are capable of exercising a considerable influence on traffic and transport planning.

VII. COMBINED TRANSPORT

1. The Federal Government promotes the development of all types of combined transport: container transport, piggyback transport with road vehicles and swop bodies, and pallets.

2. It is the objective to develop optimal "door-to-door" transport chains (from factory to factory) by using the cheapest means of transport in each case; relieve the roads of heavy lorry traffic over long distances; and further extend combined transport on international traffic relations.

3. Between 1969 and 1972 the Federal Government carried out a special programme for the promotion of combined transport and private sidings with a total volume of 850 million DM. 210 million DM thereof were provided for combined transport to encourage the purchase of vehicles (semi-trailers, tractors) and demountable bodies (containers, swop bodies, etc.) loading and handling equipment, such as cranes, forklift trucks, "piggy packers" originating from the U.S.A., ramps and the like.

4. For the transport of *containers* to and from the seaports the German Federal Railways provided a system of blocktrains which reach their destinations in the course of one night.

Example: "Delphin" from Bremerhaven, Bremen, Hamburg to Frankfurt, Mannheim, Ludwigsburg, Giessen, Nuremberg, and Munich.

5. A special transport company ("Kombi-Verkehr") has, in cooperation with the German Federal Railways, goods transport by road, and the forwarding industry, developed a *network of piggyback services* which enables lorries, trailers, and swop bodies to reach their destinations in the course of one night.

6. Container and piggyback transport services are constantly increasing in number. Their transport volume, however, is at present not more than just under 2% of the total transport volume of the German Federal Railways.

7. The expansion of piggyback transport, especially on the international level, involves technical, administrative, organizational, and economic problems.

VIII. THE INTEGRATION OF PASSENGER TRANSPORT SERVICES

A. *Long-distance passenger transport*

Long-distance passenger transport by *regular bus lines* plays only a minor part in the Federal Republic of Germany.

The prospects for a successful development of a tight *regional air transport network* within the Federal Republic of Germany are in view of the aircraft available and, among other things, also on account of the relatively small dimensions of the country—judged very cautiously at the present moment.

The main efforts are concentrated on providing effective and attractive *long-distance railway transport.* Since June 1973 there exists an integrated network (first class) with the following services:

1. 30 "Trans-Europ Express" trains (TEE) and 67 Intercity trains.

Routes with a total length of 3,700 kilometers (=2,300 miles) provide connections between 32 cities at two-hour intervals and up to eight times a day.

Special connexions link another 16 cities up with this system, so that a total of 48 big cities are served by this network. This traffic carries 70% of the passengers who are using fast trains.

2. Moreover, 16 supplemental or terminating lines with a length of 3,000 kilometers (=1,870 miles) serving another 73 cities are linked up with this network (first and second class).

3. Thus 121 cities producing 80% of the total number of fast train passengers are served several times a day.

B. *The Role of the Railways in Short-Distance Passenger Transport (Rapid Urban Railway)*

1. Since all big cities are connected with their envirous (region) by a more or less dense railway network, the idea suggests itself to make use of and *develop* the *existing railway infrastructure.* There is the further advantage that these lines and the required terrain of the railways are extending right through the big cities and reach into their very centres. From the economic point of view, it would therefore be more sensible for many cities to make use of this possibility than to build other transport systems, i.e. urban mass transport networks.

2. For the decision concerning the construction of a rapid urban railway network it will also have to be taken into account that the *housing structure* of the cities—just as in most countries—has greatly changed. While the residential population in the centres of the cities has considerably decreased, there has been an overproportional increase in the peripheral zones. The reasons for this change are chiefly as follows:

The conception of the townplanners that a separation in space of the functions must be made: industrial area, business area, and residential area.

However, doubts have now been raised whether this theory is justified; rising standard of living; the desire for a house of one's own "amid the verdure"; the wish for environmental improvement; and higher real estate prices in city centres, lower prices in the "region".

3. A typical *example* for a rapid urban railway system is the design of the rapid urban railway network in *Munich.*

In 1972, after a construction period of six years, a network with a length of 400 kilometer was put into operation. The costs amounted to 1,200 million DM (=436 million $). In comparison with that, it was only possible to build, fro about the same amount of money and during the same period of construction, 16 kilometers of underground railway in Munich. Here it should be remembered, however, that urban underground railways are mainly built in the centre of a city where prices are high and construction is difficult.

4. The *new construction of further rapid urban railways* is in progress in other important areas of mass transport: Hamburg, the Ruhr Territory, Cologne, Dusseldorf, Frankfurt, Stuttgart. It goes without saying that the establishment of rapid urban railway networks must be avoided in areas where no development of mass transport is expected in the future.

On the basis of the legal provisions as set forth in chapter II concerning the promotion of public short-distance passenger transport, the Government has approved of these projects and grants financial aids. The Laender and the communities participate in the financing in consideration of their own interest in short-distance passenger transport.

5. It is quite obvious that the rapid urban railway network of a big city must be planned and operated not separately but in *connexion with the network of the other transport enterprises* (underground railways, tramways, buses). For that reason the special form of the integrated transport system has been developed in the Federal Republic of Germany, above all in Munich and Hamburg.

6. The *arrangement of the tariff system* for public short-distance passenger transport has been the subject of a great many discussions. In the Federal

Republic of Germany reductions are granted in general, especially in business traffic and for students' season tickets.

In this way public transport is intended to be made more attractive than private transport with passenger cars. This will necessitate financial compensation, however. The so-called "zero fare", however, is not considered a suitable control instrument as this will cause a shortfall in proceeds, the compensation of which will render the financial aspect of promoting the attractiveness of public transport even more difficult. Moreover, it has been noticed that a general reduction of the fares in short-distance transport, and even the introduction of the "zero fare", have not been so attractive to the users of private cars that a considerable relief in road traffic and thus with road construction expenditure would have taken place.

C. *The Hamburg Integrated Transport System as an Example of Coordination and Integration in Public Transport*

1. In order to achieve a fundamental and lasting improvement in public transport, the transport enterprises operating in the Hamburg area have, of their own accord, formed a transport and tariff community.

2. The partners of the system are the Hamburger Hochbahn Aktiengesellschaft with underground railway, tramways, buses, the German Federal Railways with the rapid urban railway (S-Bahn) and bus services operating in Hamburg, various other local railway companies, the Federal Postal Administration with two bus routes and in addition, the Hafen-Dampfschiffahrt Aktiengesellschaft with its ferry and regular boat services in the port of Hamburg has been included in the community's joint fare system.

The members of the integrated transport system provide about 99% of the transport services in the area which extends about 50 x 60 km (=31 x 37 miles) and has a population of more than 2.5 million.

3. *The main duties of the system*

(a) transport research and transport planning.
(b) preparation of timetables and allocation of services.
(c) drafting and further development of the joint fare system.
(d) distribution of the proceeds taking into account the capacities and services.

In accordance with the above duties the system is divided into four main departments:

(a) rapid transit system.
(b) tramways, buses and shipping.
(c) fare system and distribution of proceeds.
(d) accounts and administration.

4. *The joint fare system*

The essential prerequisite for the desired integration of transport was a passenger fare system with uniform rules of price calculation and tariff provisions for all services included in the transport system.

The joint fare system permits passengers to change their means of transport as required for reaching their destination. All fare barriers hitherto existing between the different operating branches and undertakings have been eliminated. All services of the integrated transport system are offered to the passengers under a unified fare system.

A special problem is the distribution of the transport proceeds for which a sophisticated system has been developed.

5. *In summing up*

In summing up the results of this system, the following points—as a member of the Directorate of the Hamburg integrated transport system formulated it—can be made:

(a) The state of splitting in local public transport has been overcome. The integrated transport and tariff system offers the public an optimum of local transport services beyond the areas of individual transport enterprises and municipal boundaries. This range of services gives a new impetus to public transport.

(b) As an integrating planning body, the integrated transport system makes it possible to achieve better efficiency also in terms of profitability of trans-

port. Undesired developments in transport services and in the provision of installations are no longer imaginable in the future.

(c) As a co-ordinating body, the system is a suitable partner for collaboration with various urban and regional planning authorities.

(d) The competition between undertakings has been replaced by genuine collaboration in the transport system.

FINAL REMARK

The present illustration of the traffic problems in the Federal Republic of Germany and of the methods for their solution can only give a glimpse of the whole complex.

This resume is intended to serve as the basis for questions that will be addressed to the author to concretize the problems and their solution.

The orientation of German transport policy may be summed up as follows:

The whole sphere of transport must be considered as an integral and dynamic factor of the national economy and must be developed in this sense.

Within the framework of this conception the forces of competition shall always be brought to bear, but the State must interfere where this is necessary in the interest of society.

The goal is a transport system balanced both in passenger and in goods transport for a long time to come, which will benefit the community.

Exhibit 3.—Presentation of Dr.-Ing. F. Pampel to 38th International Union of Public Transportation Congress, London, England, 1969

THE HAMBURG TRANSPORT COMMUNITY, AN EXAMPLE OF COORDINATION AND INTE-

(By Dr.-Ing. F. PAMPEL, Mitglied des Direktoriums des Hamburger Verkehrsverbundes, Hamburg (Germany))

In order to achieve a fundamental and lasting improvement in public transport, the transport undertakings operating in the Hamburg area merged voluntarily into a transport and tariff community. A parent organization, which demonstrates the intention of the individual partners to collaborate and gives expression to their joint action, was established on 29th November 1965 under the name "Hamburger Verkehrsverbund" (Hamburg Transport Community).

1. CONDITIONS IN THE HAMBURG AREA BEFORE ESTABLISHMENT OF THE COMMUNITY

Like many others conurbations, the Hamburg area has also undergone important transformations in its settlement, economic and transport structure over the last 20 years. New environments and new living habits have evolved.

In the course of the extensive reconstruction work in the housing sector (due to war damage), large new residential districts were built—mainly on the outskirts of Hamburg. They caused a redistribution of population density. Fig. 1 shows that the population of inner Hamburg fell by about 50% as compared with 1938, whereas it doubled in the outskirts of the city.

In the course of this trend the Lower Saxony and Schleswig-Holstein municipalities bordering on Hamburg recorded a sharp increase in population, whereas the population of Hamburg itself has declined since 1965. Details are given in the following table:

POPULATION OF HAMBURG AND SURROUNDING AREA[1]

	Hamburg	Surrounding area	Total
1938	1,698,000	255,000	1,953,000
1950	1,583,000	467,000	2,050,000
1955	1,732,000	493,000	2,225,000
1960	1,837,000	530,000	2,367,000
1965	1,854,000	570,000	2,424,000
1966	1,847,000	590,000	2,437,000

[1] Current area of operation of the Hamburg Transport Community.

The population redistribution trend recognisable in the table is also affected by the resiting of industrial firms in the areas bordering on Hamburg. The following figures give information on the changes in the area bordering on Hamburg north of the Elbe:

INDUSTRIAL FIRMS IN THE HAMBURG AREA NORTH OF THE ELBE

	1954	1961	1966
Factories [1]	583	641	764
Employed persons	24, 843	34, 912	43, 012

[1] Including small establishments with less than 10 employed persons.

Consequently the town and fringe area are merging to form a more or less closed "concentration area". This was accompanied by the creation of a modern industrial society in which municipal boundaries are no longer as important as previously. People voluntarily tolerate long distances on their daily journey from their homes to their workplaces if good transport facilities and connections are available. The car plays an important part in this development not only in the Hamburg area, but also throughout the country. As a private transport medium it is eminently suitable for rapid, comfortable travel in a region.

In the Hamburg area the number of cars has risen sharply since 1950:

NUMBER OF CARS IN HAMBURG AND SURROUNDING AREA [1]

Year	Cars including estate cars		
	Hamburg	Surrounding area	Total
1955	72, 000	17, 000	89, 000
1960	175, 400	37, 900	213, 300
1965	322, 300	93, 500	415, 800
1966	353, 800	107, 000	460, 800

[1] Current area of operation of the Hamburg Transport Community.

For many years local public transport services in the Hamburg area have been provided by several undertakings with varying shares of the market. The upper table on page 21 gives an insight into market shares in 1965.

Recognising that Hamburg cannot remain viable without efficient public transport services, the town council and citizens of Hamburg resolved to carry out a large-scale extension of the Underground railway network as long ago as 1955. Since then the underground railway network has been increased by 14,9 km and 7,7 km are currently under construction.

The German Federal Railways (Bundesbahn), which operate a special rapid transit system in Hamburg (S-Bahn), are also enlarging and modernising their transport and operating facilities. For example, 52,6 km of line previously used by steam and diesel trains have been converted to d.c. or a.c. operation in recent years. A further 8,7 km long diesel section is currently being electrified. In addition, construction of the "City-S-Bahn", a new underground section (6,2 km) between Hamburg-Hauptbahnhof and Hamburg-Altona, was started in 1967.

Together with the lines of three further railway undertaking in the Hamburg area, the total length of the rapid and suburban railways systems was about 272 km in 1965.

The bus networks of the different undertakings were extended in the course of adaption to the town planning measures in the Hamburg and its area. The largest expansion was recorded by the bus networks of the Hamburger Hochbahn Aktiengesellschaft and the Verkehrsbetriebe Hamburg-Holstein Aktiengesellshaft, as is illustrated by the lower table on page 21.

MARKET SHARES OF TRANSPORT UNDERTAKINGS IN THE HAMBURG AREA

	Passengers in 1965 (passengers carried by different undertakings)	Market share percent
Hamburger Hochbahn Aktiengesellschaft (underground railway, tram, bus and ship routes)	395,900,000	71.3
Deutsche Bundesbahn (urban and suburban railways [S Bahn])	114,100,000	20.5
Hafen Dampfschiffahrt Aktiengesellschaft (Harbour Steamships Co)	12,300,000	2.2
Verkehrsbetriebe Hamburg-Holstein Aktiengesellschaft (bus routes)	22,300,000	4.0
Eisenbahngesellschaft Altona-Kaltenkirchen-Neumünster	2,800,000	.5
Alsternordbahn	1,100,000	.2
Bus routes of the Deutsche Bundesbahn	4,900,000	.9
Bus routes of the Deutsche Bundespost	200,000	.0
Bus routes of private undertakings	2,200,000	.4
Total	555,800,000	100.0

EXTENSION OF BUS NETWORKS OF THE HAMBURGER HOCHBAHN AKTIENGESELLSCHAFT AND VERKEHRSBETRIEBE HAMBURG-HOLSTEIN AKTIENGESELLSCHAFT

	System length in kilometres		Route length in kilometres	
	1955	1965	1955	1965
Hamburger Hochbahn Aktiengesellschaft	147	485	163	754
Verkehrsbetriebe Hamburg-Holstein Aktiengesellschaft	335	404	550	602
Total	482	889	713	1,356

Despite these achievements the number of passengers carried by the undertakings declined in recent years, as is shown in the table on page 22.

Only the Verkehrsbetriebe Hamburg-Holstein AG recorded an increase in passengers, this being primarily attributable to the large increase in population in the areas served by the undertaking and the associated extension of the network.

The absence of integration in the fare and transport system also played a part in the downward trend in public transport in the Hamburg area. This was all the more evident as the branches of the different undertakings overlapped and intermeshed with each other at many points, as shown in figs. 2 and 3. The passenger had to deal with a large number of undertakings. The structure and calculation of the fare systems varied. Operating restrictions and strictly defined operating areas limited freedom of movement. New residential districts could only be developed badly or not at all, because agreement could not be reached on transport services. The passenger missed central planning, central drafting of timetables and co-ordination of connections.

The undertakings pursued their own interests instead of collaborating. Competition resulted and caused disservices to the economy and business. Optimum solutions could not be applied in regional organisation and planning, because local transport services and fares were not integrated.

In an effort to bring about changes, introduction of transfer tickets for use on the transport media of the Hamburger Hochbahn Aktiengesellschaft and urban railway (S-Bahn) was first considered in Hamburg at the end of the fifties. It was quickly recognised that a complete solution had to be found in view of the rapid increase in the number of private cars and the passengers lost by the public transport services.

PASSENGERS CARRIED BY PUBLIC TRANSPORT SERVICES

Year	Hamburger Hochbahn Aktiengesellschaft (all operations)	Index	German Federal Railways (S-Bahn)	Index	Verkehrsbetriebe Hamburg-Holstein Aktiengesellschaft	Index	Total	Index
1956	474, 733, 000	100	138, 312, 000	100	15, 401, 000	100	628, 446, 000	100
1957	458, 871, 000	96. 7	142, 579, 000	103. 1	16, 743, 000	108. 7	618, 193, 000	98. 4
1958	452, 612, 000	95. 3	138, 888, 000	100. 4	17, 626, 000	114. 4	609, 126, 000	96. 9
1959	449, 344, 000	94. 7	135, 700, 000	98. 1	18, 104, 000	117. 6	603, 148, 000	96. 0
1960	441, 432, 000	93. 0	134, 834, 000	97. 5	18, 663, 000	121. 2	594, 929, 000	94. 7
1961	449, 273, 000	94. 6	130, 510, 000	94. 4	19, 592, 000	127. 2	599, 375, 000	95. 4
1962	440, 453, 000	92. 8	124, 329, 000	89. 9	20, 918, 000	135. 8	585, 700, 000	93. 2
1963	416, 668, 000	87. 8	117, 797, 000	85. 2	21, 331, 000	138. 5	555, 796, 000	88. 4
1964	402, 977, 000	84. 9	115, 754, 000	83. 7	21, 041, 000	136. 6	539, 772, 000	85. 9
1965	395, 869, 000	83. 4	114, 064, 000	82. 5	22, 340, 000	145. 1	532, 273, 000	84. 7

It is not enough to improve only the operational and technical side of the services offered. Organizational measures must also be taken in order to make public transport attractive again.

In a memorandum submitted in November 1960 the Hamburger Hochbahn Aktiengesellschaft outlined proposals for the materialisation of these ideas. They were based on integration of the services offered by all undertakings and introduction of a uniform passenger fare system applicable to all transport media.

2. THE COMMUNITY

2.1 *Legal form and organization of the Community*

After negotiations lasting several years with simultaneous drafting of the material and legal principles for the association system the Hamburger Hochbahn Aktiengesellschaft with all its operations (underground railway, trams, buses and Alser shipping), the Deutsche Bundesbahn with the urban railway (S-Bahn) and bus services operating in Hamburg, and the Verkehrsbetriebe Hamburg-Holstein Aktiengesellschaft with their bus services based on Hamburg merged to form the Hamburger Verkehrsverbund on 29th November 1965. A parent association was created and given the task of controlling and operating transport and the resulting further functions.

The Eisenbahn-Gesellschaft Altona-Kaltrenkirchen-Neumunster with the Hamburg-Kaltenkirchen line, the Alsternordbahn GmbH and the Elmshorn-Barmstedt-Oldesloer Eisenbahn Aktiengesellschaft with the Elmshorn-Barmstedt line joined the Community in 1966; the Deutsche Bundespost with two bus routes in South Hamburg became a member in 1967.

In addition, the Hafen-Dampfschiffahrt Aktiengesellschaft with its ferry and regular boat services in the port of Hamburg has been included in the Community's joint fare system since early 1967.

The Community members provide about 99% of the transport services in the Community area, which measures about 50 x 60 km and has a population of about 2.4 million (fig. 4). In 1968 the transport media of the Community partners carried about 560 million passengers on the 181 lines and routes included in the community tariff system.

Three agreements were concluded in order to put into practice the aims set out by the Community partners. They define the duties of the Community partners and the Community as a whole, lay down the rights and obligations of the individual partners and Community and outline the form of organization and method of operation of the association.

The Community is governed by civil law and operates in accordance with business principles.

The Community has 4 organs, viz. the Board of Directors (Direktorium), the Presidium (Prasidium), the Council (Rat) and the Assembly of partners.

The Board of Directors acts with legally binding force on behalf of the partnership and is responsible for putting the Community aims into practice. It is responsible for current affairs.

The Presidium lays down the principles for the activities of the Community and takes decisions on basic questions. It consists of the Chairman of the

Board of the Hamburger Hochbahn Aktiengesellschaft and the President of the Bundesbahndirektion (German Federal Railways area management) in Hamburg.

The Council consists of 9 members and deals with the matters of special economic importance and with a bearing on transport. The Council is chaired by the Minister of the Authority for Economic Affairs and Transport of the Free and Hanseatic City of Hamburg. The other members are representatives of the large transport undertakings in the Community and of the states of Hamburg and Schleswig-Holstein.

The Assembly of partners passes resolutions on the annual accounts, the budget, the appointment of auditors and other important matters.

The legal position and corporate form of the Community partners have remained unchanged in each case. Hence the partners retain the rights and obligations arising from the laws and permits under public law. They are still bound by the legal provisions applicable to their activities. The undertakings are also contract partners of their passengers in the Community.

The Community partners retain ownership of their installations and transport media. They continue to operate in the same way as before joining the association and cover the corresponding expenditure. They are still responsible for the total assets, the technical and transport facilities and management of capital and capacity.

2.2 *Assignment of duties in the Community*

The Community system in Hamburg provides for assignment of duties to the Community and individual partners, as is also the case in industrial organizations. The Community watches the transport market, it offers and sells services. The partners produce the services and assign them to the Community against payment.

The Community association attends to transport objectives; the partners are competent for the operational functions. All actions are undertaken on the basis of a fully integrated transport and tariff system.

2.3 *Duties of the Community association* (*Verbandgesellschaft*)

The association "shall provide suitable and economic local public transport services in the Hamburg traffic area for the benefit of the population". The association shall act "impartially as regards operation, interests and competition". Hence it is obliged to offer local transport services in accordance with objective viewpoints, while complying with the provisions of the agreements.

The duties of the association are as follows:

(1) Transport research and planning.
(2) Preparation of timetables and allocation of services.
(3) Drafting and further development of the joint fare system.
(4) Distribution of traffic revenue taking into account the capacities and services.
(5) Regular checking of vehicle use from economic viewpoints.
(6) Public relations work and advertising.

In accordance with the above duties the association is divided into 4 main departments:

(1) Rapid transit system.
(2) Trams, buses and shipping.
(3) Fare system and distribution of revenue.
(4) Accounts and administration.

and two departments for the press and basic research, which are directly subordinate to the Board of Directors (Direktorium).

2.4 *Duties of the individual partners*

The Community partners have undertaken to promote and support the activities of the partnership. In addition, they are competent for the following:

(1) Provision of operating installations and transport media.
(2) Detail drafting of the timetables and duty rosters.
(3) Establishment of operating performances.
(4) Supervision of operation.
(5) Collection of fares.
(6) Further development of their technical and operating equipment

3. PLANNING

3.1 *The Community association as a central planning body*

It is the duty of the Community association to adapt the transport network to the constant changes in demand and to ensure optimum satisfaction of transport requirements.

It collaborates externally with the planning authorities in Hamburg and the bordering districts and municipalties, and co-ordinates the plans internally with the Community partners. The partners are obliged to materialise the plans of the Community partnership as far as is feasible.

It is a task of the association to create the conditions for economic use of transport media and especially to exert its influence on town planning and the development policies of the municipalties from this point of view.

The association must ascertain the development trends and structural changes in local transport, town planning, the economic life of Hamburg and its fringe area and also in the technical traffic sector, not only for the purpose of adapting transport services to the prevailing conditions, but also to enable the Community partners to plan extension and conversion of their installations, capital requirements, the use of capital and, finally, measures in the personnel sector.

Centralisation of local transport planning is the prerequisite for ensuring that optimum efficiency is always achieved from the viewpoint of the passenger. But it also prevents possible faulty developments by the undertakings, as has often been the case precisely because of the harmfully competitive situation in local public transport. The association also has plenty of scope for action in the institutional field.

It is obvious that government and municipal authorities prefer to negotiate with an integrating body than with a large number of different undertakings.

As regards the planning work itself, the asociation can often take over already proven concepts, in particular those worked out by the Hamburger Hochbahn Aktiengesellschaft and the Hamburg Building Authority for the development of local transport.

3.2 *The Hamburg concept of organization of the public transport system*

The effects on future local transport developments, e.g. town planning, private transport, congestion on the roads during peak hours, but also the costs involved in the local transport sector, were soon recognized in Hamburg and plans for a new era in public transport services had already been made in 1955. In future public transport should operate smoothly on a second level. The main traffic flows between homes and workplaces are assigned to rapid transit systems (underground and metropolitan railways) as connections over longer distances, the other traffic being left to the buses. (Special services such as shiping are, of course, retained). The buses act primarily as feeders and distributors for rail transport and open up the outer districts in particular. The Community applies this planning concept beyond the boundaries of Hamburg to the entire association area.

For the rapid transit network the aim is to provide in the heavily built-up city area, roughly a 5 km zone around the centre, a route and stop density which should enable not only traffic destined to the city centre but also the internal traffic inside this zone to operate largely on the "second level" (fig. 5). The outer traffic and settlement zones should always be served by a closely meshed bus network based on district centres and rapid transit stops (fig. 6).

The tramways are being closed down parallel with extension of the rapid transit systems and development of the bus network. In the middle fifties trams were the most important carrier in the Hamburg area with about 45% of the total number of passengers (including the S-Bahn). The system comprised 187 km in 1956. Meanwhile about 80 km have been closed down (fig. 7). If further extension of the rapid transit systems can be financed as planned, it is anticipated that tram operation will be discontinued completely by about 1980.

The most important prerequisite for realisation of the Hamburg concept was the elimination of all fare barriers. This was achieved with the introduction of the joint fare system. All undertakings and sections in the Community are treater equally as regards fares, and passengers no longer encounter any obstacles or differentiation when changing from one transport medium to another.

This roughly outlined planning framework for the Community is supplemented by diverse individual plans. The association pays particular attention to the projects directly affecting passengers, e.g. the design of large interchange facilities, promotion of the Park-and-Ride system (fig. 9), which has already produced good results in Hamburg, special bus services for commuters, measures to accelerate tram and bus services and to reduce peak traffic by staggering working hours and changing shop closing times.

3.3 *Extension of the underground (Metro) and urban railway (S-Bahn) systems*

In comparison with other conurbations, the Hamburg transport arer already has a relatively large rapid transit system. At present the total line length of underground (Metro) and urban and suburban railways is about 274 km, i.e. about 16% of the overall system within the Community which has a total length of about 1700 km. The great importance of rapid transit systems for local transport in the Hamburg area is indicated by the fact that the rapid transit systems and suburban railways account for 55% of passengers and 67% of passenger-kilometres.

The rapid transit network is operated by the different undertakings as detailed in the table in next column.

The Metro and urban railway lines are based largely on the Hamburg city centre (fig. 5). The city centre is still the economic centre of the Hamburg region. An area of 5 km² (equal to 0.7% of the total urban area) contains the workplaces of 230,000 persons (25% of all employed persons). The good rapid transit connections help to ensure that 72% of the persons employed in the centre use public transport services.

RAPID TRANSIT SYSTEMS AND SUBURBAN RAILWAYS IN THE HAMBURG AREA

	System length in kilometers	
	1968	Under construction
Hamburger Hochbahn Aktiengesellschaft underground railway (Metro)	82.8	7.7
Deutsche Bundesbahn (German Federal Railways):		
Electric urban railways (S-Bahn)	71.2	4.9
Diesel/steam urban railway (S-Bahn)	68.4	
Eisenbahngesellschaft Altona-Kaltenkirchen-Neümunster	29.9	
Alsternordbahn	11.6	
Elmshorn-Barmstedt-Oldesloer Eisenbahn-Aktiengesellschaft	9.9	
Total	273.8	22.6

Outside the boundaries of Hamburg, in Schleswig-Holstein and Lower Saxony, the rapid transit and suburban railway lines form crystallisation points for new housing and industrial developments. The establishment of "construction axes" along the rapid transit systems (and some main roads) ensures that the area surrounding Hamburg is planned in an orderly manner.

Fig. 8 shows that two large rapid transit projects are now under construction (some parts are already operating), viz. an underground railway (Metro) line as an east-west link (Billstedt—city centre—Stellingen) and a new S-Bahn line between the main station and Hamburg-Altona passing through the city centre. This connection will greatly improve the transport value of the urban railway (S-Bahn) network, because destinations in the city centre can then be reached directly by the S-Bahn. The new Metro line will be fully operational by 1972, the new S-Bahn by 1975.

Further plans provide for a Metro line between the northern business district and the city centre as well as a new S-Bahn line from the city centre to Wilhelmsburg-Harburg.

In conjunction with extension of the rapid transit network and improvement of the services, the Park-and-Ride System is also being enlarged. At present there are already Park-and-Ride areas at 32 stations on the Metro and S-Bahn lines (fig. 9) with parking space for between 15 and 500 vehicles. The current total capacity of about 4,000 vehicles is to be increased to about 10,000 over the next few years.

The Park-and-Ride areas are mainly built by Hamburg from parking charges. They are available free of charge to car-driving passengers. At busy areas free identification cards are issued in conjunction with weekly and monthly tickets for the rapid transit systems.

3.4 *Extension of the bus network*

At the end of 1968, the Community partners operated 131 bus routes with a total length of 1,800 km which were all included in the joint fare system. This network is supplemented by 80 special services for commuters and students.

The following table shows how the network is broken down into the different undertakings:

BREAKDOWN OF BUS NETWORKS IN THE HAMBURG TRANSPORT COMMUNITY 1968

	System length in kilometers	Number of routes	Route length in kilometers
Hamburger Hochbahn Aktiengesellschaft	667	79	903
Verkehrsbetriebe Hamburg-Holstein Aktiengesellschaft	452	46	788
Deutsche Bundesbahn	44	4	54
Deutsche Bundespost	53	2	53
Total	1,216	131	1,798

It is the task of the Community association to re-adapt the bus network to town planning developments in the Hamburg area.

The greater mobility of the bus as compared with rail transport means that bus services need not be planned in advance to the extent necessary in the case of railways. However, the municipal building plans drawn up under the Federal Building Act are checked by the Community in accordance with basic principles[1]; the Community ensures that the road width, stops, bays and turning areas necessary for regular bus services are provided.

Bus networks are extended on the basis of continuous observations of demand trends. When new routes are introduced or old ones re-organized, they are connected as far as possible to rail transport media in accordance with concept explained in section 3.2, especically if traffic flows are to cover longer distances.

The Community pays special attention to layout of the bus network in the fringe areas of Hamburg in Schleswig-Holstein and Lower Saxony. Development of these districts is highly dependent on good transport connections and links to the main systems.

The express bus services occupy a special position in the transport network. They generally establish through connections between the outer distracts and city centre and thus supplement the broken connections (feeder bus—rapid transit system). The express bus services have their own regular passengers, although their journey times are sometimes longer than the broken connections involving feeder buses and rapid transit. Car owners in particular use the express bus services, 11 of which are operating at present.

4. TIMETABLES AND USE OF VEHICLES

The Community takes note of the daily and seasonal fluctuations in demand for transport services on all routes included in the joint fare system. On the basis of these observations the Community prepares for each route a timetable programme which includes the operating time, vehicles in service, frequency of vehicles, available seats and scheduled connections for the different line sections, times of day and days of the week. Reasonable allowance must be made for the conditions on the lines of the German Federal Railways, which are used by long-distance and regional traffic as well as local passenger transport. The Community is obliged to prepare the timetable in such a way that comparable transport zones in the Hamburg area are served in accordance with the same criteria.

[1] Dr. Pampel: Basic principles for the evaluation of guidance plans by local public transport undertakings, Verkehr and Technik 1967, No. 1.

The Community prepares the timetable programmes in the form of graphic timetables. The partners determine the trip times for the different routes in advance, supplement the graphic timetables by introduction and withdrawal of vehicles and work out the duty rosters for their employees.

The Community checks the vehicle circulation plans for best economic use when drafting the timetables and co-ordinates the employment of vehicles and operating performance with the efficiency optimum in accordance with the joint fare system.

In agreement with the Community partners, the association fixes theoretical values of the number of vehicles to be used and the operating performances. These theoretical values form the basis for distribution of transport revenue (section 6). Necessary timetable alterations lead to supplementation of the timetable programme and re-fixing of the theoretical values.

All services offered by the Hamburg Traffic Community are made known to the public in a timetable book published twice yearly by the association. Apart from timetable details, this book contains general plans, charts, passenger fares and other information.

5. JOINT FARE SYSTEM

5.1 *General description*

The essential prerequisite for the desired integration of transport in the Hamburg area was a passenger fare system with uniform rules of price calculation and tariff provisions for all services included in the Community. This joint fare system was introduced on 1st January 1967 after one year's preparation and replaces the previous, widely varying fare systems of the Community partners.

When the fare system was worked out, great importance was attached to identical prices for broken and continuous journeys of the same length in view of the large number of broken connections resulting from the transport network structure with the rapid transit systems as main carriers and the buses as feeders and distributors. The joint fare system allows passengers to change vehicles as required. All fare barriers existing between the different operating branches and undertakings have been eliminated. All services in the Community are offered to the passenger under a unified fare system.

The structure of the fare system permits automation of ticket sales, and also simplifies and accelerates fare collection in the different systems. Calculation of the fares is designed to ensure that the revenue covers the contractual claims of the partners for provision of capacity and performance. Work on the fare structure was preceded by detailed theoretical fare and economic considerations. In particular, the applicability and suitability of flat fares and of graded fares (relating to distance) for the Hamburg area were examined. The Association decided in principle to retain the system with the prices graded according to distance, as previously used by the different undertakings. This decision was determined not only by the considerable extension of the transport networks to be included in the join fare system, but also by recognition of the fact that the desired relationship between price, performance and costs could not be achieved with a uniform fare.

5.2 *Structure and organization of the fare system*

Two types of tickets are available: single and season tickets (fig. 10).

The single ticket fare is a section fare and applies on all routes and lines without exception. Starting with the basic price of DM 0,60 for a section (equal to two fare stages), an additional DM 0,20 is payable for each further section. A section is 4-5 km in length.

In addition, a short section ticket (equal to one fare stage) is available for DM 0,50.

The section fare also applies to travel involving changes. DM 0,20 is payable for every further section if a journey is continued on a second (third etc.) transport medium.

In order to reduce the repeated payment and collection of fares in areas in which many passengers change vehicles, two so-called "zonal tickets" are available at DM 0.80 for fare zone 1 and DM 1,000 for fare zone 2. The tickets are purchased when starting the first trip and can then be used as often as required within 2 hours (except for return journeys) in the cor-

responding areas (about 20 km and 35-40 km in diameter respectively). These zonal tickets are used by 95% of passengers who have to change.

The season tickets provided primarily for commuters are exclusively display tickets on which stamps for 5 days, 7 days or one month are affixed as required. As regards price calculation the Community has adopted the zone fare system developed by the Hamburger Hochbahn Aktiengesellschaft in 1963. The Hamburg area is divided into zone rings spaced at intervals of about 4 km and subdivided into segments. Two zones are combined into one fare stage in each case, in order to eliminate as far as possible the price injustices occuring in fare systems with fixed limits. The tickets enable passengers to travel as they wish on all transport media within the selected zones.

The zone fare system is supplemented by a section fare on the outskirts of the transport area (in which not the whole territory is covered by public transport). Both merge into each other smoothly without any difference in prices.

Depending on how often the season tickets are used the fare discount is 10 to 40% as compared with the corresponding single tickets.

The following table shows the proportions of passengers using the different types of tickets before and after introduction of the joint fare system.

BREAKDOWN OF PASSENGERS ACCORDING TO TYPES OF TICKET

Passengers	Percent	
	1966	1967
Single tickets	58.4	46.2
Season tickets:		
Weekly tickets	15.0	13.2
Monthly tickets	26.6	40.6
Total	100.0	100.0

As anticipated, the introduction of the joint fare system resulted in a marked shift towards the monthly tickets. This was caused by the cost factor, the absence of restrictions on use and the concession that season tickets need only be shown and therefore do not involve any fare collection or issue of tickets.

5.3 *Issue and inspection of tickets* [2]

The tariff community between the different branches and undertakings necessitates corresponding ticket issuing systems, especially between the rapid transit and surface transport media (trams and buses). The method adopted in Hamburg was based on the following considerations:

(1) The issue and cancellation of tickets should be reduced as far as possible and preferably not be dependent on personnel.

(2) Automation of ticket sale and cancellation should not restrict the fare structure and calculation, even with future development and re-fixing of the fares.

(3) The entire ticket issuing and inspection system should not be bureaucratic from the viewpoint of the passenger, but should appear liberal and thereby contribute towards creation of a positive image for public transport.

Hence the Hamburg Transport Community introduced display tickets and facilitated their purchase by passengers in every possible way. Issue of weekly and monthly tickets involves only 1-10% of the sales operations necessary for single tickets. In addition, cancellation is completely dispensed with.

Since up to 90% of passengers use display tickets at peak travelling times, it was possible to dispense with introduction of automatic cancelling machines. Moreover, with adoption of the joint fare system, the development initiated by the Hamburger Hochbahn AG some years ago eliminating inspections at the entrances and exits of all rapid transit systems and suburban

[2] See also Leopold: "Contribution to the problem of fare collection (issue of tickets) in rapid transit systems". Verkehr und Technik 1968, 3rd special issue "Zweite Ebene" ("Sesond Level").

railways was pursued as a logical continuation. Passengers with display tickets are allowed to use all stops without the need for operation of automatic machines, safety barriers or the like.

The Hamburg Transport Community uses single-stage clearance for passengers with single tickets. The passenger buys a ticket which is cancelled at the same time as issue, so that a separate cancelling operation is also unnecessary in this case. Tickets are issued mainly by automatic machines, or by employees only if they are also required for other duties (e.g. information purposes or despatching trains). The single tickets are issued by the drivers on buses and trams.

Ticket inspection has been changed over to a spot check method. On the rapid transit systems tickets are inspected on the trains and by cordoning off entire stop areas. On buses and trams tickets are checked in the usual manner by inspectors boarding the vehicles.

The Community partners provide the inspectors, who perform their duties on their own vehicles in accordance with the instructions of the Community. The inspection plans are worked out by the Community on the basis of mathematical statistical considerations and empirical data.

The Hamburg system of ticket sale and fare collection offers further possibilities of rationalisation. Automation of stamp sales is envisaged as the next simplification stage. A money collection method, which will permit purchase of the stamps without payment in cash, is being considered in conjunction with banks and savings banks.

6. DISTRIBUTION OF TRANSPORT REVENUE

6.1 *Possible methods of distribution*

A Community partnership shares risks, hence each individual partner should participate to the same extent in the profits as well as the risks.

On the other hand, the revenue distribution method must ensure that the association is capable of fulfilling its duties impartially as regards operation, competition and interests.

With these considerations in mind, various distribution systems were first developed and checked in Hamburg. An obvious method, for example, is revenue distribution based on transport performance. In this case, the revenue from fares is allocated in proprotion to the number of passengers or passenger-kilometres accounted for by the individual partners. This method can operate if the spheres of influence of the different partners are strictly delimited with respect to each other. But if the transport networks are intermeshed, a conflict of interests must be anticipated, because every route alteration will be accompanied by shifts in the transport performances and thus in the share of revenue. All new transport business for a partner means an additional source of income without any simultaneous increase in operating costs.

Hence it follows that revenue distribution based on transport performance does not eliminate thoughts of competition among Community partners. An amicable partnership is not guaranteed.

Another system of revenue distribution would be a method linked to costs. In this case it should be borne in mind that the different undertakings ususally have highly diverse cost structures and degrees of cover. Experience has shown that it is not easy to define costs in detail and to break them down into cost items and types of costs, especially if some undertakings are not fully committed to the association.

Apart from these technical obstacles the main objection to a cost-refund method is that the individual partner is released from joint responsibility for profitability of the association. Efforts to achieve profitability decline if all expenses are refunded.

A more effective distribution method is one which not only offers every partner an opportunity, but also gives him a strong self-interest in being able to plan good trading results on his own responsibility within the association.

6.2 *The Hamburg method*

The fares charged by the Community partners in accordance with the joint fare system are credited on paper (not in cash) to the association, which distributes the revenue to the individual partners as "Accountable

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receipts" (Verrechnungseinnahmen). Differences between the cash receipts and allocated amounts of the Community partners are settled monthly.

Additional income such as hire charges and rentals, revenue from occasional transport services etc., which the partners obtain privately, are retained by the partners and are not covered by the revenue distribution method.

The Accountable receipts are calculated by the following formula:

Accountable receipts = profitability ratio × specific cost rates × (capacity and actual service).

The profitability ratio is the ratio of transport revenue to expenditure on transport in a base year. It is defined for every operating sector included in the Community and characterizes the degree of profitability of the sector before admission to the Community. A "normal" financial year before membership of the Community is selected as base year. The profitability ratio is a constant and can only be changed in the event of successful rationalisation of an extraordinary, above-average and lasting nature.

The specific cost rates consist of the following:

(a) Costs dependent on route-sections (DM/route-section-km). Costs of maintaining all route-sections, tracks and stops, insofar as they are used for passenger transport under the joint fare system, divided by the route-section lengths.

(b) Costs dependent on vehicles (DM/vehicle-place). Costs of providing the number of places (accommodation) required for peak traffic on all routes (maximum timetable requirements), divided by the number of vehicle-places.

(c) Costs dependent on place-kilometres (DM/place-km). Costs of all place-kilometre performances resulting from the timetables, divided by the place-kilometres.

(d) Costs dependent on train-kilometres (DM/train-km). Costs of train trips, insofar as they are not included under the costs dependent on place-kilometres (e.q. train driver and guard costs), divided by the train-kilometres.

These specific cost rates are determined for each sector in the tariff reference year and apply throughout a tariff period.

Insertion in the distribution key of the operating capacities (number of route-section kilometres and places) and operating performances (number of place-kilometres and train-kilometres) made available in the current financial year, gives the accountable receipts to be apportioned to each partner.

Transport revenue achieved from the joint fare system less an amount corresponding to the Community administration's own expenditure is distributed as accountable receipts. If they fall short of or exceed the actual gare revenues, the differences are allocated to the Community partners in proportion with their shares in the revenue.

Fig. 11 shows a diagram of the Hamburg method of revenue distribution.

It follows from the diagram that the income received by the partners is based on their "old income" (income in base year). The operating costs of the partners are included in the calculation only if the joint fare system is modified. Hence the operating costs plays a part, but are not a decisive factor.

The distribution method ensures that the individual partner retrains his "accustomed trading results" in the association, even if changes in capacities and performances cause increases or reductions in costs.

Accordingly the method of revenue distribution ensures that the different undertakings do not suffer any economic disadvantages through membership of the Community. Undertakings which previously showed an annual profit can continue to anticipate good trading results. Others which recorded deficits must obtain the subsidies necessary to cover costs from the sources which previously granted them.

It goes without saying that in practice the method of revenue distribution is more diverse than can be described here. For example, there are provisions relating to cash settlement of revenue, determination of vehicle and seating requirements, calculation of the profitability ratio and cost rates. treatment of suspended operating capacities.

6.3 *Efforts to achieve profitability in the Community as a consequence of the method of revenue distribution*

The structure of the revenue distribution method ensures that economic considerations are to the forefront in all measures taken by the association and the individual partners.

The former is obliged to meet the demand for transport as economically as possible by providing services adapted to hourly, weekly and seasonal fluctuations. It is contractually bound to serve comparable transport area in accordance with the same criteria. Indices are the seat occupancy ratios (quotient of the passenger-kilometres and place-kilometres) calculated for each operating sector.

It can be seen from the diagram of the distribution method (fig. 11) that the desired joint responsibility of the partners for profitability actually exists. For example, rationalisation efforts and other measures to increase productivity in the undertakings are encouraged by the fact that the specific cost rates (column 2 in fig. 11) remain unchanged throughout a fare period. If a partner achieves successful rationalisation, which reduces costs in the undertaking, his trading results will improve. Differential profits of this kind are effective until the next fare calculation which takes into account the actual cost situation of the partner in question.

On the other hand, a partner cannot demand an increase in the specific cost rates (in the event of wage and salary increases) during a fare period. Debits of this type must be absorbed by the partner.

In economic terms this procedure places the partners in a position resembling one in which they did not collaborate in the association.

An undertaking cannot either increase fares by itself immediately after any internal increase in costs.

If costs and income diverge widely after a prolonged period so that the "accustomed results" of the individual partners are no longer ensured, the association is obliged to propose and apply for a new passenger fare system to the appropriate authorities. For calculation of the new revenue the specific cost rates are re-fixed for each partner with allowance for the cost increases in the undertakings and the defined trading results (column 1 in fig. 11) re-established.

6.4 *Practical success of the Hamburg method*

In German there is a proverb: "Friendship ends where money begins."

Two complete financial years (1967 and 1968) with considerable changes in the capacity and performance of the individual partners have been settled in accordance with the Hamburg method. The distribution key is fair and can be easily checked. There were no difficulties or complaints. Each partner received "his" income and does not consider himself worse off financially than if he had not joined the Community. Hence the method has proved successful. Its permits contractual collaboration in the Community, although the individual partners are different forms of undertaking under company law and in terms of organisation, and also achieve different trading results.

7. PUBLIC RELATIONS AND ADVERTISING IN THE COMMUNITY

Future development of public transport does not depend exclusively on whether it makes positive contributions within the framework of urban and regional transport. Acceptance and recognition of these services as such by the general public will also be a decisive factor. The important point is to create an attractive image for local public transport. This form of transport must not be regarded as a "necessary evil", and passengers must not feel to be "second class citizens".

The undertakings must strive to "sell their services" and should pursue active market policies, which require special financial resources and the employment of trained personnel. The transport market must be investigated and supply tailored to meet demand—exactly as in other sectors of the economy.[3]

Establishment of the Hamburg Transport Community and completion of the integration of fare systems and transport was well received by the

[3] See also Mross: "Coordination and integration in public transport as a necessary condition for adequate regional transport", report to the UITP Congress, London 1969.

general public in Hamburg, in political circles and especially also in the opinion-forming institutions of press, radio and television. In the knowledge that even a good service soon becomes a habit and subsequently is no longer retained as a conscious thought, the Community is making every effort to develop what has already been achieved by means of public relations and advertising.

In this respect the Community uses three methods. By utilising its close contacts with the daily and trade press it regularly supplies the public with interesting information and reports on local transport. The Community is attempting to draw attention to special problems by despatching "Community information bulletins" to leading personalities in political and business life at specific times. In collaboration with a well-known advertising agency it is pursuing a policy of intensive "market cultivation."

In 1968 the Community offered special fares—valid for several weeks or months in each case—and highlighted them in advertising media.[4] Similar campaigns are also being prepared for 1969. In this way the association ensures that it is always "in the news" and that the public are aware of it in a positive sense.

Apart from the effective improvement in the services offered in the Hamburg area by establishment of the Community, the public relations work and publicity campaigns have undoubtedly helped it to become widely known. An opinion poll conducted in 1968 by a specialist institute produced the following results: 76% of the interviewees were familiar with the name "Hamburg Transport Community", only 18% had not heard of it and 6% had no opinion. 64% of the interviewees considered the merging of the undertakings and introduction of the joint fare system to be a "very good" innovation, a further 29% regarded it as "good", only 1% thought it was "not very good" and 6% did not express any opinion. Fig. 12 shows a poster advertising introduction of the joint fare system.

8. RESULTS OF THE COMMUNITY'S WORK

The desired transport and tariff integration was fully realised with the introduction of the joint fare system. Elimination of the fare barriers between the different branches and transport networks, introduction of uniform rules for fare calculation, and facilitation of ticket issue enabled passengers in the Hamburg transport area to enjoy a previously unknown freedom in the choice and use of transport media.

The new joint fare system opened up new possibilities for many passengers with the result that appreciable shifts in traffic flows were anticipated. The Community had made corresponding preparations and made suitable alterations to routes and timetables. In 1967 alone the routes, scheduled frequency and connections of about 120 bus and tram services were modified.

In order to promote use of the rapid transit systems and relieve the scheduled road services, the bus feeder network previously related to the underground railway (Metro) of the Hamburger Hochbahn Aktiengesellschaft has also been co-ordinated with the urban railway (S-Bahn) operated by the German Federal Railways. Consecutively the S-Bahn now carries a considerable amount of new traffic, as is shown in the following table:

INCREASE IN PASSENGERS/WEEKDAY AT S-BAHN STATIONS BETWEEN 05.30 AND 08.30 HOURS

		December 1966		October 1967	
Line	Station	Passengers	Index	Passengers	Index
S 1	Othmarschen	2,150	100	3,590	167
S 1	Barmbek	2,720	100	4,560	167
S 1	Ohlsdorf	2,290	100	3,410	149
S 1	Poppenbüttel	2,400	100	3,420	143
S 2	Elbgaustrasse	2,430	100	3,300	137
S 4	Rahlstedt	2,100	100	2,650	126

[4] These included week-end concessions for passengers over 65 (large discount) and for children under 10 (free travel accompanied by an adult) and a so-called Christmas ticket for Christmas shopping purposes.

With the abolition of the fare barriers, the underground, urban (S-bahn) and suburban railways formed a transport and tariff unit. This is indicated by the increase in transfers between the railway systems. Examples are given below:

INCREASE IN TRANSFERS AT RAPID SYSTEM AND SUBURBAN RAILWAY STATIONS BETWEEN 05.30 AND 08.30 HOURS

Station	Railway system	December 1966		October 1967	
		Passengers	Index	Passengers	Index
Sternschanze	Metro/S-Bahn	2,100	100	3,910	187
Hauptbahnhof	Metro/S-Bahn	5,600	100	11,760	210
Eidelstedt	S-Bahn/AKN [1]	1,100	100	1,550	141

[1] Eisenbahngesellschaft Altona-Kaltenkirchen-Neumünster.

The introduction of services with standard fares brought about a redistribution of passengers in relation to the most favourable travel times. In comparison with the previous system, 29% of passengers now save travelling time. In some cases, up to 46% or 30 minutes are saved on a previous journey time of 67 minutes.

Integration of the fare structure and improvement of the bus feeder system for the rapid transit systems also shortened the walk to the stations for many passengers. A total of 19% of public transport users (up to 30% in some parts of the city) now have shorter walks than previously.

Soon after introduction of the joint fare system competing parallel services on the roads were withdrawn and the vehicle capacities and operating performances then becoming available were used to cover requirements in other areas. Here is an example (fig. 13): Travellers from a district in northeast Hamburg towards the city centre were carried by buses operated by the Hamburger Hochbahn Aktiengesellschaft to an underground railway (Metro) line of the same company. With the joint fare system, on the other hand, most of this traffic is transferred to the S-Bahn (German Federal Railways), which also runs into the city centre. Consequently a saving of 20% in buses and bus operating performances was achieved in this area. In addition, passengers now reach the city centre much more quickly than previously.

The expectations placed by the public in the joint fare system have been fulfilled: freedom of choice as regards transport medium and unrestricted changes. Passengers who previously travelled on the vehicles of several undertakings and had to buy two or more tickets, now require only one ticket. At the same time fares were also reduced considerably for these passengers.

The Community and the individual partners are making efforts to standardise the appearance of their vehicles and the facilities for informing passengers of the routes and stops. For example, the two larger bus undertakings in the Community, the Hamburger Hochbahn Aktiengesellschaft and Verkehrsbetriebe Hamburg-Holstein Aktiengesellschaft, have now decided to use the same colour for their buses. The different network maps for the underground and urban railways have now been replaced by uniform general maps at all stops and in the vehicles.

Preparations are currently being made for standardisation of the timetables displayed at the bus and tram stops. These timetables will be prepared by data processing machines.

All aspects of the Community's work have given a new impetus to local public transport in the Hambur area. Most West German cities recorded heavy passenger losses in 1967 and 1968 (1967 as a result of the economic recession), while the decline was checked in the Hamburg area where the number of passengers has remained virtually unchanged in 1967 and 1968 as compared with 1966.

9. SUMMARY

With establishment of the Hamburg Transport Community on 29th November 1965 and introduction of the joint fare system in December 1966, the desired co-ordination of transport operation and integration of services in

the Hamburg area was fully realised. The method of operation and organisation of the Community proved successful after a short time. In summarising, the following points can be made:

(1) Fragmentation of local public transport in the Hamburg area has been eliminated. The integrated transport and tariff system offers the public optimum local transport services beyond transport undertaking areas and municipal boundaries. This range of services gives new impetus to public transport.

(2) As an integrating planning body, the Community enables better efficiency to be achieved, also in terms of transport profitability. Faulty developments in transport services and provision of installations, which occurred under competitive conditions, are no longer conceivable in the future.

(3) As a co-ordinating body, the Community is a suitable partner for collaboration with various urban and regional planning authorities. Public transport will thus become an effective instrument of regional planning, regional development and town planning.

(4) The previous competition between undertakings has been replaced by genuine collaboration in the Community. Disputes about concessions, spheres of influence etc. have become unnecessary among Community partners.

(5) The legal independence of the undertakings in the Community is not affected. Managements are still able to use their own initiative. The Community structure encourages rationalisation efforts by the undertakings, while simultaneously requiring the Community to act in an efficient manner. The various forms of undertaking of the individual partners are unimportant in regard to the work of the Community.

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Population broken down according to distance zones

Percentage — Number of inhabitants

Einwohneranteile gegliedert nach Entfernungszonen

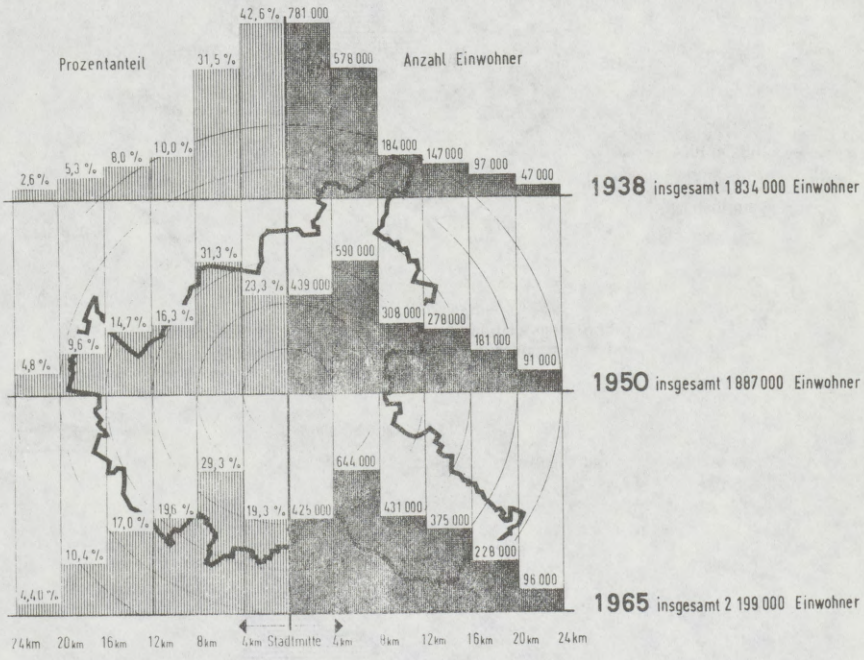


Fig. 1 : Structural changes in distribution of population.

1938 Total population : 1 834 000
1950 Total population : 1 887 000
1965 Total population : 2 199 000
Stadtmitte : City Centre

Fig. 2 : Operating areas of undertakings operating rapid transit systems and suburban railways in the Hamburg area.

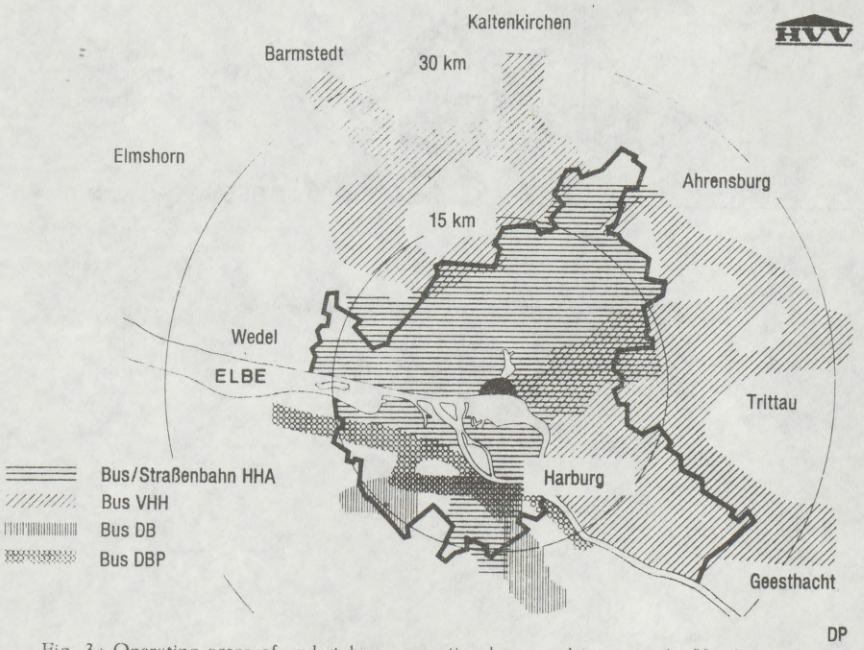


Fig. 3 : Operating areas of undertakings operating buses and trams in the Hamburg area.

Umgrenzung des Wirkungsraumes

Tarifbereich

Der Wirkungsraum umfaßt 233 Gemeinden mit zusammen 2 440 000 Einwohnern auf einer Fläche von rd. 3 000 qkm.

In den Gemeinschaftstarif sind 177 Linien mit 2 243 km Linienlänge und 2 181 Haltestellen einbezogen.

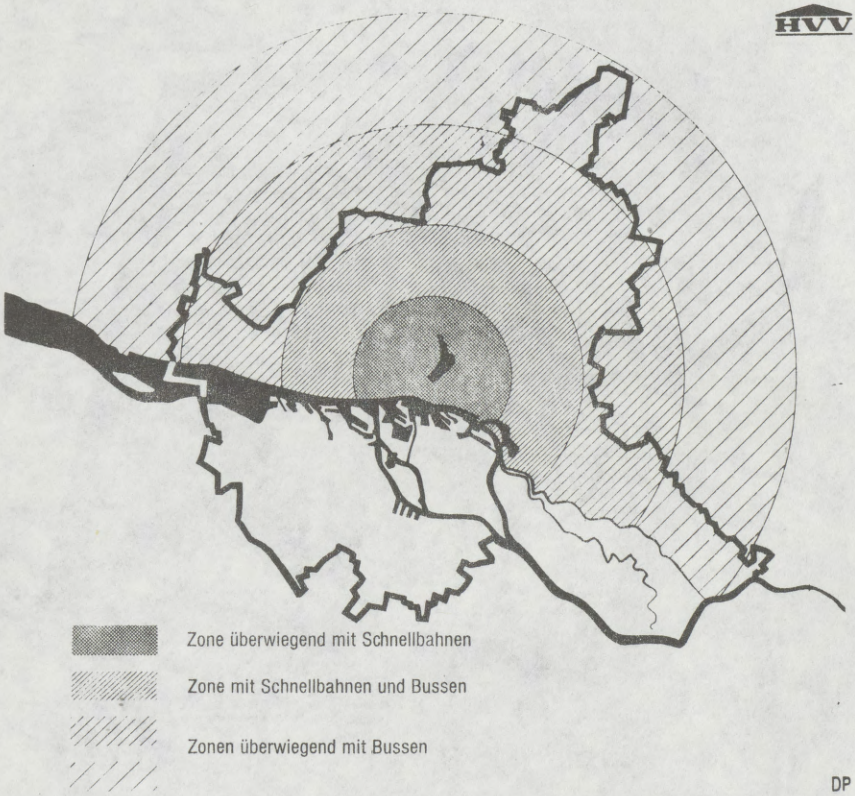
Boundary line of area of operation

Fare system area

The area of operation includes 233 municipalities (Gemeinden) with a total of 2 440 000 inhabitants in an area of about 3 000 km².

The joint fare system includes 177 routes representing 2 243 km in length and 2 181 stops.

Fig. 4: Area of operation of the Hamburg Transport Community.



Zone in which rapid transit systems predominate
Zone with rapid transit systems and buses
Zones in which buses predominate

Fig. 5: Operating zones of the transport media.

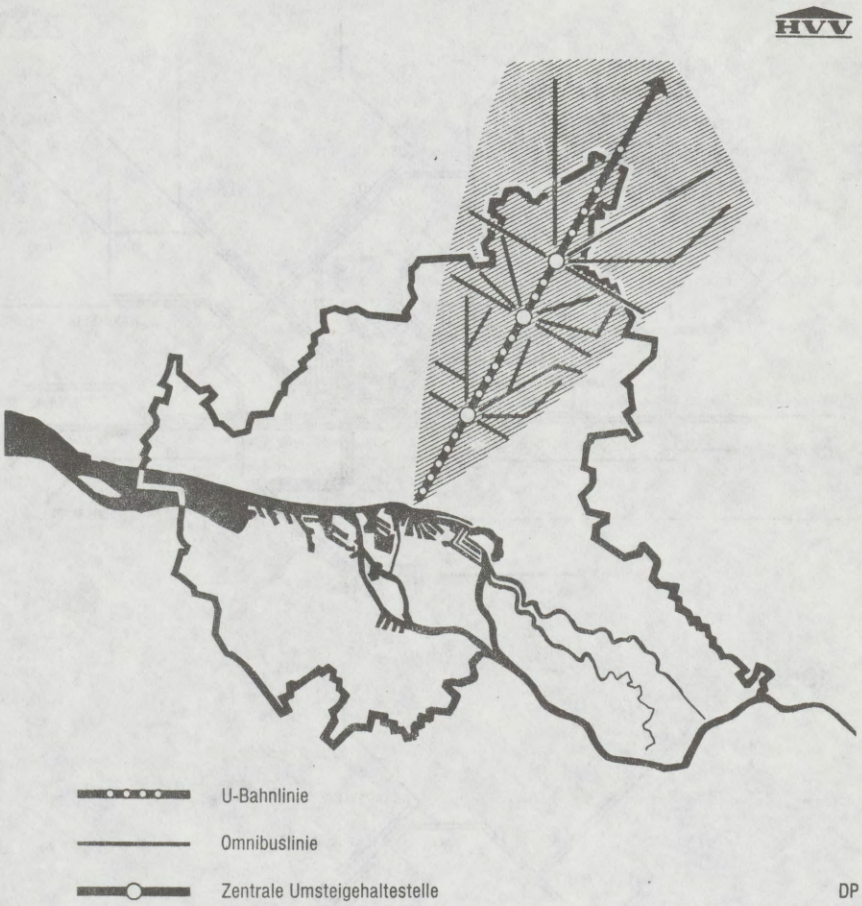
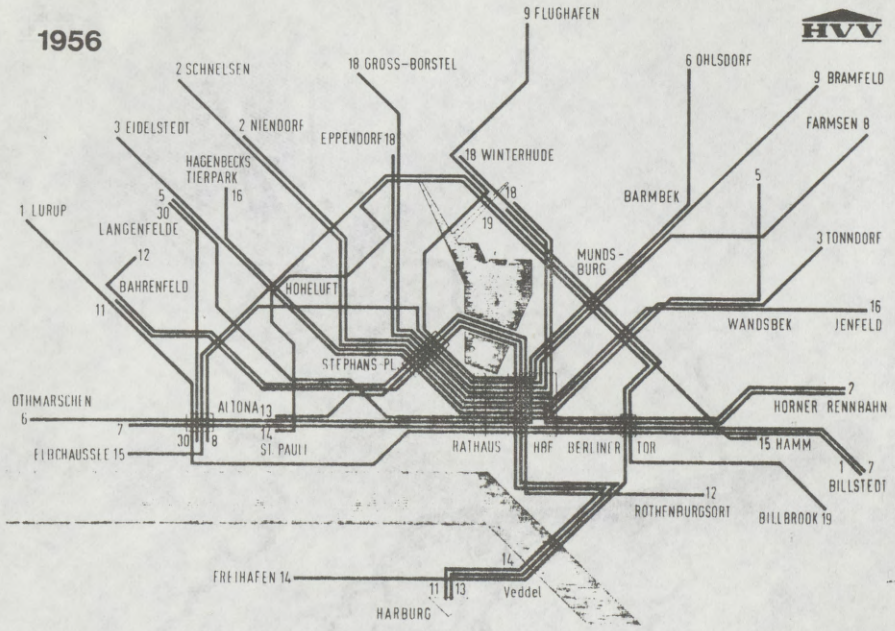


Fig. 6: Commuter services with rapid transit systems as mains carriers and buses as feeders and distributors.



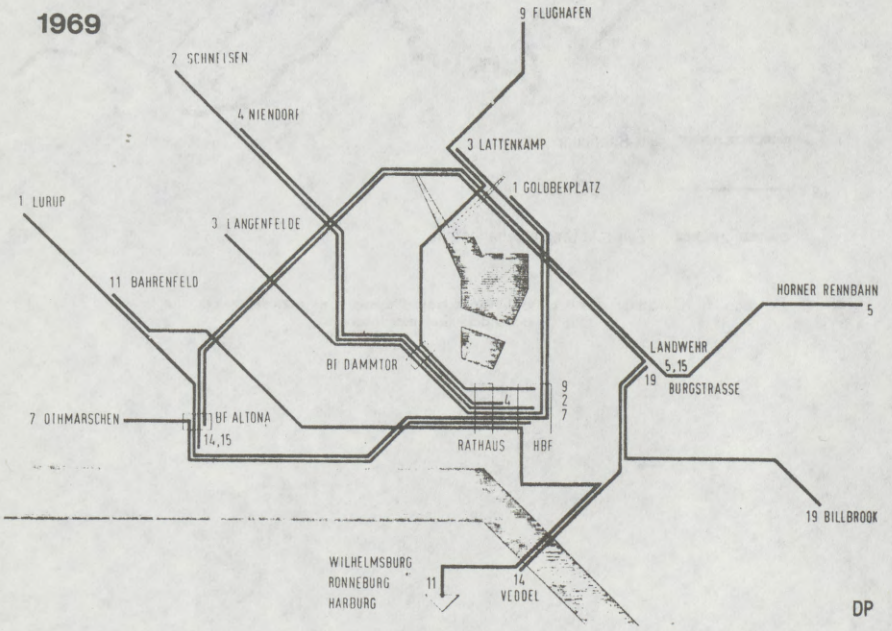


Fig. 7 : Restriction of tram operation by the Hamburger Hochbahn Aktiengesellschaft.

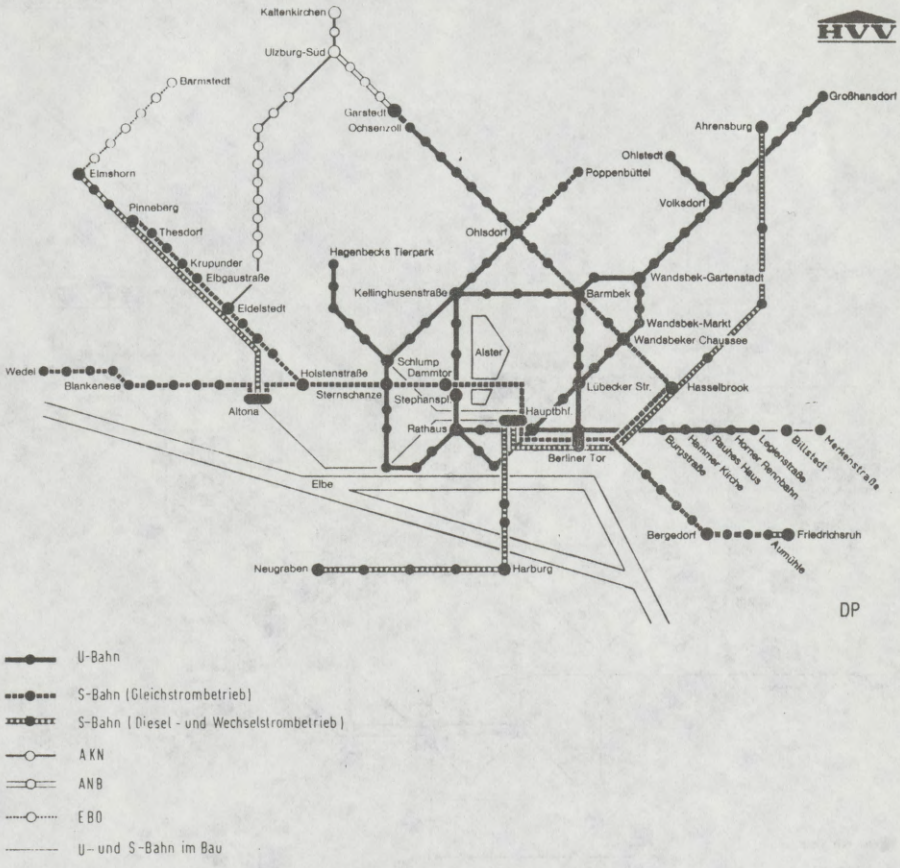


Fig. 8: Network of rapid transit systems and suburban railways in the Hamburg Transport Community.

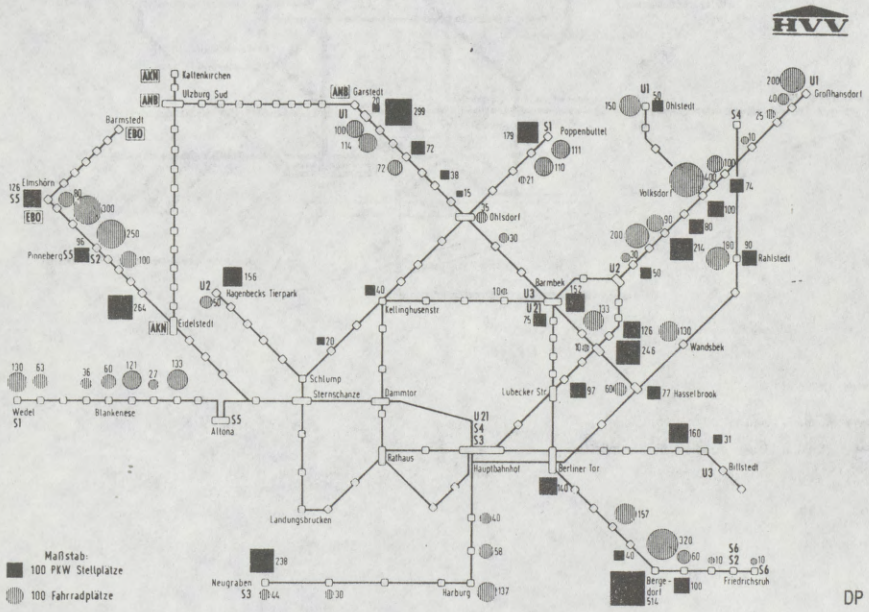


Fig. 9: Park and ride in the Hamburg area.

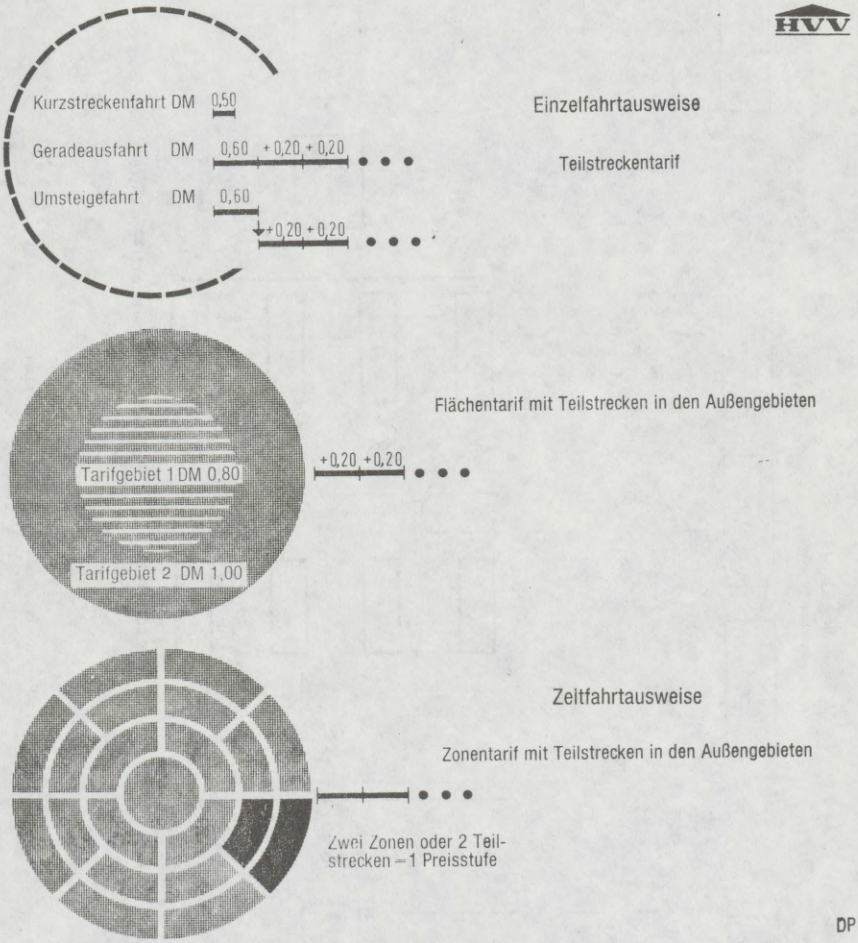


Fig. 10: Diagram of joint fare system.

Kurzstreckenfahrt DM 0,50	=	Short journey DM 0,50
Geradeausfahrt DM 0,60 + 0,20 + 0,20	=	Journey involving changes DM 0,60 + 0,20 + 0,20
Umsteigefahrt DM 0,60 + 0,20 + 0,20	=	Journey involving changes DM 0,60 + 0,20 + 0,20
Einzelfahrtausweise	=	Single tickets
Teilstreckentarif	=	Section fare
Flächentarif mit Teilstrecken in den Aussengebieten	=	Area fare with stages in outer districts
Tarifgebiet 1 DM 0,80	=	Fare area 1 DM 0,80
Tarifgebiet 2 DM 1,00	=	Fare area 2 DM 1,00
Zeitfahrtausweise	=	Season tickets
Zonentarif mit Teilstrecken in den Aussengebieten	=	Zone fare with stages in outer districts
Zwei Zonen oder 2 Teilstrecken = 1 Preisstufe	=	Two zones or 2 sections = 1 fare stage

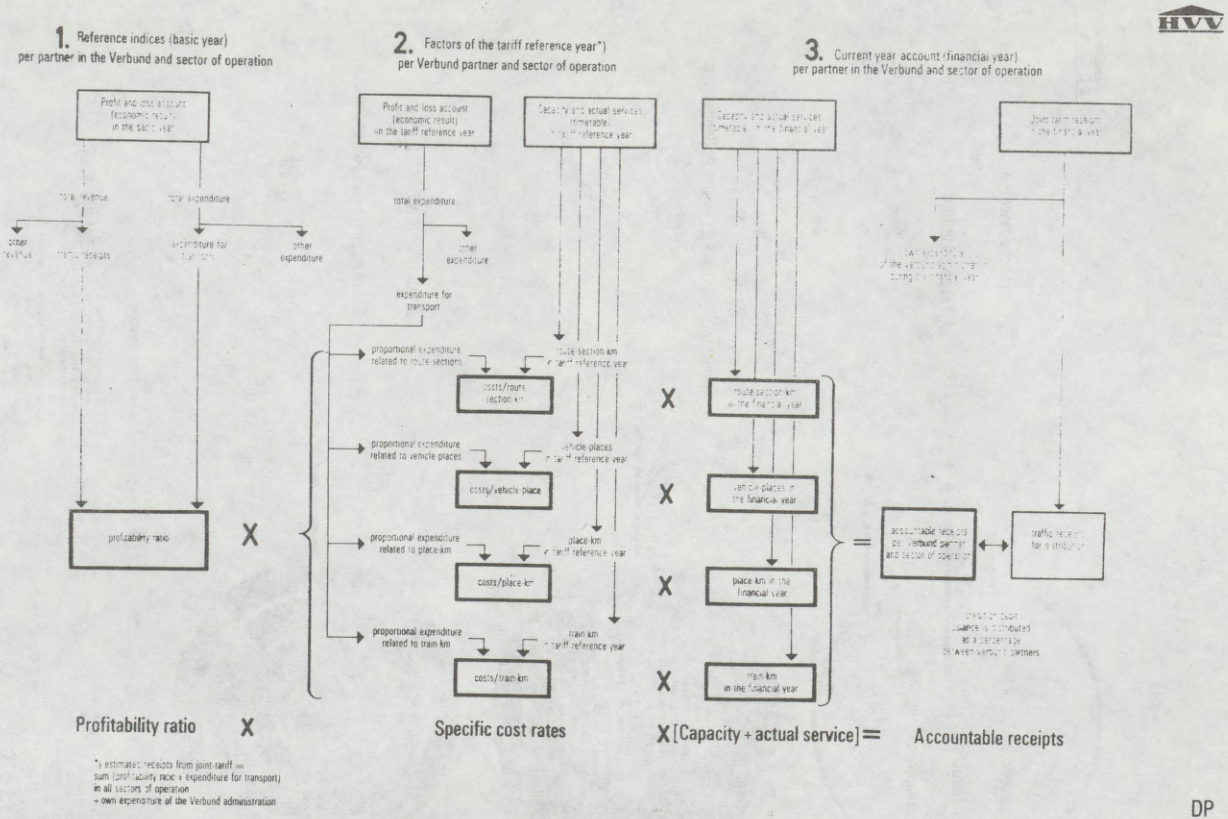


Fig. 11 : Revenue distribution in the Hamburg Transport Community.

DP

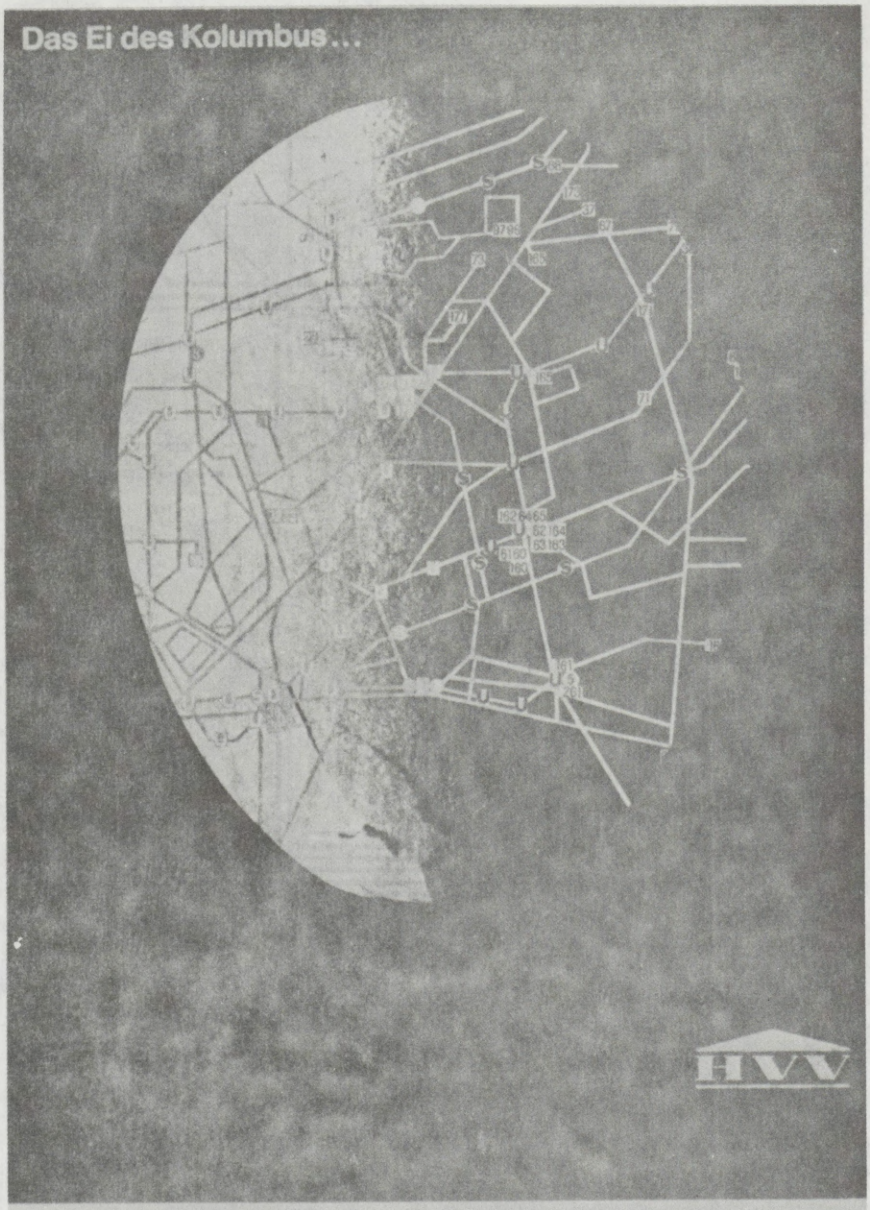


Fig. 12: Poster advertising introduction of the joint fare system.

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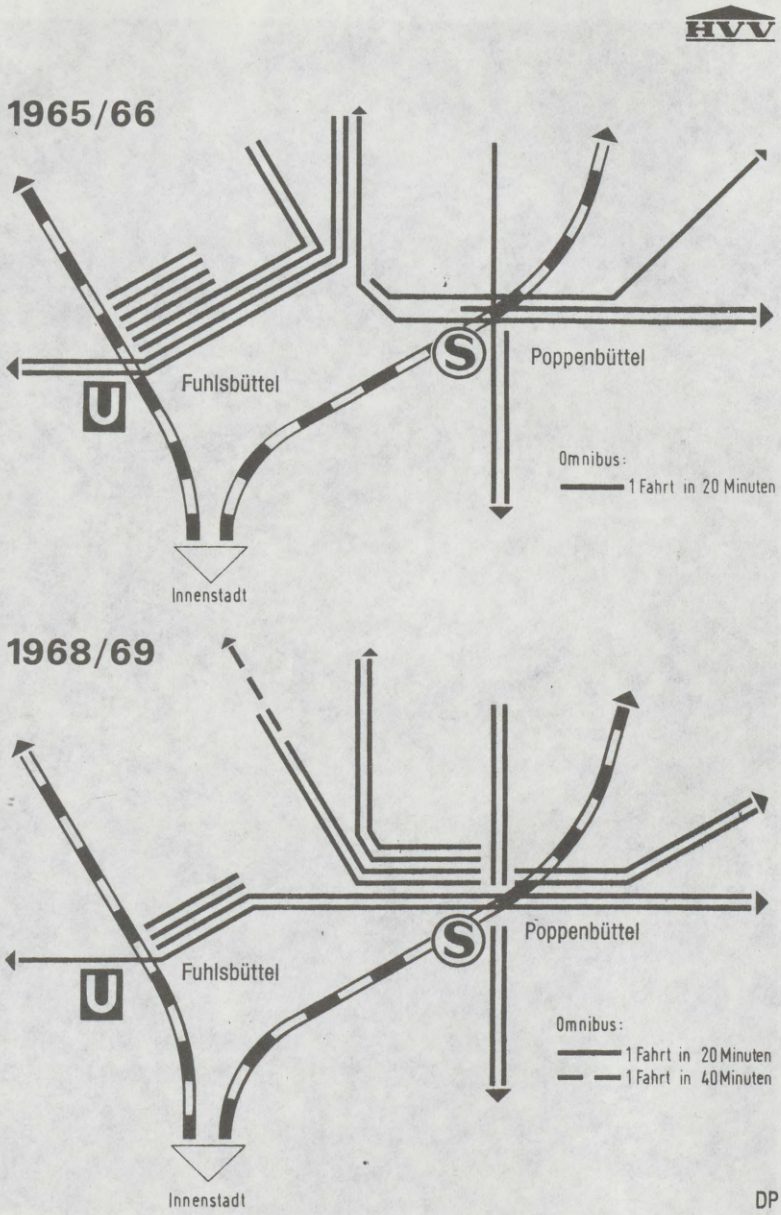

Fig. 13: Capacity, service and journey time savings as a result of the joint fare system.

THE INDUSTRIAL REORGANIZATION ACT (S. 1167)

(Ground Transportation Industries)

FRIDAY, MARCH 1, 1974

U.S. SENATE,
SUBCOMMITTEE ON ANTITRUST AND MONOPOLY
OF THE COMMITTEE ON THE JUDICIARY,
Washington, D.C.

The subcommittee met at 10 a.m., in room 2228, Dirksen Senate Office Building, Hon. Philip A. Hart (chairman of the subcommittee) presiding.

Present: Senator Philip A. Hart.

Staff present: Charles E. Bangert, assistant counsel; Patricia Bario, editorial director; Janice Williams, chief clerk; Peter N. Chumbris, minority chief counsel; and Charles E. Kern II, minority counsel.

Senator HART. The subcommittee will be in order. This morning our first witness is Prof. Stanley Boyle from the Department of Economics, Virginia Polytechnic Institute and State University.

Professor Boyle held positions earlier with both the Trade Commission and the Justice Department. Before joining the faculty of VPI he served as Chief of the Industry Analysis Division of the Trade Commission.

And the subcommittee retained his as a consultant and asked him to formulate a proposal for restructuring the automobile industry.

Professor Boyle has studied the industry since 1961 when he was a senior staff economist at the Department of Justice, Antitrust Division, and worked on its auto and transportation investigation.

Professor, we welcome you this morning. Please proceed as you would like.

STATEMENT OF STANLEY BOYLE, PROFESSOR OF ECONOMICS, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Professor BOYLE. Thank you, Senator. I welcome the opportunity to be here this morning. I apologize for the length of my statement, but I cut it and cut it and I can't say anything less, I think.

Senator HART. I have listened through most of the week to some of the complications. I understand it fully.

Professor BOYLE. I appreciate the drag on your time, additionally since I am trying my first hand this year at elective office—town council.

Senator HART. That is the toughest kind, the very toughest.

Professor BOYLE. The intense desire of economists, lawyers, Congress, and the Executive to live in a world of make-believe has made a shambles of our economic system.

Starting in 1890, with the passage of the Sherman Act, and for nearly 85 years thereafter, we have espoused an official governmental policy of the promotion and development of competition wherever possible.

Based upon our performance thus far, one might conclude that it was impossible for competition to exist anywhere, for nowhere have we made any real progress.

It is not true, of course, that competition on a much larger scale than now prevails cannot exist in most sectors of the economy, however small they might be. What is true, however, is that we lack the will, and the wit, to formulate and carry through a long-run effective antitrust program.

Over the past 85 years we have encountered and made substantial progress toward solving tremendous social and economic problems in many areas.

We have, for example, with a single stroke of the pen and a few years of vigorous enforcement made it possible for all citizens of this country to vote wherever they might live.

Similarly, we have reduced substantially job discrimination against blacks, Indians, Orientals, and between male and female.

The results have been far from perfect, but they have outsped and outshown the results obtained in the area of antitrust a hundredfold or more.

One could conclude, therefore, that we place higher values upon social goals than we do upon economic goals.

But in the long run, this type of compartmentalization perpetuates an incorrect definition of the problem and approach to its solution.

Our problem is to get economic equality as well as social equality for all members of our society. Economic equality and social equality are inexorably intertwined, for no man can be truly free if he is at the same time poor while others are rich and benefiting from his poverty.

Why have we obtained these differential results? Here I think the answers are very simple. The counterarguments to social justice are weak and are not capable of serious misconstruction; moreover, the bulk of those who lead, change, or mold the minds of individuals beyond their personal ranks have presented a more or less unified front in fighting these social evils.

The problems that we face in the area of antitrust are more complex; and because of their complexity it is often easier to misrepresent the facts than it is to present the truth.

It is easier to make countercharges and obscure the problem than it is to present in a clear manner the gains of the proposed change.

Here economists must share the blame because they have failed to make the public aware of the seriousness of the present situation.

An old proverb reminds us of a basic truth: "You can't make an omelet without breaking eggs." In the same vein you cannot redevelop a socially desirable system—that is, reconstitute a competitive

economic system—without making serious structural changes in existing markets.

These changes are absolutely necessary to reduce the size, integration and diversification of leading producers in highly concentrated markets.

What are the alternatives to making serious and substantial changes in the present structure of our industrial sector of the economy now?

The logical answer suggests that if we fail to meet this challenge, the result may be the elimination of both our competitive economic and democratic free society as we know it.

If that is not enough, present and growing public dissatisfaction with the results obtained from our economy as it is presently structured could bring about popular fragmentary and piecemeal changes which in all probability will be made without serious thought being given to the root cause of the problem.

We run substantial risk in giving greater attention to the results of the structure—so that we attack symptoms—rather than causes.

We create martyrs rather than achieve desirable economic ends. It is not difficult to imagine that a continuation of our present path will lead to serious problems in terms of a rupture of our domestic political as well as economic tranquility.

The approach we have seen adopted so often in the 20th century and in earlier times is that of countering with force disruptions in domestic activity which occur.

When revolutions occur the typical solution is to impose stringent controls in the form of a dictatorship. Whatever the source of this dictatorship, and whatever the nature of it, it seems that we can ill afford to risk ruining the only solution which can solve our problems at this point in time.

Only time and the events of the future will demonstrate whether or not we have the will and wit to make a program of industrial deconcentration possible.

The fact remains, however, that short of state ownership—socialist or dictatorial—the only viable solution to the bulk of our present economic problems is one which will involve a serious attempt to develop and invigorate competition in a growing number of crucial sectors in the economy.

The remainder of this statement is devoted to an attempt to do two things: First, to indicate briefly, but analytically, the essential characteristics of the Industrial Reorganization Act of 1973; and, second, to indicate the kind of solution that will have to be provided under the act itself.

I firmly believe, on the basis of long and searching study of the industry, that the suggested changes will not result in losses of efficiency and operation.

Rather, they will improve both the vigor and quality of competition bringing about lower prices, lower profits, higher rates of innovation, and an improvement in the general welfare of the society and its members.

The automobile industry is a prime candidate for employing this approach. If a reorganization plan which is both economically feas-

ible and desirable can be developed for this industry, then it seems perfectly clear that the program, the approach, and the general basic concept of the reorganization bill can be applied everywhere.

THE INDUSTRIAL REORGANIZATION BILL

The industrial reorganization bill represents the first serious attempt at widespread antitrust reform since the passage of the Clayton Act in 1914. It establishes an organization—the Industrial Reorganization Commission—to conduct economic investigations into industrial problem areas and provides a means, the Industrial Reorganization Court, for the implementation of the remedial changes suggested by the Commission.

In addition, the act establishes a set of standards which define the presence of monopoly power—title I. Moreover, reorganization plans are required to contain (a) an estimate of the maximum feasible number of competitors, (b) the minimum feasible degree of vertical integration, and (c) the maximum feasible degree of entry at every level.

The term "feasible" is defined as that change which can be made "without loss of substantial economies." The use of the term "substantial" seems intentional and obvious in this context in that it does not mean that reorganization plans should or would be rejected if their implementation would result in small—insubstantial—increases in costs.

In essence the act states that all other things being equal less monopoly power—more and smaller firms—is preferable to more monopoly power—fewer and larger firms.

INDICIA OF MONOPOLY POWER

In this act, Congress would, for the first time, establish clear and unambiguous standards of the presence of monopoly power which conform to the bulk of economic thought—high and persistent rates of profits, lack of "substantial" long-run price competition between two or more corporations, and high levels of concentration. In defining these terms the act states that a presumption of the possession of monopoly power shall exist:

> * * * if any four or fewer corporations account for 50 per centum—or more—of sales in any lines of commerce in any section of the country in any year out of the most recent 3 years preceding the filing of the complaint.

The date in table 1 show that this level of concentration existed for 123 out of 412 industries in 1970. Also, that 32 of the 123 high-concentration industries had total shipments of $1 billion or more.

[Table 1 may be found at the end of Professor Boyle's oral testimony as exhibit 1.]

Professor BOYLE. Finally, three out of the four industries with 1970 sales of more than $10 billion had CR4 values of 50 percent or more.

Indications of the lack of price competition are seen when (1) price levels are seen to remain constant or rise as total demand declines; (2) when a pattern of simultaneous price changes among firms persists in the long run; or (3) if firms exhibit collusive price behavior.

The act does not require proof of price conspiracy, only that no substantial price competition shall have existed between two or more corporations in an industry as might be inferred from long-run patterns of identical price levels, and uniformity in both the magnitude and timing of price changes.

The third of the explicitly delineated indicia of noncompetitive markets set forth in the act is based upon the presence of long-run monopoly profits—rate of return—by one or more leading firms. The critical level set forth in the act is a rate of return on net worth—after taxes—of 15 percent or more for a period of 5 years.

Thus far I have delineated the guideposts which must be employed. It remains to develop a reorganization program for this industry which does not violate them.

Like many others, the motor vehicle industry is long on studies but short on remedy. The notable exceptions to this are contained in two smaller studies of the industry which have suggested some possible approaches to the restoration of competition.

The first of these, by Snell, appraised the competitive effects of annual style change and concluded that cosmetic style changes are engaged in by larger firms in the industry for the primary purpose of maintaining or enhancing their market share and forestalling new entry into the industry.

The prohibition of these changes represents one possible solution. A second approach is contained in an article I wrote in 1971 which starts with the premise that wide reaching structural changes are necessary if competition is to be restored in the industry.

In particular, it suggested that the exclusive dealer arrangement is a prime anticompetitive device employed by major firms in the industry to maintain and extend their control, and to forestall new entry.

This device enables them to carry over into retail distribution the same high degree of monopoly control they have in the production of motor vehicles and parts.

Aside from these two limited purpose studies, no general proposals have been generated in the past 50 years which are aimed at restoring competition in the motor vehicle industry. This had led to greater attention being devoted to practices rather than structure.

THE INDUSTRY

The motor vehicle industry—including the production of parts and accessories—was a $50 billion industry in 1971, the largest in the country.

Census data for 1971 indicate that the total value of motor vehicles parts and accessories produced in 1971 was $10.9 billion, and that shipments of "motor vehicles" alone in 1971 total $38.2 billion; the next largest industry was petroleum refining products with a value of shipments of that industry of $23.5 billion, or 62 percent of the value of motor vehicle shipments.

The need for restructuring the major firms in the industry rests upon a number of economic conditions.

Size: The largest U.S. producers rank among the largest, most

concentrated, integrated, and diversified manufacturing firms in the American economy.

In terms of sales, the three leaders, General Motors, Ford Motor Co., and Chrysler Corp., ranked one, three and five respectively in 1972.[1]

The smallest U.S. firm in the industry, American Motors Co., ranked 101. Many point out, however, that size alone is not the same as monopoly power.

Concentration: The best measure of the level of monopoly power is the level of concentration which exists in an industry.

Census estimates show that the four largest producers of motor vehicles accounted for 91 percent of total 1970 industry shipments.[2]

The production of automobiles shows even higher levels of concentration. In 1972, Genereal Motors, Ford, and Chrysler accounted for 97 percent of U.S. productions of automobiles with American Motors accounting for the remainder.[3]

These same companies accounted for 87 percent of total new car registrations [4]—the remainder was made up of foreign imports including automobiles manufactured by foreign subsidiaries of U.S. producers.

Integration: Concentration is one measure of economic power. Available evidence indicates that there are no technological reasons for firms of the size which presently exist in the industry.

However, the leading firms in the industry are highly integrated—horizontally and vertically. The absence of large-scale production economies is apparent from the following industry figures. The data show that most of the plants are of the 150,000–200,000 annual production class. Sixty percent of them have an output of 200,000 vehicles a year or less.

A plant of that size is equal to about 2.3 percent of the 1971 industry output. Given their long experience in the industry it seems reasonable to assume that these firms operate plants which reflect the most economic size plant.

This pattern of development has resulted in firms which contain extensive horizontal integration. If actual plant sizes constitute a good scale estimate then we could conclude that General Motors, for example, is approximately 20 times larger than is necessary to achieve minimum production efficiency in automobile and truck production.

Tables 4 and 5 provide some numerical estimates of the degree of horizontal and vertical integration of the four U.S. motor vehicle manufacturers in 1971.

[The tables referred to appear as exhibit 1 at the end of Professor Boyle's testimony.]

Professor BOYLE. GM has an average-size plant equal to 4.5 percent of that company's total output. Ford's average-size plant was equal to about 6.6 percent of company production, and the figure for Chrysler's was about 16.7 percent.

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[1] "Fortune Directory of the 500 Largest Industrial Corporations," May 1973.

[2] U.S. Bureau of the Census, "Annual Survey of Manufactures: 1970 Value-of-Shipment Concentration Ratios" M70 (AS)—9, U.S. Government Printing Office, Washington, D.C. 1972, p. 36.

[3] "Automotive news Almanac, 1973."

[4] Ibid.

American Motors had only one auto production plant, consequently the figure for it was 100 percent. The General Motors data show a slight increase in horizontal integration since 1957 compared with those for Ford and Chrysler, both of which show a slight decrease.

The high level of vertical integration coupled with substantial monopoly power obviously reduces the ability of new firms to enter this industry.

The availability of data upon which to develop such estimates had been a problem previously. Rough employment data for the major U.S. automobile companies has enabled us to develop a set of integration estimates which may shed light on this question.

[See Table 5 at the end of Professor Boyle's testimony.]

Professor BOYLE. These data show that GM is the most highly integrated firm, followed in order by Ford and Chrysler. American Motors shows almost no vertical integration.

At the present time the three largest firms appear to have more people engaged in the production of components, subassemblies, and parts than in the assembly of cars and trucks.

For General Motors the ratio is 3 to 1—three people producing related parts for each person engaged in automobile production; for Ford the comparable ratio is about 2 to 1; and for Chrysler 1.5 to 1.[5]

THE REORGANIZATION PROPOSAL

Any plan which contemplates a widespread reorganization of an industry is fraught with possible pitfalls. Foremost among these is the possibility that the framer of such a proposal may fail to understand the interrelations which exist between component parts of the company.

Preoccupation with that possibility that this might occur will inevitably paralyze any meaningful efforts. The proposed reorganization bill contains mandatory data collection procedures which will enable the Industrial Reorganization Commission to collect all relevant information which should avoid this possibility.

This reorganization proposal for General Motors, Ford, and Chrysler relies upon a variety of public data sources. Those data are used to establish dividing lines for the creation of new firms of a size and variety of output which allows them to compete with other firms now in the various industries.

It is anticipated that the new companies will be financially viable concerns, and that the net effect will not result in a reduction of productive efficiency.

The plan, if implemented, would result in lower prices, greater output, and an improvement in competitive activity. The reorganization proposal outlined below is in two parts—general guidelines for dividing the major functions of the companies, and specific details which deal, wherever possible, with product-by-product and plant-by-plant recommendations.

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[5] These companies have become more diversified in recent years, also. Between 1950 and 1970, these companies increased their diversification by more than 50 percent, i.e., the number of industries in which they produce.

GENERAL GUIDELINES

Any comprehensive and viable reorganization plan for this industry must include at a minimum, the following changes.

Distribution: The basic distribution system employed is in two parts. The first involves the distribution of automobiles through a system of some 26,000 supposedly independent franchised new car dealers.

Many other systems have been used in the industry. In fact, the distributorship plan was employed by General Motors in the sale of Cadillacs up through 1965, and is currently used by Volkswagen.

The reason for the use of the distributorship system was the fact that manufacturers did not have the necessary capital to finance their own dealers.

When this problem was overcome, they abolished the system.

Some form of the exclusive franchise system now employed has existed throughout the life of the industry. It has undergone a number of changes; however, the basic premise is the same—the dealer is allowed to carry one or a combination of domestic products by the same producers, or in some cases noncompeting foreign producers.

He is not, however, the sole sales agent in any particular section or area. The exclusivity is unilateral, not bilateral.

Automobile manufacturers also employ a nationwide system of parts depots. In the case of General Motors, this means a system of 40 parts depots. These serve as regional and local parts wholesalers to warehouse distributors and jobbers.

Changes in automobile distribution can be achieved by making a simple but comprehensive move; that is, the elimination of exclusive franchised automobile dealers.

One program which has been suggested and which has greatest appeal is that presented in detail in, "Restructuring the Automobile Industry: Exclusive Dealing as an Unfair Method of Competition Under the FTC Act." [6]

The basic recommendations contained in the following statements are excerpted from that source:

These provisions might take the form of an FTC order directing each of the Big Three automobile producers to ". . . cease and desist" [from]:

1. Refusing to sell to any purchaser on the basis of the past business relationship between the manufacturer and such customer, the ability of the dealer to provide post-sale maintenance and repair service for the final customer, the amount of display space accorded by the dealer to the manufacturer's automobiles, or upon the past or present business activity of the dealer;

2. Discriminating against any prospective purchaser of its automobile in terms of the prices charged, delivery of requested models or styles, delivery of optional or accessory equipment, promptness of delivery, and extension of credit;

3. Failing to make all of its products and/or services equally available to all purchasers and prospective sellers on nondiscriminatory terms;

4. Conditioning or limiting its responsibilities under its warranty agreement in any way by reason of the use in the maintenance or repair of its automobiles, or parts having the same performance characteristics as its own but produced by manufacturers not operating under its direction or control;

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[6] Stanley E. Boyle, "Restructuring the Automobile Industry: Exclusive Dealing as an Unfair Method of Competition Under the FTC Act," 5 Antitrust Law and Economic Review 19 (1971).

5. Establishing for a period of 10 years, wholly or partly owned "company" dealers or repair facilities. Provided, however, that the Commission might at any time reopen the matter and, upon due consideration of the current state of competition in the industry, set aside this provision, extend it, or make it permanent.

[D]ealers, in turn would be required to:

1. Operate their sales facilities on a nonexclusive basis, standing ready to sell any and all models of new automobiles; and 2, make their floor space and related facilities available to all automobile manufacturers on nondiscriminatory terms.[7]

While this is far reaching, the effects of the measure would be numerous. First it would establish markets with increases in the number of effective competitors.

Second, it would open up the distribution process and allow for new firms to enter the market without the necessity of setting up an uneconomic, high-cost, duplicative distribution system.[8]

Third, the proposal should allow for greater competition in the automotive parts aftermarket which is currently dominated by the Big Three.

Financing: In recent years automobile producers have become significant forces in financing the purchases of passenger cars, buses, trucks, and household durables.

Also, they are extensively engaged in financing the establishment and operation of new car dealers. Their integration into financing gives them a considerable advantage over potential competitors who are not so integrated, since they are able to offer financing services to potential customers, in addition to supplying the automobile.

The bulk of new car sales financing comes from commercial banks and finance companies indirectly, and the retailers themselves. In 1971, banks and finance companies purchased paper totaling 52.3 percent of new automobile credit extended.[9]

The "Final Report of the National Commission on Consumer Finance" suggested that financing arranged through dealers will, except in very low-risk cases, probably cost the buyer more than would be the case if the customer were to deal directly with either a commercial bank or finance company.[10]

The adverse impact of automobile producer-owned financing activities is most significant in the production and sale of vehicles not in financing. As of December 1972, the Big Three held a total of $18.97 billion in financial paper through wholly owned subsidiaries.

In 1971 GMAC and Chrysler Credit financed a total of $36 billion of sales. Between 75 and 80 percent of the total, or some $28 billion, was used in financing wholesale purchase of their products.

Ford probably accounted for an additional $10 billion of financing.[11] The three companies handled an amount equal to about $45 billion.

The solution to the problem posed here is quite straightforward. The three finance branches should be severed entirely from the parent companies and set up as independent companies, and all motor

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[7] Ibid.

[8] At the present time we have some six or more duplicative distribution systems.

[9] National Commission on Consumer Finance, "Consumer Credit in the United States," December 1972, Chapter 7.

[10] The net effect of this approach is that company financing is available primarily to those buyers who have many alternatives already available.

[11] This figure is estimated from 1970 data.

vehicle manufacturers should be prohibited from operating finance companies for a period of at least 10 years. Thus, the product and the financing could not be offered in a single package.

A concomitant development of the trend to monopoly and the growth of the exclusive dealer system has been the establishment of a series of overlapping company parts distribution systems.

In the hands of the leaders of the industry, these depot systems, like the dealerships and financial arrangements, constitute an additional barrier to entry. The four U.S. automobile producers operated an estimated 139 such regional parts depots at year-end 1972.

[See table 8 at the end of Professor Boyle's testimony.]

Professor BOYLE. The existence of these duplicate depot systems seems inefficient from either a social or an ecoomic point of view. Multiproduct—brandname—warehouse distributors would probably yield lower costs and prices to buyers.

The solution here is twofold. First, the present warehouse system should be altered in such a way that the three large companies would be broken up. The present GM system could be divided into 33 firms, Chrysler into 12, and Ford into 11 new firms.

Also, automotive producers should be prohibited from engaging in these activities for a period of 10 years at a minimum.

SPECIFIC CHANGES IN THE INDUSTRY

Over the past 50 years—roughly from 1920 to 1972—automobile production increased more than fourfold from less than 2 million to more than 9 million passenger cars.

At the same time, concentration—CR4—increased from 0.75 to 0.97 in U.S. production. The number of producers declined from 84 in 1920 to an all-time low of four producers in 1970.

The power of the Big Three is not limited to the United States. They account for about 95 percent of vehicle output in Canada, 52 percent of production in Great Britain, 35 percent of the output of West Germany, and 15 percent of French production.[12]

A result of their growth in overseas markets has been a decline in exports.

[See tables 10 and 11 at the end of Professor Boyle's testimony.]

Professor BOYLE. In table 11, exports of passenger cars to the "Rest of the World" declined from 230,000 to 89,000 between 1948 and 1972; trucks and buses experienced a similar decline, from 201,000 in 1948 to 58,000 in 1972. Foreign output of U.S. firms increased. The overseas production of the Big Three totaled 769,000 in 1952. By 1972 the figure had increased to 5,428,800.[13] There appears to be little economic necessity for the overseas operation of these plants as an adjunct to the production of vehicles in the United States. Therefore, a separation should be effected between the domestic and foreign components of these companies as part of the reorganization plan.

The remainder of the reorganization plan is developed on a functional basis, and by company within each functional area.

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[12] OECD, "Trends of Concentration in the European Motor Car Industry" (1972), Appendix 4.

[13] See table 10.

By way of an additional comment, I testified at the Cost of Living Council hearing on granting price increases in the automobile industry back in November.

And at the time, the automobile firms argued very strongly that they should not include their profits on overseas activities because they distorted their picture at home.

I can see, given the size of their operations abroad, why they would like to exclude them.

Final assembly plants: Discussions of the motor vehicle industry inevitably center around the automobile assembly operations of the companies, on the assumption that that is the industry.

In fact, however, this is the final stage of production. The Big Three had a total of 44 vehicle assembly plants in 1971.

[See table 3 at the end of Professor Boyle's testimony.]

Professor BOYLE. American Motors operates one such plant. Most of the motor vehicle industry employment of the Big Three is engaged in the production of "related" parts and accessories—75 percent, GM; 68 percent, Ford; and 58 percent, Chrysler.

American Motors had only 8 percent of its employment engaged in the manufacture of such products. Its ability to survive in the absence of extensive vertical and horizontal integration is a tribute to AMC management.

My examination of foreign manufacturers indicates the profitability of production from a single plant, since few, if any, of the foreign companies have achieved the degree of integration achieved by U.S. producers.

European observers of the market generally assume that 250,000 cars per year is the breakeven point for an automobile producer.[14]

Many new facilities have outputs which fall short of this figure. Volvo, for example, has announced plans for the establishment of a plant in Chesapeake, Va., which will produce about 100,000 automobiles annually at full production.

In 1972 there were 44 automobile production plants. In addition, one plant owned by Chrysler produced only trucks.[15]

The average-size automobile plants had an output of almost 196,000 automobiles, or an average of about 2.27 percent total U.S. production.

Twenty of the plants also produced trucks. However, only nine plants had an output of 250,000 automobiles or more. Between 1964 and 1972 the mean size of plant varied from a low of 2.17 percent of industry output in the period 1967–70 to a high of 2.43 percent in 1966.

General Motors Corp.: According to the clearest data available, General Motors appears to have 23 plants engaged in the assembly of trucks and automobiles.

These are listed in table 12 along with their 1972 output. With the exception of the Framingham, Mass., plant, each of the plants shown in table 12 has produced around 200,000 automobiles in recent years. The annual output of that plant varied from a low of about 80,000

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[14] H. Jirgensen and H. Berg, "Mergers versus Competition?", "Intereconomics," no. 9 (1968), p. 267.

[15] Wards Automotive Yearbook," 1973.

to a high of more than 140,000 automobiles over the period 1963–72.

[Table 12 appears in exhibit 1 at the end of Professor Boyle's oral testimony.]

Professor BOYLE. Variations in company output seem to be met by simply adjusting—increasing or decreasing—the output of all plants rather than closing some of them and operating others at rates at or near capacity.

In addition, some variations in individual plant output may be a function of variations in the demand for particular makes of automobiles.

At one extreme, 9 of 23 GM plants had an output of 250,000 or more trucks or cars. At the other extreme 9 plants had outputs of less than 200,000 motor vehicles.

The bulk of these plants, 14 of 23, had outputs lower than those which most authors have suggested as constituting the output which yields minimum optimal scale economies.

The distribution of the plant sizes in 1972 and previous years suggests that the long-run average cost curve for motor vehicle plants is rather gently sloped on either side of the optimum-size plant. In most earlier years, less than 5 of the General Motors plants had output of 250,000 or more.

Throughout the period of 1957–72, the rate of return—income after taxes as a percent of stockholders' equity—fell below 15 percent in only 3 years, 1958, 1961, and 1970.[16]

At the other extreme, the rate of return averaged about 20 percent over the entire 5-year period, 1962–66. In 1972, the company earned a rate of 18.5 percent after taxes.

Ford Motor Co.: Ford is a smaller company in terms of motor vehicle production than is General Motors. According to the data contained in table 13, Ford operated 15 motor vehicle assembly plants.

Of these plants, only one-third had outputs as high as 250,000 in 1972. Four of the plants had outputs of less than 150,000 motor vehicles.

The size of Ford plants was somewhat smaller than that of General Motors. In terms of passenger cars alone, the mean size of Ford passenger car plants between 1963 and 1972 varied from a low of 120,100 to a high of 153,200.[17]

Despite its substantially smaller overall output and average plant size, Ford earned a rather high rate of return. With the exception of 1967 and 1958, respectively, on equity its average rate of return from 1957 to 1972 was about 13.3 percent.[18]

Its 14.6-percent rate of return in 1972 was not much below that of GM—18.5 percent.

Chrysler Motor Co.: Chrysler was the smallest of the Big Three in 1972 with 15.5 percent of U.S. passenger car production and 13.2 percent of U.S. truck production.

Chrysler had seven plants in the United States producing motor vehicles. The 1972 model year output of each of these is shown in table 14.[19]

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[16] General Motors Corp., Annual Reports, various issues.
[17] *Wards Automotive Yearbook*, various issues.
[18] Ford Motor Co., *Annual Reports*, various issues.
[19] *Wards Automotive Yearbook*, 1973, pp. 97 and 118.

[Tables 13 and 14 appear in exhibit 1 at the end of Professor Boyle's testimony.]

Professor BOYLE. The plants listed are somewhat more uniform in terms of output than are those of Ford and General Motors. Five of the six plants have outputs of 200,000 or more. Even the smallest plant—Newark, Del.—had an output of 189,100 in 1972.

While the other companies have had moderate fluctuations in profitability, Chrysler shows substantial variations in output over the period from 1957 to 1972. It ranged from a high of 19.1 percent in 1964 to a low of −4.9 percent in 1958.

A comparison of changes in market share and rates of profit on an annual basis for each company shows little direct relationship between these variables.

On the basis of the data presented in the larger study and the experience noted in other countries, it appears that the basic component of any reorganization plan for the U.S. motor vehicle industry must contain a provision that all plants of the Big Three should be spun off as separate companies. No reasonable or logical alternative to this proposal suggests itself in this examination of the structure of the industry.

One possible area of contention could center around the fact that only a limited number of the plants—new companies—have truck production. This does not seem to be an insurmountable problem, however, since any careful examination of the production facilities of an assembly plant indicates that the management has considerable latitude in organizing the production of that plant; that is, technical restrictions do not preclude shifting parts of the individual facilities into truck manufacturing.

The decision of whether or not to produce trucks could therefore be left to individual company executives.

MOTOR VEHICLE PARTS AND ACCESSORIES

The remaining portions of this discussion will cover domestic production of stamping, forging, and castings, and other parts—electrical, drive train, and the like. Each of these will be dealt with in a summary manner.

Stamping plants: The stamping process involves the production of fenders, doors, hoods, bodies, and other noncast structural frame members from sheet steel.

These products are shipped to vehicle assembly plants where they are joined to form the outer shell of the motor vehicle.

This process involves the pressing of sheet steel, under high pressure, between matching dies. A variety of stamping processes are involved in the production of different parts. Some pieces can be completed in a single pass.

Other, more complicated pieces require a number of stampings. These are usually pieces requiring indentations. In these cases the piece of sheet metal is passed through a series of presses—dies—each adding to the final shape of the piece, like a fender, rather than achieving the final shape with a single blow.

The latter process would likely result in a broken or weakened

piece. The lifespan of dies varies considerably. Some are low volume dies—particularly those made of plastic—while others may have an extremely high output when the dies are made of high quality steel. Discussions with company employees indicate that dies can be developed which will yield almost any predetermined lifespan.

White suggests that economies of scale in stamping are small. Available information suggests that the shape of the cost curve for stamping is such that at outputs short of 400,000, costs do not rise rapidly or substantially.[1]

Most styling changes involve changes in the external contours of the vehicle, and the dies involved in shaping and cutting the stamped parts constitute the bulk of new—as opposed to replacement—capital equipment.

It is clear that the more rapid the changes in style, the greater the cost. Mann, Snell, Menge, and others have argued that these costs constitute a substantial barrier to entry of new U.S. producers.

Snell argues, for example, that all style changes should be viewed as deleterious to consumer welfare. If it is assumed that the quality of competition in the industry will not improve then there may be some merit to this position.

However, a number of real improvements could be made in the quality of competition which would make such a prohibition unnecessary.

Some buyers seek out style differences in their purchases; if they are willing to pay these costs, there is no valid economic reason to prohibit firms which wish to compete on the basis of style from doing so. However, this may not be an acceptable form of behavior if there are a limited number of firms, each possessing considerable market power, engaged in a form of quasi-collusive behavior which encompasses primarily style and/or style variations as is now the case.

The number of stamping plants operated by Chrysler, Ford, and General Motors is shown in table 15. These companies operate a total of 39 stamping plants compared with a total of 44 vehicle assembly plants.

[Table 15 appears in exhibit 1 at the end of Professor Boyle's oral testimony.]

Professor BOYLE. Unlike the assembly plants, however, the stamping plants do not all produce identical products. Many of them tend to be specialized, particularly in General Motors, to a certain and sometimes a rather different list of products.

It would appear, however, that substantial movement from one product or set of stamped products can be effectuated without any substantial shifts in technical and production skills.

It appears that stamping facilities and assembly plants are separate and could be operated separately. Based upon available data, it appears that this segment of the industry could be populated by a group of unintegrated independent companies.

This would increase competition, speed the rate of real innovation, and lower prices. Despite the close relationship necessary between

[1] For an opposing point of view see: John S. McGee, "Economies of Size in Auto Body Manufacture," *The Journal of Law and Economics*, vol. XVI (2), October 1972, pp. 239–274.

assemblers and stylists, there is no inherent reason why these stages could not be operated independently.

An optimal reorganization plan of this segment of the industry would require that stamping and assembly plants be set up as separate companies.

Forging and casting: Cast motor vehicle parts include a wide range of products. The best known of these include most engine parts, including engine blocks, pistons, piston rods, cylinder heads, and such other products as oil lines, water jackets, crankshafts, oil pans, manifolds, and many others.

The basic process involves the pouring of molten metal—usually iron—into molds which is allowed to harden and the molds stripped off. Molds are made of green sand and are in two halves. These give the exterior shape to the parts.

Baked sand and/or resin cores are inserted into the mold to provide the shape of the hollowed-out portion of the part. After the molten iron has cooled, the mold and cores are removed and the cast part sent to the machining stage.

This final stage is necessary since sand casting provides parts which have only the rough shape and specification of the final part.

The aluminum casting process differs from that for ferrous casting in that different types of molds are used. In addition, pressure is applied in the aluminum-casting process.

How many plants—foundries and casting—are operated by the Big Three motor vehicle producers? Data taken from various sources suggest that there are about 32 foundries and casting plants operated by the Big Three. Three of these are engaged in the manufacture of aluminum casting.

In addition, Ford operates its own steel mill. This mill does not meet the company's total steel requirements however. Casting operations are quite flexible in terms of size of plant.

White reports that a new foundry Chrysler built in 1965 has an output of 110 tons of iron an hour.

During the same year, GM built a new plant with an output of 900 tons a day.[1] The Chrysler foundry "has two sets of cupolas and furnaces, plus another set for modular iron, so that the basic efficient unit in casting may be at a rate of only 55 tons per hour or less." [2]

This is roughly one-half of the capacity of the plant. The foundry and castings operation is obviously operated as an adjunct to overall production and design considerations. The demand for such products, as well as the physical and technical capabilities of each are a function of decisions made by the parent holding company.

There is no inherent technological reason, therefore, why the foundry and casting operation must be carried on as a part of integrated production processes of automobile producers.

This is true also of the machining stage of the production process. Machining involves the smoothing of rough edges and the precision shaping of molded or cast pieces. This is necessary for the mainte-

[1] White, footnote 9.
[2] Ibid., p. 23, footnote 10.

nance of the rather high tolerances required in modern internal combustion engines.

The speed of this process determines the overall speed at which the casting operation may be conducted. Casting provides the rough shape while matching gives the precise dimensions necessary.

These facts suggest that there is little or no apparent reason why these stages could not be operated separately. Moreover, it appears that each of the existing facilities is now operated more or less independently.[1]

It is recommended, therefore, that each of these plants, as well as the steel mill operated by Ford, be established as a separate company.

Other automotive parts plants: An examination of the output of other automotive part and accessory plants of the Big Three indicates that they are rather diversified.

Data available from public sources suggest that substantial problems exist in classifying these plants by primary product line.

Of necessity, therefore, one must use very broad categories.[2]

My best guess is the suggestion that the three large U.S. motor vehicle manufacturers operate a total of almost 90 plants which produce other parts and accessories used in the final assembly of motor vehicles.

The data in table 17 represent a division of these plants into three broad groups: Group I, mechanical parts—transmissions, axles, steering gear, driveshaft, and the like; group II—engines, engine parts, and electrical machinery; and group III—adhesives, heaters, air-conditions, et cetera.

[Table 17 appears in exhibit 1 at the end of Professor Boyle's oral testimony.]

Professor Boyle. One of the problems which exists in other areas is not present here. A number of other companies exist which produce these products. They are not as profitable as GM and Ford, but they are successful—they survive and operate at a profit.

They do this despite the fact that the outputs of auto parts of these unintegrated plants constitute only a small part of the industry's total output.

Nelson pointed out that in 1967 some 143 leading unintegrated producers sold almost $2.4 billion of replacement parts in 30 selected lines.

On the other hand, the value of intracompany transfers by the Big Three vehicle manufacturers totaled almost $1.1 billion.[3]

Some 80 percent of the total value of the shipments of the automotive parts industry is accounted for by the major motor vehicle manufacturers.

Any discussion of concentration levels in the remaining 20 percent of the industry must be made with the fact in mind that it is a relatively minor part of the industry, and that the firms in this sector are overshadowed in general and in specific sectors by the major vehicle manufacturers who control the bulk of the industry.

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[1] This would seem desirable if such method of operation yields no substantial diseconomies.

[2] The alternative to the use of such a catchall category eliminates the need to delineate lines of commerce which are often of very small scale.

[1] Nelson, p. 5.

A brief examination of the relative rate of return earned by 20 selected automotive parts producers[1] shows that the bulk of them earned healthy if not astronomical profit levels.

Moreover, it is important to note the 70 percent of these companies each had sales of less than $50 million in 1967.

This examination suggests that it is not necessary that these 89 plant classified in table 18 be a part of a single or series of giant corporations.

[Table 18 appears in exhibit 1 at the end of Professor Boyle's oral testimony.]

Professor BOYLE. Therefore, in the absence of another alternative, I recommend that each of these plants be set up as a separate company.

TRADENAMES AND TRADEMARKS

An aspect usually neglected is the treatment of trade names and trademarks. Chrysler Corp. has three major vehicle product groupings—Plymouth, Dodge, and Chrysler; Ford Motor Co. has three—Ford, Mercury, and Lincoln; and General Motors Corp. has five—Chevrolet, Buick, Pontiac, Oldsmobile, and Cadillac.

In total, they number 11 major trade names—12 if GMC truck is included—with a variety of lesser trade names. We can see that the number of assembly plants far exceeds the number of trade names.

If an optimal reorganization plan is to be achieved, then two alternatives face those responsible for effectuating the changes.

First, they can assign the trade names to one or more of the companies established. Second, and by far the more realistic alternative, is to eliminate all proprietary interests in the present names.

In this context, the 11 major trade names would become public property. There seems to be no way that a competitive industry can be established without making this basic but necessary change.

SUMMARY AND CONCLUSIONS

The data contained in this chapter are summarized from the more extensive and detailed presentations contained in the full report submitted to the committee. The purpose of including these data is to indicate the nature of the support presented in that report and the magnitude of the problem to which some given segment of the proposal is addressed.

In summary, the reorganization proposal presented here has a number of major parts. It includes the separation of Chrysler, Ford, and General Motors into a large number of unintegrated companies. In a general way the program requires: (*a*) the elimination of existing trade names; (*b*) dividing the financing operations from the parent companies and setting them us as separate companies; (*c*) eliminating the exclusive dealer system; (*d*) dividing foreign operations from the domestic companies; and (*e*) dividing the plants of the Big Three on both a horizontal and vertical basis.

The implementation of this plan would undoubtedly evoke cries of horror from those intimately affected—Chrysler Corp., Ford Motor Co., and General Motors Corp.

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[1] "Moody's Industrial Manual," 1968.

And, by simply suggesting it, I will be labeled as a crank, fool, and/or idiot at the least. Even the most extensive program suggested by others would have been limited to setting up 8 to 12 companies in place of the present four companies now in operation.

However, the reorganization proposals suggested by others have a parallel in the 1911 Standard Oil divestiture program for the petroleum industry.

Too cautious a program was adopted then with the net effect that little real competition was established. One result of the acceptance of that incomplete reorganization plan is seen in bills presented in Congress which have a common basic element—the complete separation of companies' economic activities at different vertical levels. No firm could be engaged in two or more of the four major segments of the industry's production process—oil production, shipment, refining, and retail distribution. See also the recent FTC suggestion breaking up the refining sector.

The reorganization proposal presented here is a conservative rather than radical approach to the problems which face the country. An intelligent reorganization program for the motor vehicle industry requires a complete examination.

There is no sense in doing a partial job. As one student of the industry noted when faced with another of the many incomplete proposals which have been presented, "Any program put into operation must insure that the General Motors problem of today is not traded for the Chevrolet problem of tomorrow." Thank you.

Senator HART. Thank you very much, Professor. I wouldn't quarrel with your prediction that labels, perhaps including those which you have used yourself, will be attached to your suggestion.

It is a far-reaching and dramatic plan—and as one who comes from Detroit, it is a plan that I can't conceive would work. But, that's no justification for failing to give it very serious thought.

I would say that to those engaged in the business directly, those who are peripherally involved, and to your fellow economists.

How many companies will your proposal create?

Professor BOYLE. In total? I suppose that we have a sector of the industry which is between $50 and $70 billion; counting parts, accessories, and the whole operation, probably somewhere in the neighborhood of a couple of hundred companies, in a vast array of different areas.

It may be that some good arguments, and I would be willing to listen to them, for combining some of these operations but thus far I haven't heard any.

Senator HART. It is your judgment that these 200-odd could operate as viable, independent units without significant loss of efficiencies?

Professor BOYLE. I honestly believe, Senator, that we would operate with an increase in efficiency; that we would end up with lower cost. Moreover, more competition would require them to pay a great deal more attention to cost savings to the implementation of new innovations, and to the demands of the buyers.

Presently, I don't see that sort of response on the parts of the firms making the decisions where to invest. I think it would result in an improvement in efficiency rather than a reduction.

Senator HART. Earlier it was stated that there is a worldwide trend in automobile manufacturing toward more concentration.

If there is a trend toward greater concentration abroad, how does this jive with your suggestion here? Do you know whether there is this trend?

Professor BOYLE. Yes; I have seen it referred to in some OECD reports on the European and Japanese industry. They also point out in these same reports that the biggest companies in those countries have learned their lessons from Detroit quite well—that they are going into their countries and becoming dominant firms.

They are integrated, and as a consequence we have had a number of mergers between these firms as a way of fighting back.

They feel that they have difficulty unless they are able to achieve a comparable market power to compete with the U.S. firms in their own markets and so they have become like them.

It is in one of these cases where rather than adopt the best, we've adopted the worst.

Senator HART. You advised us in your prepared testimony that there were no technological reasons for automobile firms the size that we now have.

Could you expand on the basis for that?

Professor BOYLE. Well, I think that that position is well accepted, at least among the group of economists who have looked at the problems associated with vertical integration.

They agree that the rate of innovation is held up—is retarded—rather than speeded by extensive vertical integration, particularly when that vertical integration is associated with high levels of monopoly power.

A firm makes an innovative decision on the basis of looking at the future value of its present capital and then discounting that in comparison with the cost of the new development.

Whether or not to introduce an innovation is essentially a financial question in many respects. In a competitive industry, competitors innovate because they have to.

If they don't, somebody else is going to beat them to it.

And so I think that is one of the real advantages, one of the things we've lost.

We've had problems, and you're more aware of them than I am, in the area of trying new innovations—pollution control devices.

I think that the slowdown and the limited scope of activity is a result of the fact that we've had highly integrated, highly concentrated firms.

Senator HART. I have expressed the feeling in these last few years, in discussions and concern about continuing the internal combustion engine as the powerplant that if we had had 15 or 20 Pierce Arrows still around here, somebody would have taken a shot at an innovative powerplant.

Professor BOYLE. I think that is true. I think it is also true that if we change the distribution system along the lines that I suggest, where you have 26,000 independent distributors, that somebody could come into the business and would have to devote $1 billion to establishing a group of distributors.

Someone could come in with an automobile which was a "safe," "pollution-free" automobile and if he could sell it to 250,000 or 300,000 individuals, he could make a go of it.

Or perhaps the number is slightly larger. But he would have a chance. And I think we would give consumers some real alternatives again.

Senator HART. Mr. Bangert?

Mr. BANGERT. No questions.

Senator HART. Mr. Chumbris?

Mr. CHUMBRIS. Thank you, Mr. Chairman.

Professor Boyle, as you noted in your statement, Mr. Snell had indicated that divorcement of locomotives and buses, et cetera, from the automobile companies should be put into effect.

Professor BOYLE. Yes.

Mr. CHMBRIS. Professor White suggestioned we should break up General Motors into five different companies: a parent company and four manufacturing companies, each independent of the other.

And he listed the type of cars that would go into the four separate companies. Ford would have three companies— a parent company plus two manufacturing companies and he listed the cars that would go into those two companies.

Chrysler would have the same thing. American Motors would remain the same. And you state in your paper you think they don't go quite far enough and, therefore, you would make your own suggestion of how the automobile corporations should be broken up?

Professor BOYLE. Yes, sir.

Mr. CHUMBRIS. Now, I guess, just like anything else, that is proposed before Congress, it will take quite a bit of study to see whether the facts will bear out whether the suggestion is good or bad. I think you noted that in 1915 when the Clayton Act was passed it was the last time that a proposal to break up corporations was suggested by Congress.

Professor Adams suggested breaking up corporations back in 1949 by way of the Public Utilities Act of 1935 as a means of divorcing certain facets of the corporations that he had in mind.

Are you familiar with Walter Adams' suggestions?

Professor BOYLE. I don't think I'm familiar with that one.

Mr. CHUMBRIS. Well, Congressman Celler introduced that suggestion in the form of a bill. So there have been suggestions at least since 1949, and before our Antitrust Subcommittee in the last 17 years we've had several suggestions toward doing something about concentrated industries—whether it be automobiles, energy, IBM, or A.T. & T.

We had hearings on A.T. & T. last year; we're still continuing hearings on them. So, those subject matters have been before our Congress constantly and more repeatedly in the last 2 years, especially with the bills that you referred to.

There are a few other suggestions that would even go further by divorcing the oil industry into four categories—producing, refining, transporting, and marketing.

So, the idea is not a novel idea.

Professor BOYLE. No; I was merely suggesting that I thought that the reorganization bill represented a really serious effort to

meet the most widespread economic change that have come about since the passage of the Clayton Act.

I'm familiar with the long history of this committee and I think it's one of the committees that Congress can be justly proud of because it has been extremely useful in turning up problem areas and in trying to counter them wherever possible.

M feelings are obvious. I believe that we haven't accomlished really as much as we should have or could have accomplished—and I think "should have."

Mr. CHUMBRIS. There is a situation in the automobile industry which probably is different from most other industries that we have investigated.

For example, in steel, there are 1,000 steel corporations, large and small. In steel we don't have the Big Three having 90 percent of the market.

Professor BOYLE. That is true.

Mr. CHUMBRIS. It was much, much lower. As a matter of fact, U.S. Steel, which is the largest, has been losing its percentage of the market over the years rather than increasing.

I gave some statistics the other day to show what happens in the automobile industry and I think maybe this is more significant than when I first gave them.

This is a chart taken from Senator O'Mahoney's TNEC hearings back in 1938 through 1941 and in it, on page 244, it states—table 2 is based on the new car registration, registration data broken down by name of car—first became available in 1925.

In 1925, the chart shows that Ford had 42.8 percent of the market; General Motors, 30; and Chrysler, 9.1. In 1930, Ford dropped to 40.3; General Motors increased to 34.5; Chrysler dropped to 8.5.

Then in 1935; which was quite a change, Chrysler moved up to 22.9; General Motors moved up to 38.4; and Ford Motor dropped to 30.2 percent.

1938 was the last figure—and I think it was done purposely for their hearings since it was a 1938 study—Ford remained at 30.5; General Motors went to 44.8; and Chrysler, 25 percent, making a total of 90.3 percent of the domestic market.

According to the statement of Dr. White, earlier this week, General Motors now has dropped from its 50-point-plus percentage of the market to 44 percent, which gets it back into the status of 1938.

And Ford at that time had 30.5; and Chrysler, 25; which is different from Ford's and Chrysler's share of the market of today. And I think that Dr. White in his book showed where the change came about, starting with the year 1946, because Chrysler was above Ford at that time by 4 percentage points—26 to 22 percent.

And Ford had moved into second place rather significantly and Chrysler had gone down into third place, which may mean that we may be back into the 1938 era because the percentage for General Motors is exactly the same today as it was in 1938.

So the trend may be going away from General Motors getting an increase of the market and showing that there is that competition, and it also shows that this industry, for whatever reasons that will be brought out in the course of these hearings, will show that it is a type of industry that makes it difficult for new entrants,

primarily because of the tremendous cost of getting into the industry.

I think the testimony shows how much money is needed for a corporation to buy its way into the auto industry.

I think the figure is $500 million, if I am not mistaken, as the minimum that it would require a new corporation to come into this particular industry.

We will have testimony from others as we go along. This week it has been primarily people who feel that the bill is a good bill. When we had our hearings last year, during the summer, Dr. Paul McCracken, Dr. Thomas Moore, Dean Smith from Loyola College in New Orleans, Dr. Fred Weston, and Dr. Schwartzman from New York, all felt that the reorganization bill will be bad for the country.

Economically—no matter how you look at it—it would be bad. Dr. Mueller and Dr. Lee Preston thought it would be good.

Dr. Mueller had reservations about the three categories, as what constitutes concentration. Dr. Turner was sort of half and half. He didn't give it full okay, but he did okay it as to certain aspects of the jurisdiction amount requirement of a bill.

Thus far the majority of the economists that we have brought before this subcommittee on the general subject matter have felt the reorganization or the deconcentration bill, if you would prefer to call it, would not be in the best interest of the country.

Professor BOYLE. There is a division of feeling on the part of some people who do not like the bill. Those people generally have not liked antitrust in any form either, except insofar as it appears to conspiracies.

Mr. Turner's position, I suppose, is a carryover from the fact that he worked for the Government for a period of time in executive capacity. That rubs off on us.

I spent 5 years working for the Department of Justice and the Federal Trade Commission and it took me at least 4 years before I could make a direct statement again.

I think, however, that most of the people who have come and talked about this particular industry have suggested some kind of major change.

And I think that's important. Some of their proposals are less far-reaching than others; none are perhaps as far-reaching as mine.

But the fact remains that I think that all of them feel that this is an undesirable situation. Now, you point out that the condition may be similar to what it was in 1938.

I refer you to the Federal Trade Commission's 1939 study of the motor vehicle industry, which found a very uncompetitive industry.

Or you go back further to Epstein's study and Seltzer's study back in the 1927 and 1928 period, both of which point out that in the 1920's, thoughtful economists were concerned terribly about the state of competition in the automobile industry. They did not view it as a desirable situation. And we look at what's happened in recent years—I think it's as useful as much as anything else to look at what's happened to the number of firms in the industry.

Go back to 1946 and we have roughly, I think, 10 firms left in the industry in 1946. Around 85 percent of the output, however, was associated with the top three.

Now we have four, one of them comprising the old Nash and Hudson combination, and we have a very high level of concentration—96 or 97 percent of production—it varies between 95 and 97 depending on the year, in the hands of the three largest.

I cannot imagine by any circumstances that this is a healthy, competitive situation. The fact that there are 4 now rather than 10 just 25 years ago seems to me to be a very, very damning and very, very thought-provoking comparison, as well as simply looking at concentration.

Mr. CHUMBRIS. When we had our hearings on the general subject matter of concentration of economic power from 1964 until the last hearing we held on that subject in January of 1972, many of the economists coming in to testify on the question of the increasing concentration, felt that there was concentration.

They couldn't come to a decision whether concentration was increasing or decreasing as we went along. They would have to decide whether you're talking about overall concentration or you're talking about concentrations in specific industries.

But when we got to the bill itself, I just reviewed to you what we had among some of the top experts in the country.

Now, this bill would be a bad bill for Congress to enact into law. We were talking about percentages. I should also note that, as I understand it, although General Motors has 44 percent of the domestic market it only has 37 percent of the entire world market.

In other words, when you consider that imports used to be 5 percent, now 15.5 percent of cars in the United States are imported automobiles.

If that should continue, then I believe that the Big Three would have less of the percentage of the cars that we have in this country.

Professor BOYLE. If imports continue to rise it's well possible that they might find that more buyers are finding alternatives.

And, in some cases, the alternatives are imported automobiles produced by U.S. companies. The foreign operations, however, of thse companies have grown at a tremendous rate.

They now constitute roughly about a third of their total production. In 1952 it was a very, very small figure, something like 769,000 in 1952 compared to 5.4 million in 1972.

There are changes which are occurring in the relative shares of the three largest. But overall, their control remains relatively strong.

I remember vividly the hearings of 1964 to 1966, because I used to regularly come up here with Williard Mueller, when he was Director of the Bureau and I was Chief of the Division of Industry Analysis. An those occasions we looked at overall trends in concentration and noted, I think, almost without fail that they were rising.

Mr. CHUMBRIS. Well, some of these experts have testified previously that when one introduces a bill which would urge an overwhelming change in the law then you have got to prove by a great preponderance of the evidence that it would be for the best interest of the country.

And thus far that record has not been made. Thank you, Mr. Chairman.

Senator HART. Did you care to comment?

Professor BOYLE. Well, I disagree with Mr. Chumbris. I've looked at a number of studies both in the United States and foreign studies——

Mr. CHUMBRIS. I am talking about the record of this hearing on Senator Hart's reorganization bill, S. 1167.

Professor BOYLE. The record of this hearing? I think that the material submitted here—it was included in my larger report—Mr. Snell's report, Mr. White's report—all suggest that substantial excess size exists among American manufacturing firms in the motor vehicle industry.

And I think that record is made quite reasonably well, I hope. I may be proven wrong, but I hope not.

Mr. CHUMBRIS. But it still doesn't meet that great preponderance of evidence to convince Congress that it should change the system that we are operating under today.

That is what you have to do. You have to convince the 535 members of Congress that this is the thing to do. That is what you have to do.

Professor BOYLE. That's true. It doesn't do you any good if you don't have the votes to pass it. There is one thing that I would like to say, which really is not perhaps directly at your comment, Mr. Chumbris.

Perhaps I could address it sort of to the committee more directly. And that is that I find a considerable amount of evidence and weight among the people that I talk to.

Now, I lived in Washington for a long time. I lived here twice and I lived in St. Louis and a lot of other large cities.

In the last 7 years, I've been living down in western Virginia, which is a rural area made up of people who are basically honest and have a very conservative approach to role of Government. The feeling exists in western Virginia, western North Carolina, and West Virginia, and among people in my own home State out in Washington, I find that perhaps they are convinced that change is needed. They feel this more so than many of the Members of the Congress do.

I've had a number of people say to me repeatedly, particularly in response to conditions in the automobile industry and the petroleum industry: "What we really ought to do is to take over the industries, run them by the Government"—which is not the position I necessarily espouse—"and then sell them off on the basis of our experience in operating them to individual companies."

Now, this is not my attitude and I'm quite frankly surprised to hear it from some of the people that I do. I gave a speech to the Junior Chamber of Commerce a couple of weeks ago. The group seemed to feel that something dramatic and substantial had to be done and they feel that Congress is being conned, really.

And it's amazing. So I think there is great amount of sentiment out there in rural America for some rather substantial changes, Mr. Chumbris.

Senator HART. Mr. Bangert?

Mr. BANGERT. Professor Boyle, in your prepared statement, you talk about certain minimum changes that must be made and your first area is the distribution system.

Later, you say, "The effects of the measure would be numerous"; that is, changing the distribution system.

You indicate that it would open up the distribution process and allow for new firms to enter the market without the necessity of setting up an economic, high-cost duplicative distribution systems.

Now, I guess you are not trying to say there that revamping the distribution system in and of itself is going to have any real comparative effect on the automobile industry; is that right?

Professor BOYLE. I'm saying that I think that this change needs to be made in this area; but by itself, it will not solve the problem. That's correct.

Mr. BANGERT. When you are talking about stamping plants in your statement, you indicate that

> White suggested that economies of scale in stamping were small.
> Available information suggests the shape of the cost curve for stamping is such that outputs short of 400,000 costs do not rise rapidly or substantially.

Now, as I understand Mr. Snell's study, he would indicate that economies of body stamping are much less than 400,000, maybe even as low as 100,000 to 125,000.

Do you have any feeling about that range from 100,000 to 400,000?

Professor BOYLE. I've seen a number of studies, two by Frenchmen, one by a group of Englishmen. All three of them suggest much smaller figures than the White figure.

I took perhaps the most conservative figure, which still didn't overwhelm me with size.

Mr. BANGERT. You agree then?

Professor BOYLE. I think that the increased cost from smaller stamping operations, perhaps down to at least half that size, probably doesn't succeed in raising it.

The level of stamping cost could go up by 5 percent. These costs constitute a relatively large share of total costs—maybe 8 or 9 percent. On this basis a difference of 5 percent in stamping costs makes a difference of less than one-half of 1 percent in the overall cost for the automobile. The bill talks of "substantial" diseconomies.

One-half of 1 percent is a minimal change, certainly not a substantial one. You can give more study to the question of stamping, but there have been quite a few studies and they're pretty good.

Mr. BANGERT. Well, I guess that gets into the next area and that is whether or not the organization of the industry would result in higher product cost.

Now, you have had experience in this field to a considerable extent. Do you have any ideas?

Professor BOYLE. My feeling, Mr. Bangert, is that the proposal I have set forth will reduce overall costs. Now, there are some relocation costs perhaps that we would have to take into account, but I think in terms of the long-run improvements in innovation, and in terms of a more profit-oriented activity or activities on the part of smaller firms, combined with the fact that there is no clear evidence of substantial economies of scale, the change will improve the operation of industry.

They are simply duplicating existing facilities in various places. So, there are few, if any, cost savings from the duplication of an existing plant somewhere else.

Mr. BANGERT. As far as profitability is concerned, you don't feel that reorganization would harm the profit picture, except if there are monopoly profits now being made?

Professor BOYLE. That's right. It's perfectly obvious that I believe that the level of profits being made generally by the major firms in the industry is above a level that can be justified on the basis of competitive economic conditions.

I think that the profits for these companies will come down and I think that the profits off all companies in the industry will come somewhat closer to approaching a competitive norm.

And I think that's quite desirable because for every dollar of monopoly profit that consumers lose, they lose a dollar of spending power.

I don't necessary believe that just because the companies make that monopoly profit that it's going to be reflected immediately in the general welfare.

Mr. BANGERT. What is the range of profits that we are talking about, considering the general all-manufacturing profits and considing automobile manufacturing profits.

Professor BOYLE. On the average automobile manufacturer, particularly the profits by General Motors and by Ford in the very good years and Chrysler except in their worst years, profits have been substantially above the average.

I think General Motors have averaged over the period something like 15 to 20 percent after taxes on equity. You find very few industries or very few large firms where that's generally the case.

They are seen in such other consumer goods like cosmetics and breakfast foods and things of this nature, where, again, there is a high degree of product differentiation and a high degree of company control.

Mr. BANGERT. In all manufacturing, am I correct in saying that profits are in the 10 or 11 percent range?

Professor BOYLE. Somewhere in that range, yes.

Mr. BANGERT. Thank you, Mr. Chairman.

Senator HART. Mr. Chumbris?

Mr. CHUMBRIS. On this point of profits. When we talk about monopoly profits we are talking about a profit because you are a monopoly.

You can charge anything you "doggone" please, right?

Professor BOYLE. Well, you can charge anything you please if you're willing to take the burden for it. Nobody ever said that you can charge $400,000 for an automobile and expect to sell it.

Mr. CHUMBRIS. I'm talking about being in a realistic manner.

Professor BOYLE. That's right.

Mr. CHUMBRIS. Now, Professor White, just a few days ago, testified that although the automobile industry is very profitable industry, still the automobile people did not charge as much as they could have charged if they followed the price index.

The price index rose from 1946 until today by 78 percent; the automobile industry's price index rose only 34 percent or just one-half.

So if this monopoly power that you are talking about would have reached for these automobile manufacturers who administer the pricing as other industries do, they could have gone along with the other

price index and charged the full 78 percent instead of 34 percent and made that much more profit.

Now, when you start talking about profit, for the past 17 years we have had hundreds of corporations and industries in the United States before us and we know what their profits are.

There are companies which are not making the 16.5 percent that the atomobile industry is, according to statistics of Dr. White, but we've had some come in with 45 and 50 percent profit.

Professor BOYLE. That's true. There are a handful of companies that really do fantastically well, for a variety of reasons.

Mr. CHUMBRIS. As a matter of fact, Mr. Hardesty testified before the Haskell committee about a month ago on the oil situation, when they were talking about the so-called high profits in the oil industry because they went up 45 percent.

Well, the reason why they went up 45 percent was because for the previous 2 years, instead of them getting their 12 percent, they were only getting 8 percent.

When you take 45 percent of 8 percent of the previous year you're back to 12 percent; where they should have been in the first place. So Mr. Hardesty read into the record what Columbia Broadcasting Co. was making and what the Washington Post and New York Times were making, and they were making much higher profits than this so-called profit that the oil companies were making in 1973 as brought out during the course of that particular hearing before the Haskell committee.

So I think the trouble I have always found is that we never try to take everything in perspective. We have got know in relation to what when we start talking about either the percentage of profit increase or what profit you are making or what price you are getting for your product.

And if Dr. White's statement is true—and it is right here in his paper—that the automobile industry's price increase was 34 percent more from 1946 until today, whereas the price index went up 78 percent, than the auto industry just asked a price that was 50 percent less than what all of the other prices that are on the price index of goods that people buy day in and day out.

Professor BOYLE. Well, there are two problems to that. One is an estimate of the elasticity of demand, to be a technical economist, but the elasticity of demand for product suggests that you'e going to adopt a range of prices which will maximize your profits.

Secondly, if you look at the automotive industry set of prices, as I did in the chapter on prices and profits, you find that what it would actually cost you to buy a car, the change in that is substantially different from the BLS index.

Now, I understand why the BLS index is the way it is, because it's looking at buying a comparable set of wheels—in one case versus another.

But, unfortunately, I think that's terribly unrealistic in the automobile industry because there's isn't any comparable set of wheels to buy.

You have to take what's in the market because you don't have any other choice. And so you have to talk about what real prices are.

That seems to me to be an additional factor that you have to take

into account. I'm not denying, however, they don't very carefully take into account the elasticity of demand and set their prices in a way in which they hope they can maximize their profits.

I think that their market potential and their control enables them to do this very nicely and they would do it even better if we could manage to keep out imports and reduce new entry into the industry.

Mr. CHUMBRIS. We had some hearings about 3 or 4 years ago dealing with Defense purchases as to why we couldn't whittle down that $80-some billion in Defense spending.

I think the chairman will remember that we found out that in the bids that were made by these different companies that the automobile manufacturers were getting less percentage profit than the other successful bidders were.

We asked why and it may have been that the industry is just sensitive—that since they were in this business of dealing with the Government they didn't want to be accused of trying to make the higher profits of some of the other companies who put in their bids, and the auto companies were ranging 3 or 4 percent below, if I remember that correctly.

Is that the way you understood it, Mr. Chairman?

Senator HART. I would hesitate to give you the figure, but there was testimony on that.

Professor BOYLE. I can understand their position, given the size of Government purchases.

Senator HART. Professor, thank you very much. That was a helpful testimony.

Professor BOYLE. Thank you.

[The following was received for the record. Testimony resumes on p. 2138.]

MATERIAL RELATING TO THE TESTIMONY OF PROFESSOR BOYLE

Exhibit 1.—Tables Referred to During Professor Boyle's Oral Testimony

INDUSTRY CONCENTRACION BY LEVEL OF CONCENTRATION AND SALES SIZE CLASS: 1970

TABLE 1A.—DISTRIBUTION OF 412 INDUSTRIES BY LEVEL OF CONCENTRATION 1970

Total	1 to 49 percent	50 to 75 percent	More than 75 percent
412	289	91	32

TABLE 1B.—DISTRIBUTION OF HIGH CONCENTRATION INDUSTRIES, BY VALUE OF SHIPMENTS

Value of shipments (billions)	Level of concentration		
	50 to 74 percent	75 percent or more	Total
$20.0 plus		1	1
$10.0 to $19.9	2		2
$5.0 to $9.9	1		1
$3.0 to $4.9	3	2	5
$1.0 to $2.9	21	5	26
$.5 to $.99	14	23	37
Less than $.5	47	4	51
Total	88	35	123

Source: U.S. Bureau of the Census, Annual Survey of Manufactures: 1970, "Value of Shipment Concentration Ratios" (M70(as)-9) 1972. Table 4. Usable data shown for 400 industries in part B.

TABLE 2.—*Industry concentration: 1946–72*

Year:	CR_4 value
1946	84.6
1948	80.4
1950	87.0
1955	95.6
1960	91.5
1965	96.3
1970	95.8
1972	96.8

TABLE 3.—*Distribution of big 3 U.S. vehicle assembly plants by plant size, 1971*[1]

Size class (output of autos and trucks):	3 company total
Under 100,000	5
100 to 150,000	6
150 to 200,000	15
200 to 250,000	8
250 to 300,000	3
Over 300,000	7
Total	44

[1] Chrysler operated 1 plant in Warren, Mich., which assembled only trucks. 21 of the 43 plants listed above which assemble automobiles also assemble trucks.

TABLE 4.—HORIZONTAL INTEGRATION[1] IN THE AUTOMOBILE INDUSTRY 1971, 1967, 1961, AND 1957

Company	1971	1967	1961	1957
American Motors Corp	100.0	100 0	100.0	100.0
Chrysler Corp	16.7	14.3	(2)	(2)
Ford Motor Co	6.6	6.3	6.3	5.6
Generals Motors Corp	4.5	4.6	5.0	5.3

[1] Output of mean plant size of each company as percent of company production.
[2] Data of earlier years not comparable.

Source: Computed from "Wards Automotive Reports," various issues.

TABLE 5.—*Estimates of employment in automobile and truck assembly as percent of total employment engaged in production of motor vehicles, parts and accessories*

Company:	Percent[1]
American Motors	92
Chrysler Motors	42
Ford Motor Co	32
General Motors Corp	25

[1] The higher the percentage, the lower the degree of vertical integration.

Source: Estimates developed from confidential data.

TABLE 6.—NEW PASSENGER CAR FRANCHISES, BY COMPANY, 1973

Company	Net	Percent dealers exclusive[1]
American Motors	1,952	100.0
Chrysler Corp	5,418	36.2
Ford Motor Co	6,676	58.6
General Motors	12,050	59.7
Total	26,096	
Percent Intercorporate[2]		.025

[1] Sells exclusively the output of single make, i.e., Ford, Dodge, Chevrolet, etc.
[2] Number of dealers carrying brands of 2 or more different U.S. producers.

Source: "Automotive News Almanac," 1973.

TABLE 7.—*Net financial receivables held by company, December 31, 1972*

Chrysler Financial Corp	$1.97
Ford Motor Credit Co	5.23
General Motors Acceptance Corp	11.77
3-company total	18.97

Source: Annual reports and "Moody's Bank and Finance Manual."

TABLE 8.—*Parts depots of U.S. motor vehicle manufacturers, 1972*

American Motors Co	27
Chrysler Corp	24
Ford Motor Co	22
General Motors Corp	66
Total	139

Source: Motor Vehicle Manufacturers Association, "Plants of U.S. Motor Vehicle Manufacturers in the United States and Canada, February 1973.

TABLE 9.—*Number of passenger car producers, selected years—1902–70*

Year:	*Number of producers* [1]
1902 [2]	12
1910 [2]	52
1920 [2]	84
1930 [3]	16
1940 [3]	10
1950 [4]	10
1960 [4]	6
1970 [5]	5

[1] Between 1902 and 1926, there were 169 new entrants into the industry and a total of 137 exits from it. This represented a net addition of 32 new firms.
[2] L. J. Seltzer, "A Financial History of the American Automobile Industry" Houghton Mifflin Co. (1928), p. 65.
[3] Simon Whitney, "Antitrust Policies," vol. I 20th Century Fund (1958), p. 468.
[4] L. H. White, "The Automobile Industry Since 1945," Harvard University Press (1971), pp. 291 and 294.
[5] Automotive Industries, Annual Statistical Issue," 1972.

TABLE 10.—FOREIGN PRODUCTION OF PASSENGER CARS AND TRUCKS BIG 3, 1952–72

[Thousands of cars]

Year	Chrysler	Percent of comparable production	Ford	Percent of comparable production	General Motors	Percent of comparable production
1952	72.4	6.4	302.5	19.6	394.8	15.0
1957	81.4	5.9	520.7	19.0	648.2	16.7
1962	75.8	8.4	971.9	29.7	1,015.8	19.4
1967	733.0	32.6	1,295.1	37.0	1,472.7	23.4
1972	1,349.0	43.9	2,029.8	35.8	2,050.0	26.3

Source: Company annual reports, various issues.

TABLE 11.—MOTOR VEHICLE EXPORTS FROM U.S. PLANTS 1948, 1960, AND 1972

[Thousands of cars]

Year	Canada	Rest of world	Percent of U.S. production	Canada	Rest of world	Percent of U.S. production
1948	3	230	6.0	2	201	14.8
1960	27	145	2.2	5	211	18.0
1972	382	89	5.3	94	58	5.2

TABLE 12.—MOTOR VEHICKLE PRODUCTION FOR GENERAL MOTORS CORP., BY PLANT, 1972

[Thousands]

Plant location	Production		Plant location	Production	
	Auto	Truck		Auto	Truck
South Gate, Calif	166.9	0	Lansing (Olds)	387.2	0
Fremont, Calif	87.5	108.3	Pontiac (Pontiac)	261.8	123.6
Van Nuys, Calif	171.8	12.6	Flint, Mich	0	212.7
Wilmington, Del	205.6	0	Willow Run, Mich	328.2	0
Doraville, Ga	208.3	0	Leeds, Mo. (K.C.)	139.5	30.4
Lakewood, Ga	119.2	89.0	St. Louis, Mo	222.3	119.3
Fairfax, Kans	201.5	0	Linden, N.J	191.2	0
Baltimore, Md	190.3	109.8	Tarrytown, N.Y	186.7	0
Framingham, Mass	123.3	0	Lordstown, Ohio	408.7	81.5
Detroit (Cadillac) Mich	231.6	0	Norwood, Ohio	101.5	0
Flint (Buick), Mich	292.3	0	Arlington, Tex	143.3	0
			Janesville, Wis	205.5	84.9

Source: "Wards Automotive Yearbook," pp. 97 and 118.

TABLE 13.—MOTOR VEHICLE PRODUCTION FOR FORD MOTOR CO., BY PLANT, 1972

[Thousands]

Plant location	Production		Plant location	Production	
	Auto	Truck		Auto	Truck
Los Angeles, Calif	96.3	0	Twin Cities	77.9	23.0
San Jose, Calif	115.4	109.6	Kansas City, Mo	190.2	115.2
Atlantic, Ga	211.6	42.0	St. Louis, Mo	150.5	0
Chicago, Ill	173.9	0	Mahwah, N.J	188.8	63.1
Louisville, Ky	77.5	108.7	Metuchen, N.J	232.5	0
Dearborn, Mich	208.0	0	Lorain, Ohio	316.6	117.4
Wayne, Mich	163.5	175.6	Norfolk, Va	38.8	41.4
Wixom, Mich	130.1	0			

Source: "Wards Automotive Yearbook," pp. 97 and 118.

TABLE 14.—MOTOR VEHICLE PRODUCTION FOR CHRYSLER CORP., BY PLANT, 1972

[Thousands]

Plant location	Production	
	Auto [1]	Truck
Newark, Del	189.1	0
Belvidere, Ill	241.2	0
Detroit [2]	333.1	0
Hamtramck	432.8	0
Warren	13.6	216.3
St. Louis	145.7	109.4

[1] Excludes exports of 9.913 produced in Michigan.
[2] Output of Jefferson Assembly and Lynch Road Assembly.

Source: "Wards 1973 Automotive Yearbook," pp. 97 and 118.

TABLE 15.—*Number of stamping plants, by company, 1973*

Firm:	*Number* [1]
Chrysler	7
Ford	9
General Motors	23
Total	39

[1] The location and identity of each of these plants is shown in the appendix of the report.

TABLE 16.—*Foundry and casting plants operated by big 3*

Company:	Number
Chrysler	6
Ford	[1] [2] 16
General Motors	[3] 10
Total	[4] 32

[1] Plant at Sheffield, Ala., makes primarily cast aluminum products.
[2] Ford operates steel plant at Detroit, Mich., as well.
[3] Cast aluminum parts are made at Massena, N.Y., plant and at Beford, Ind., plants.
[4] 3 of 32 plants produce cast aluminum parts.

TABLE 17.—MOTOR VEHICLE PARTS AND ACCESSORY PLANTS OF BIG 3: 1973

Company	Product group			
	I	II	III	Total
Chrysler	5	7	15	27
Ford	5	9	6	20
General Motors	15	16	11	42
Total	25	32	32	89

Source: Company annual reports and Association of Motor Vehicle Manufacturers.

TABLE 18.—*Rate of return for selected manufacturers of automotive parts, 1967*

Rate of return:	Number of companies
10.0 percent or more	2
7.5 percent to 9.9 percent	1
5.0 percent to 7.4 percent	10
2.5 percent to 4.9 percent	4
2.4 percent or less	3

Source: "Moody's Industrial Manual," 1968.

Senator HART. The committee now welcomes the chairman of the board of Weeden & Co., a securities house in New York, Mr. Donald E. Weeden.

As you are preparing I will explain what we have asked you to try and help us with. Whenever there is discussion about reorganization of any industry, the question invariably arises, what effect will it have on shareholders and, specifically, what, for example, would be the result if the Big Three auto makers were reorganized into smaller, at least in theory and I would hope in fact, more competitive units.

What if General Motors was compelled to divest itself of the bus and rail operations? It is to that kind of thinking that we would welcome your counsel.

STATEMENT OF DONALD E. WEEDEN, CHAIRMAN OF THE BOARD, WEEDEN & CO., NEW YORK, N.Y.

Mr. WEEDEN. Thank you, Senator.

I must start out by saying I am quite flattered that so many people are going to stick around and listen to what I have to say.

When I came over at 10 a.m., the radio in the taxicab said that

there was going to be an announcement coming from Judge Sirica's office about 11 a.m. I brought my own transistor radio here to listen to it while I am giving testimony because that somehow seems to be of a higher interest to most people at this time.

Senator HART. Well, I confess that, though I didn't have a transistor, someone just handed me a sort of batting order of Judge Sirica; seven indictments and 35 coconspirators.

You can read about that in the paper. I am not so sure we will read what you are telling us. But it, too, affects the quality of life.

Mr. WEEDEN. Well, maybe there is a parallel here. Let's see. My name is Donald E. Weeden. I live in New York City, and am chairman of the board of Weeden & Co., who are dealers in stocks and bonds.

I should state at the beginning that any opinions I express reflect my own ideas and experience and not necessarily those of my firm.

I am pleased to accept your invitation to appear before the Subcommittee on Antitrust and Monopoly of the Committee on the Judiciary of the U.S. Senate as it takes testimony on S. 1167, the Industrial Reorganization Act.

I understand the hearings are now focused on the automobile industry and that my testimony is sought on two questions.

First, would splitting up the Big Three automobile manufacturers help or hurt the stockholders of these companies; and second, would such splitups help or hurt future financings in the field of surface transportation?

There are precedents that help in answering these questions. They suggest that by and large, divestitures, both voluntary and involuntary, for the most part, have not harmed shareholders.

But more importantly, deconcentration should encourage capital formation in the mass transportation field and encourage new entrants, including massive Government assistance.

The reason for such predictions—and of course that is all that they are—personal predictions of one Wall Streeter, a marketmaker, is that the Street abhors a monopoly just as surely as nature abhors a vacuum. Investment funds are not available for new entrants into industries where monopolistic or oligopolistic domination exists.

Presently, General Motors sells at around six times earnings, Ford at four and Chrysler at three. None is short of working capital. Still, big as they are, the Big Three are viewed as distinctly unglamorous—and properly so.

Wall Street—more than Main Street—knows that the transportation crisis is very real. Emma Rothschild has stated the case in an excellent recent book called "Paradise Lost—The Decline of the Auto-Industrial Age." In the first half of this century the motor vehicle wrought a revolution in the United States. The private car, the public bus, and the commercial truck individually, collectively, and cumulatively effected profound changes in our basic economic and social institutions. The Big Three were the darlings of the Street and were literally surfeited with capital.

But for the cities in the 1970's, especially the big cities—I come from New York—motor vehicles pose a paradox. They have become indispensable to our economic and social lives. And yet, as they

multiply, they threaten our efficiency and our well-being. The congestion and pollution they bring with them has become intolerable and now with the energy crisis, as each of us spends more and more time waiting in line to get $3 or $4 worth of gas, we are beginning to realize that the price we are paying for these poorly designed products grows higher each year—in dependence, delay, damage, disease, and death. For private citizens and government officials the challenge is to control the automobile before it controls us.

And that is no easy assignment. The structural changes required are profound. A nation addicted to the private car is more likely to resort first to regulation imposed by czars before seeking out those fundamental changes needed to bring in new brains and new capital for new solutions.

Last year, just about this time, before the energy crisis really hit us, I released the "Manhattan Auto Study" in draft form. The paper represented 2 years of hard work by a team of experts which I had assembled to study what could be done to make more national the use of motor vehicles in New York's central business district—that is the area of Manhattan stretching from 60th Street down to the Battery.

One of our findings was that the Big Three had not and would not in the future design and produce a proper taxicab—meaning a comfortable, short wheelbase, low power, easy to maintain vehicle. Clearly, economies of scale and the rule of maximizing profits have convinced the Big Three that there is more money to be made by limiting production to stock-car-type private passenger cars, whatever the purpose. We concluded that the only solution was for taxi users and owners to band together and use the good offices of various government agencies such as New York City's Taxi and Limousine Commission to demand a U.S.-made, London-type cab. Without consumer pull, the Big Three will continue to push their stock cars for use as taxis. We see the same resistance to producing properly designed compact, urban vehicles and maxicabs.

The question now is whether it makes sense to rely any longer on those in the business of producing millions of private passenger cars to come up with those innovations, especially in mass transit vehicles, which are needed to conserve energy and to reduce congestion and all of its deleterious side effects.

Let me cite another personal experience. As a director of a major semiconductor manufacturer, I am aware that Detroit—for whatever reasons, indifference, fear, endless layers of bureaucracy—is responding far too slowly to those electronic solutions which could make for quantum jumps in saving fuel, or improving safety, reducing maintenance.

The focus seems to be on gadgets rather than on solid engineering. Regretfully, I conclude that the smaller, newer, more aggressive, export-minded European and Japanese car manufacturers are making the more important technological changes in automobile design.

Could it be that the talents presently rewarded in Detroit are styling, flair, marketing, and financial acumen rather than engineering innovation?

Are the Big Three so big that engineers get lost in the corridors of high finance? Jean Frere of Bank Lambert told the 1990 White House Conference on the Industrial World Ahead that General Motors can best be understood as a major financial institution with some automobile and other manufacturing subsidiaries.

If that is accurate then General Motors is not the business entity Wall Street should pick as "most calculated to make breakthroughs in mass transportation."

Given the urgency of the country's need for improved mass transit and Detroit's failure to contribute significantly to its solution, the impact of deconcentration of the Big Three on their respective stockholders is relevant, but decidedly secondary compared to the public interest.

Stockholders can neither save nor sink the Big Three and vice versa. The inability of stockholders to have any voice in the modern industrial corporation has been documented exhaustively from Galbraith to Berle. Like widows and orphans, stockholders of major corporations have been relegated to wards of the occasional courts who hear rule 10b–5 cases.

From my own knowledge of prior deconcentration cases, they generally have demonstrated that the sum of the parts equals and often exceeds the price of the concentrated whole. The Standard Oil breakup is a notable illustration. Just prior to forced distribution in December 1911, Standard Oil trust stock sold for $660 per share; 1 year after the 33 affiliates and subsidiaries had been spun off into separate companies and their stocks distributed pursuant to court order, their aggregate value then was $971. That 47-percent increase in the sum of the parts over the undivested whole occurred during a period when the Dow-Jones Industrial Average rose only 7.6 percent.

In appendix A, which I will be placing before the committee, I have assembled illustrations of other divestiture cases—some voluntary and some forced.

[Appendix A appears as exhibit 1 at the end of Mr. Weeden's oral testimony.]

Mr. WEEDEN. I apologize for not having that before you, Senator. The logistics of getting it together at a time when I have been involved in other matters down in Washington have just made it difficult but that will be available to you.

Senator HART. Thank you very much and I do have a Thermofax.

Mr. WEEDEN. Fine. We have some preliminary figures and I would just, in the interest of knowing precisely what all those figures mean and whether they are accurate, I would like to reserve the right to change some of them and possibly add to them as we go deeper into the problem.

Senator HART. The record will be open for that purpose.

Mr. WEEDEN. I suppose the only recent claim that divestiture hurts stockholders is the famous weekend paper prepared by Mr. Ramsden, a former White House Fellow, to demonstrate that divestiture of the Hartford Insurance Co. from I.T. & T. might lead to a collapse of the stockmarket. Perhaps that paper was too quickly

prepared and will be revised one of these days. The problem is that most studies of this sort contain an element of special interest or self-serving that in this time of Watergate makes one doubly skeptical of their objectivity. Members of the subcommittee can properly assume for the present that there are no studies of merit to support the proposition that the securities resulting from deconcentration of the Big Three would in the aggregate necessarily be of less value than the undivested whole. Of course, at their present multiples, of six, four, and three for the Big Three, that may not be saying anything profound.

Of much greater importance to you is the prospect of Wall Street once again getting fired up about investing in surface transportation—especially financing new entrants specializing in mass transit.

The Highway Trust Fund as originally conceived is an idea whose time has come and gone. What we do not need now is more superhighways. The emphasis over the next decade will be on governmental incentives for mass transit. The problem for Wall Street is that presently it is difficult to come up with a domestic company in which to invest because of its future role in mass transit. Investing in General Motors—the leading producer of locomotives and buses—is like investing in a mutual fund for auto stocks.

Some have questioned the motives behind GM's involvement in the production of rail and bus transportation—when they account for less than 3 percent of GM's sales. Obviously this is impossible to determine and I do not think it proper here to impugn them as bad—or good. But whatever its motives, GM's domination in this industry at the same time that almost all of their revenue comes from the sale of private passenger cars, in my opinion, presents a conflict of interest that clearly should be avoided.

Mr. CHUMBRIS. In your paper you had 1 percent. You said 3 percent.

Mr. WEEDEN. It should be 3 percent. We don't know what the return on capital is, or the actual revenue derived from that, but the sales, as near as I can gather, are 3 percent or less.

So long as one bus can do the job of 35 Cadillacs, one subway car, 50 Oldsmobiles—and 1 train, 1,000 Chevrolets—the pressure on the most public-spirited, well-meaning corporate managers at General Motors will be overwhelming to push private cars rather than mass transit.

Perforce, then, one cannot advise clients to invest in General Motors even though it controls the production of diesel buses and diesel locomotives. But if not General Motors, then what company for the investor sold on the future of mass transportation? That is what I mean when I say the Street abhors a monopoly the way nature abhors a vacuum. Whatever investment funds are available go into the monopoly—which is the functional equivalent of a vacuum.

Dissipate that self-defeating conglomeration of conflicting goals—spin off at least two divisions from General Motors—buses and locomotives—and Wall Street will more than likely respond to the new investment opportunities. And so will the Government, with much larger research and development grants. Whether we are talking

about computers, chemicals, cameras, or cars, capital will flow where and when competition has a chance. Face us with an overconcentrated industry and we can only back the "Big Boys," even if they appear to be on the wrong track.

Through retaining their vast earnings, these superlarge corporations can successfully ignore the Street's estimate of their policies and prospects.

But as waiting lines in front of gas stations grow longer and urban space becomes more congested, thoughtful analysts and money managers are beginning to conclude that small cars and mass transit may be good bets. That is the meaning of the extraordinary volume in recent months in American Motors. Reorganize GM's present bus and locomotive divisions into separate independent companies and the amount of private capital willing to invest in mass transit solutions might increase beyond the equity underwriter's fondest dream. One can only speculate at what multiple GM's new minicompact line would sell if it were spun off as an independent entity.

In fact, such modest divestitures might be an ideal controlled test before more ambitious deconcentration policies are considered.

It is not part of my proper assignment to advise this or any other body whether the Big Three should be split up—let alone how or by what means. But as a third market maker who is now appearing before the Congress fighting for my life on the simple issue of deconcentrating the instrumentalities by which stocks are traded, I can tell you that splitting up the Big Three, if accomplished in a rational way, should be a great incentive to innovation.

Its effect on Wall Street would be considerable.

First, it would allow for more precise investment. Those who believe in small cars should be able to pick one or two companies to back without having to buy into conglomerates which at the same time make big cars, dishwashers, and refrigerators. Investors like straightforward, easily understood situations. Presently, all the Big Three can offer the auto investor is a straddle. The same applies to those who might want to invest precisely in mass transit.

Second, it would allow investors to back management teams whose philosophy was more easily understood—whose talents were far more subject to analysis and evaluation. Presently, we cannot parse out the differing talents and objectives of a team headed by Gerstenberg from one headed by Iacocca or by Townsend. We know they all have been through an extraordinary screening process to have gotten where they are. But they all look and sound so strikingly similar—and so secretive.

Divestiture might yield some new "Lancelots," a latter day "Romney" or a "DeLorean" able to carry out his own views, rather than getting lost in endless committee meetings.

Third, it would give the Street more merchandise to analyze and sell. Certainly, the breakup of the public utility holding companies has created an important and long-lasting area of investment activity for the Street. For those who are concerned about concentration of ownership in American companies, clearly any breakup would have a salutary effect. Institutions, by concentrating on the

dominant companies, simply reflect the economic concentration of the industries themselves.

Fourth and last, the Street is subject to more intuition and emotion than is generally realized. We try to market our services in an elaborate aura of facts and figures. With the computer, we overwhelm our clients with pseudoscientific data. But in fact, the concepts that work are very simple.

The message we are getting is that more and more private investors are alienated by bigness. Perhaps President Nixon is right when he argues on behalf of I.T. & T. that bigness is not bad per se. But if it is not bad per se, it is surely boring per se. The coordinated responses of "Big Business," "Big Labor," "Big Government" to "Big Issues" are all too predictable, all too similar and all too ineffective.

Every new crisis is met with a solemn call by the establishment for more regulation—regulation which none of us believes really works—regulation which none of us believes is even-handed—regulation which none of us believes is anything but reinforcement of the status quo.

For those of us who believe in the big cities, Detroit's participation in the lobbying against the use of Highway Trust Fund moneys for mass transit is not surprising but very disheartening. The alienation of investors is not a paranoid perception of the 1970's. It is grounded in the realization that these big accumulations of power have so many interlocking relations, so many conflicts of interest, they are unable to do more than look left, look right, and check to the dealer.

If the city dwellers are disheartened, imagine the plight of the millions who are and have been for years faithful shareholders in the Big Three. They have no influence on corporate policy. They have no confidence that management is interested in anything other than trying to sell more expensive, complicated, private passenger cars in a market already oversaturated. Some of these investors would like to change direction but have no say. Others would like to get out but are reluctant to take the necessary losses.

Deconcentration might well be a constructive dividend. Those who wish to stick with the whole range of products General Motors makes, without regard to internal conflicts, could hold fast. Those who wish to refine their investments could keep the shares of those of the divested companies that make products in which they have faith and sell the others.

In the process of realining these portfolios, we might accomplish what our tax policies have failed to do. We might help spread the power around and thereby open up opportunities for new investment, new ideas, and new faces. Thank you very much.

Senator HART. We have heard from a number of witnesses in the course of the hearings this week. Without exception they have been interesting and stimulating but if we wanted to close with a rolling of the drums for this week I think we couldn't have found a better witness.

That statement of yours is—I was going to say a delight but that

does a disservice. It is an exciting portrait of what might be and the suggestion of what is.

Mr. WEEDEN. It is an exciting time, Senator. The opportunities to really redirect this country's transportation policy are extraordinary and I hope that the Congress, with the support of the public, will seize upon it.

Senator HART. Toward the end, you reminded us of the apparent inability of large units and the economy to react to change and suggested that restructuring would help.

I'm not sure that we in Government have ever tested that. But as you point out, big government doesn't respond very well and maybe it isn't because it is loaded with bad people.

Maybe there is a structural problem here that also requires restructuring.

Mr. WEEDEN. I'm not a very good historian but I gather that the people who developed the Constitution recognized this fundamental pressure toward greater and greater concentration whatever area that you can think of.

And they tried as best they could to structure a government that would have sufficient checks and balances to prevent that, but there are times—within the press of business—that we become thoughtless about our responsibilities to use those checks and balances properly and maintain that spread of power.

In the economic area those same pressures exist and I see no reason why it should not be public policy, as it is in the political area, to reexamine what has happened and bring in the kinds of checks and balances or the deconcentration efforts necessary to get us started in the process of using competition with all of the wonderful things that it provides in terms of stimulating peoples' imagination and energy to produce better goods and services for us.

Senator HART. Turning now to the specific elements of your tsetimony, there is one point I want to make sure we have in the record.

You commented, and we ordered printed subject to subsequent check on specific figures, your appendix. This is a table of breakups and spinoffs showing what has happened. How do these materials relate to your direct testimony?

[The appendix referred to appears as exhibit 1 at the end of Mr. Weeden's testimony.]

Mr. WEEDEN. It's an attempt to take those voluntary and involuntary diverstitures which have occurred—we've concentrated on the last 5 years—and to show the relative market value of the single entity 7 days prior to distribution and then go forward and document what the value of the package was the distribution day, 1 month later and 1 year later.

It is an imperfect analysis because there are many other intangible factors that come into determining the market price in those particular securities.

You have market level, you have the outlook of that particular industry and so forth. We have attempted to document it in a way that would be understandable and useful to your committee.

In trying to go back and research the literature on some of the larger divestitures that occurred before this recent 5-year period,

such as the Public Utility Holding Co. divestitures, it became so darn complicated that we were really able to just touch briefly on it.

There is—in talking to people on the street, while we're not able to document it—the general opinion that it was a very positive thing from a market price standpoint.

Some of the divestitures that happened earlier in the century are too early for most people that you can call upon to give any of their personal experience, but there is, to my knowledge, no research on the market price impact of those divestitures and we'll just have to do more work in order to give you the benefit of those figures.

Senator HART. Well, I note that your last sentence before you get into the tabulation reads: "On the record, however, it is safe to conclude that stockholders, by and large, have not been hurt and in many instances appear to have done quite well."

Mr. WEEDEN. Yes.

Senator HART. I see in the tabulation which I was looking at that in the spinoffs that you have analyzed here, the stockholders who appear most to have been hurt are those involved in the Syntex-Alza spinoff.

The distribution was in January of 1969 and a year later the stock had dropped from 63 to 52.

Mr. WEEDEN. Yes; that happened in 1969 and as you remember the entire marketplace deteriorated quite significantly at that time. And Syntex was the kind of stock that probably would have declined at a much faster rate under the conditions that existed in the marketplace than the Dow Jones Industrial Average.

It was a very new, exciting, high-flying security that, under the environment that existed in the latter part of 1969 and 1970, was just not conducive to doing very well.

Senator HART. Mr. Chumbris?

Mr. CHUMBRIS. Mr. Weeden, there is one thing in your paper——

Mr. WEEDEN. If that is all, I got off pretty easily.

Mr. CHUMBRIS. Well, when we say one thing, we mean one at a time, because I used to chuckle when my cocounsel on the other side would say, "I just have a few more questions," and about half an hour later, he got through with this few more questions.

Mr. WEEDEN. I am prepared to stick around then.

Mr. CHUMBRIS. It is this statement that sort of worried me: "It is not my proper assignment to advise this or any other body whether the Big Three should be split up, let alone how or by what means."

Now, this is the point: "But as a third market maker who is now appearing before the Congress fighting for his life on the simple issue of deconcentration, the instrumentalities by which stocks are traded, I can tell you that by splitting up the Big Three, if accomplished in a rational way, should be a great incentive to innovation."

And I am just wondering if you are talking about worrying about your stockmarket business. We are worrying about how the general economy is going to be affected by it and do I read in it that you look upon this as what it will do to help the stockmarket?

Mr. WEEDEN. Oh no; not at all.

What I am saying there was that my area of expertise is the

securities business and I know what concentration, excess concentration, in our business has done to innovation and I know where the innovation is coming from and it is not coming from that area of the industry that dominates by a factor of, let's say, 80 percent.

Innovation is coming from the fringe area and the regional stock exchangers and the third market. The pressure on prices is coming from these people who are actively competitive and innovative in developing new clearing systems, developing new ways in merchandising securities.

What I'm saying is that if we could create an atmosphere in the automobile industry that would encourage the kind of innovation that is being developed by those—when I say "fringe" I just mean in terms of the amount of business that they're doing—I think that you'd see all sorts of new ideas, new experiments, new types of vehicles, new engineering developments that are not coming out of the present dominant forces in the automobile industry.

Mr. CHUMBRIS. Well, I just want to be sure that that was not misread.

Mr. WEEDEN. Yes.

Mr. CHUMBRIS. I took a quick look at the exhibit that you have submitted and the different divestitures that took place and they are a far cry from what we are contemplating here.

In other words, when Procter & Gamble and Chlorox had to divest one from the other, both of them were pretty well established companies, not new companies being formed as in S. 1167.

Paramount Pictures, that was back in 1949 when the Supreme Court decision ordered the different movie houses to divest a certain part of their operations. Is that what that one is?

Mr. WEEDEN. Right.

Mr. CHUMBRIS. Just as in *General Motors—Dupont* v. *FTC* case, when the Supreme Court decision came down on that one. But here we have a situation. Let us assume we follow the White plan of breaking General Motors up into five different corporations and Ford into three different corporations and Chrysler into three different corporations and American Motors to remain as it is.

And knowing of the past history of how the automobile industry developed and what changes were made over the years, and I have read some of that into the record several times, we are getting into an area of deep unknown.

In other words, some stockholder may be plenty lucky if he happens to get Chevrolet stock. Let's assume that one corporation is known as Chevrolet.

Now, that Chevrolet may be highly successful just like General Motors sprouted up in 1930, from second or third place to the point it is today. Let's say Chevrolet does that.

But in doing so, one auto of the former General Motors Corp., maybe one or two of the Ford and of the Chrysler corporations may do very badly in the future because of the way the automobile industry has reacted and become the Durands and the Nashes and the Willises, et al. They went down and out completely or were taken over by others.

In other words, some might do well on the stockmarket and others do very badly because of this breakup. Whereas, we know how well the stockholders have been doing in the auto industry, as well as the economy. Hence, that's just something that I think is probably the biggest problem that Congress would have to wrestle with: the impact on the stockholders, on the economy, and the public in general.

Shall we take a chance on continuing with the industry the way it is—it has not raised its prices as high as the market would permit according to the testimony of the witnesses—or take a chance and break it up? As one Senator said over 10 years ago, if we did break up General Motors into five corporations with Chevrolet as one of them, then 10 years from now instead of it being known as General Motors Corp. it would be known as the Chevrolet Corp., because it would eat up the other four. And that is the big issue.

Mr. WEEDEN. Well, let me answer your question two ways. First of all, anybody who is a present General Motors shareholder would be given Chevrolet, or Pontiac, or Buick stock.

What he would be given is a percentage of each one of those, so he would not be forced into ownership of a specific part, but he would be getting his share of all of those parts. He then would have the chance to make a judgment, an investment judgment that he does not have an opportunity to make today as to which one of those companies has the best management and the best opportunities for growing.

As for my second point, I must say that I'm not that familiar with the White plan, but I am familiar with what would happen if somebody came in and suggested divestiture of the various parts of Weeden & Co.

I'm not sure that Government would know the best way to divest Weeden & Co. into those parts that would have the best chance of surviving as separate entities.

But I know, and my colleagues know, and if we were given that responsibility we could come up with what I think would be the most responsible plan--if it was determined that that was public policy to do that—and the most constructive plan from the standpoint of the shareholders whom I represent. So I suggest to you that it might be a wonderful opportunity to go to, say, middle management of General Motors, Ford, and Chrysler and ask them how they would do it. And to say to them, "Here's the responsibility that you have and if there were legislation, how would you divide up General Motors so that the surviving elements were best able to take care of the economic realities and so forth?"

Senator HART. If Mr. Chumbris would yield.

Mr. CHUMBRIS. I was hoping you would comment, because I was going to.

Senator HART. I think the bill reflects the fact that I share your feeling that Government is not the source from which the greatest wisdom can be obtained as to how to reconstruct an industry.

We have attempted in this bill to develop a hearing process, a presentation to the special court from a variety of sources.

But since it isn't a criminal proceeding and there aren't any treble damages, I would anticipate the first and the preeminant witnesses in such a hearing would indeed be management from the segment of the economy that is under review.

But let them lay down a pattern——

Mr. WEEDEN. Right. And then be able to justify it.

Senator HART. I don't think we're going to hear from middle management until that court is in business and the industry itself is in the courthouse, which is not to say that I have not had indications that certain middle management and other management had very, very specific ideas about how things might be.

Mr. CHUMBRIS. Thank you, Mr. Chairman. Thank you, Mr. Weeden.

Senator HART. Mr. Bangert?

Mr. BANGERT. In your statement you indicate that Wall Street may not today give much thought to investing in service transportation. As long as the status quo is maintained, I take it you mean that new forms of service transportation would have a difficult time getting money from Wall Street. Is that correct?

Mr. WEEDEN. Yes. I think that the realities are—as I said—that there is one company that dominates those areas.

And one would be very reluctant to try and develop new capital or a new company with that kind of domination.

Mr. BANGERT. For the past several days we have heard about forms of transportation and the innovations in design, but we have seen very little in the way of foreign companies coming into this market.

Mr. WEEDEN. Well, I think that the problems of American companies getting into this business are magnified when you consider foreign companies.

You have the tariff and nontariff type of barriers. I think that they would be very reluctant to enter the business. The problem is more complicated.

Mr. BANGERT. Is there money going from this country to foreign auto makers rather than being invested here?

Mr. WEEDEN. Well, of course, you have interest equalization tax. It's just recently been removed and that was a great impediment to American capital moving into foreign companies.

I really think it's too early to tell. But certainly, in terms of the present situation and the changes that are taking place, in my own opinion, some of those look very attractive if those companies were encompassed in an American entity. Just like American Motors, they would become quite attractive or at least more attractive.

Mr. BANGERT. But if the money moves overseas to invest in those type of automotive organizations there, won't that add to our balance of payment problem?

Mr. WEEDEN. Yes, sir. Before anybody would want to invest over there they would certainly want to know what the reaction of Congress is to what I understand was Leonard Woodcock's suggestion here just yesterday.

Mr. BANGERT. Thank you, Mr. Weeden.

Senator HART. Mr. Weeden, again I thank you for—as I said—a very interesting presentation.

Mr. WEEDEN. Thank you, Senator.

Senator HART. The subcommittee is adjourned subject to the call of the Chair.

[Whereupon, at 12:15 p.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.

[The following material was received for the record:]

MATERIAL RELATING TO THE TESTIMONY OF MR. WEEDEN

Exhibit 1.—Market Value Impact of Recent Divestitures

APPENDIX A.—BREAKUPS AND SPINOFFS

The accompanying table provides a list of breakups, spin-offs and/or distributions that, for the most part, have occurred in the past five years. The table also includes one simple example of a partial breakup of a utility holding company and a complete breakup of one of the integrated motion picture companies, with both divestitures occurring some years ago.

Major breakups have not been a common occurrence in recent years when it has been the mergers and acquisitions that have caught the investment banker's and industry fancy—certainly none of great scope if one thinks in terms of a major breakup of GM. For a comparable situation, one would, probably have to go back to the old Standard Oil Co. and to the old Tobacco Trust, neither of which appear to have hurt the original stockholders.[1]

Recent examples of divestitures of a relatively sizable portion of assets would include Georgia Pacific-Louisiana Pacific; Unionamerica-Union Bank; Olin Mathieson-Squibb Beech Nut and Transamerica-FirstAmerica. However, in the case of GM, if one is talking about the divestiture of just GM's bus and diesel locomotive businesses, one is really talking about a very minor, even negligible part of assets and the market implications for stockholders are also inconsequential. Note, for instance, the Proctor & Gamble-Clorox arrangement where the impact of a relatively small distribution was further minimized by trading off Clorox stock for Proctor & Gamble shares, thereby shrinking the latter's equity capitalization.

In a breakup of consequence, the market generally assumes that in the end, the parts will be worth more than the whole. This is not always so and will depend on the circumstances of the breakup, the stock market at the time, and the business environment in general and in the specific industry involved. The utility breakups provided many outstanding market opportunities. The utility holding company setup tended to conceal the solid strength of the underlying operating companies including some very attractive growth situations which emerged more or less simultaneously with the more aggressive development of the growth concept in the stock market. On the other hand, the motion picture breakups often occurred at the peak of motion picture attendance or shortly thereafter, and this was followed by the introduction of the first television sets. One can only surmise whether the motion picture companies would have fared any better if they continued as integrated operations.

More recent examples of the impact of timing might be Georgia Pacific-Louisiana Pacific and Unionamerica-Union Bank. The first occurred generally in a favorable residential building climate while the breakup of Unionamerica holding company into bank and non-bank entities occurred when mortgage-related and leasing operations were not doing well, certainly in the stock market. What saved the day was a tender offer for its own stock by the new Unionamerica, the non-bank operation.

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[1] All the paper spun off from the Tobacco Trust appreciated about 6.5% in the first year, or slightly less than the general market increase of 7.6%. For Standard Oil, see the accompanying statement.

The duPont distribution of GM stock was added not because it conforms to the kind of situations used to illustrate the situation here, but simply because it did involve GM.

The Columbia Broadcasting distribution of Viacom which at the time represented a relatively small 8% of the total value of the package involved was also included. This is a case where not everything is quite as it seems. Viacom is a CATV company and CATV was loaded with glamour! At first blush one would have though that it was Viacom that was responsible for the stellar market performance of the package. In point of fact, Viacom was selling somewhat lower a year after distribution but the important thing is that in terms of the package, stockholders did quite well even if it was only because of the performance of CBS.

It should be noted that measuring the impact of breakups and distributions is subject to pitfalls. Should one start out with the data at the time of distribution or shortly before as we have done? Or should one start measuring on the first general announcement of the company's intentions? Unfortunately, the records make it quite difficult, if not impossible, to determine such dates with any degree of precision. Nor does one know if, as and when the information might have seeped into the market well before announcement, as it probably did.

In this connection, it should be simply noted that the market's response to breakups or large spinoffs tends to develop in stages, particularly if the divestiture is forced. In the first stage when the threat or the possibility of a breakup surfaces, the market is likely to be uneasy and uncertain, and the stock price weak. However, as divestiture approaches reality and the terms are firmed up, a return of confidence leads to some market strength. And once the basic merits of the separate pieces of paper become apparent and the deal approaches fruition, the Street may begin to respond more positively.

At some point, the deal and when-issued trading permitting, arbitrageurs may enter the picture and significantly influence market performance. The utility breakups, which often extended over a period of years, provided great arbitrage opportunities. Not as much can be said for some recent spinoffs. In the case of Louisiana Pacific for instance, it was very difficult to establish a price for the new pieces of paper. In the old days arbitrage operations would gradually narrow the discount as one approached the effective dates of distribution, or consummation date of mergers and acquisitions. In the recent years, the impact of arbitrage operations however, appears to have been influenced by lack of adequate arbitrage funds, just too many mergers and acquisitions to go round, and/or margin and regulatory requirements. As a result, discounts are much more likely to stay wide until almost the day the deal is consummated. At that point, the spread will disappear abruptly.

Needless to say, that whatever the circumstances, it is essential that the parts all be economically viable. In addition, the spinoff be relatively substantial to be meaningful. Yet, there is never any assurance that a breakup will not hurt stockholders in any given situation. But then one also has to ask how the stockholders would have fared without any distribution of assets—and obviously this is entirely conjectural. [On the record, however, it is safe to conclude that stockholders, by and large, have not been hurt and, in many instances, appear to have done quite well as a consequence of breakup.]

SELECTED SPINOFFS: THE CHANGE OF MARKET PACKAGE VALUE AS COMPARED TO CHANGE OF DOW JONES INDUSTRIAL AVERAGES DURING THE FIRST YEAR

Parent company—Distributed company	Date of distribution	Share value price 7 days prior to distribution	Package value: Distribution day	Package value: 1 month later	Package value: 1 year later	Percent change package vs. DJIA (1 year)	Distribution as percent of total package
Columbia Broadcasting	Dec. 7, 1970	29	31	26	47	+52	
Viacom						+5	8
Commonwealth Southern	Sept. 30, 1949	5	5.30	5.71	5.70	+8	
Ohio Edison		30				[1] +5	33
duPont	Jan. 4, 1965	235	290	309	288	−1	
General Motors		96				+11	16
Georgia Pacific	Jan. 5, 1973	37	45	38	44	−2	
Louisiana Pacific		28				−16	16
Grinell	Jan. 29, 1968	97	194	196	205	+6	
Am. Dist. Telegraph		83				+9	
Holmes Elec. Protective		62					50
Automatic Fire Alarm		63					
Olin Mathieson	Jan. 15, 1968	71	74	64	78	+5	
Squib Beech Nut		45				+4	42
Paramount Pictures Inc	Dec. 31, 1949		44	42	48		
Paramount Pictures Corp		21				+9	46
United Paramount Theatres		23				+17	54
Procter and Gamble	Jan. 2, 1969	90	107	107	107	0	
Clorox [2]		28				−15	
Riegel Paper [3]	Jan. 4, 1972	19	17	19	17	0	
Fed. Paper Board Com		24				+17	37
Fed. Paper Board							37
Rexham							26
Syntex	Jan. 19, 1969		63		52	−17	3
Alza						−17	
Transamerica	July 7, 1958	43	44	42	55	+25	
First America (Western Bancorp)		18				+35	40
Unionamerica (Calif)	Dec. 31, 1973	19	21	22	[4] 24	[4] +14	
Union Bank Corp. (Calif)						[4] +1	
Unionamerica (Del.)							

[1] Dow Jones utility averages.
[2] Exchange of 1 share of Procter and Gamble for 3.95 of Clorox, therefore 100 percent distribution.
[3] Spinoff of Rexham and balance of assets merged into Federal Paper Board.
[4] Price as of Feb. 27, 1974, and percent change to date.