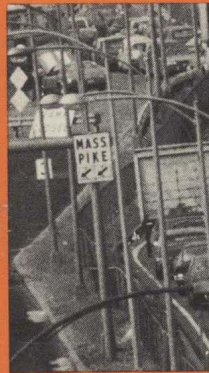
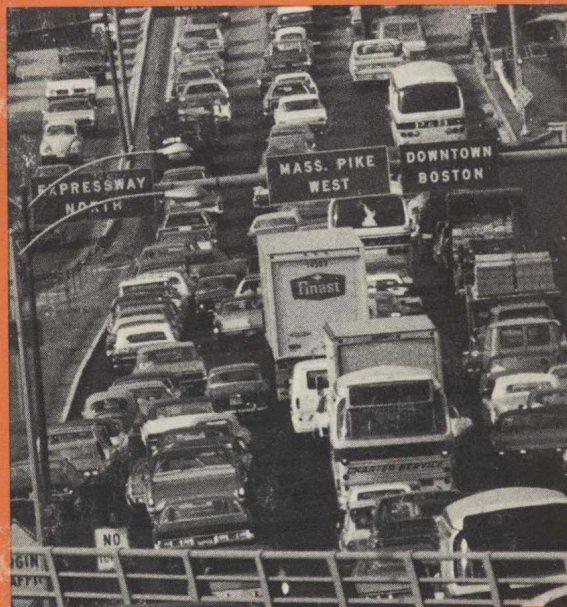


A Twentieth Century Fund Report

AUTOS TRANSIT AND CITIES



John R. Meyer
José A. Gómez-Ibáñez

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John R. Meyer / José A. Gómez-Ibáñez

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Foreword

Urban transportation problems have frequently been touched upon in the many urban policy studies sponsored by the Twentieth Century Fund. But it was not until a few years ago, when John R. Meyer and José A. Gómez-Ibáñez submitted a proposal for a thorough assessment of urban transportation policies, that the Fund was presented with an opportunity to sponsor and supervise a project that focused directly on the role of transportation in our cities. The Fund's Trustees, who had decided and very individualistic views about the "mess" in urban transportation—as does everybody who has ever been stuck in traffic on congested streets or has suffered the foul air and crowded conditions of urban subways—recognized the value of the proposed study. They also were reassured that the project directors were not only immensely knowledgeable about their subject but also levelheaded, unlikely to be swayed by new panaceas in an area where policy makers have adopted plans that were billed as panaceas but that have all too frequently been found wanting.

Meyer, a respected economist and an authority on transportation (he is a professor at Harvard University) and Gómez-Ibáñez, associate professor at the Kennedy School of Government at Harvard, made a very effective team, both for analyzing urban transportation policy since World War II and for making their own recommendations for the future. Their clear and comprehensive examination reveals that public

policy with other specific objectives—promoting home ownership, for example—had a marked influence on urban transportation. They also point out that policy makers concerned with transportation policies have frequently behaved like generals fighting their last war over again; repeatedly, their response to changing developments has been to propose (usually expensive) programs that because of changing conditions are outmoded almost before they are implemented and to swing from one extreme in strategy to another.

Above all, this study provides fresh and compelling documentation of the pervasive role of the automobile. Despite the energy crisis, and despite the loss of the competitive edge once held by the American automobile industry—which pioneered in mass production and which has had so great an economic, social, and cultural influence on our society—Americans continue to rely, perhaps excessively, on the automobile. Certainly, our attachment to the automobile has been accompanied by multiple problems for our cities—street and highway congestion, high levels of gas consumption that have contributed to air pollution and affected our balance of payments, and high accident and casualty rates that have increased insurance premiums and resulted in tragedy for those involved. The public policy response to these and other problems—which has involved billions in expenditures—has been either ineffective or inadequate.

It is the thesis of Meyer and Gómez-Ibáñez that the automobile will remain the nation's dominant form of urban transportation and that transportation programs that fail to assume—and accept—its continued significance cannot work. Their own policy recommendations are directed at taming and containing the automobile and its role, in part by redesigning and reengineering the automobile itself. They also consider the options available in the form of mass transit facilities and other, more modest, arrangements. But they make a strong case that critical attention must be paid to civilizing the automobile. This solution may itself seem tame or (if I may be permitted a pun) pedestrian. In reality, though, it may be the beginning of wisdom for getting out of the transportation mess.

The Fund is indebted to John R. Meyer and José A. Gómez-Ibáñez for their painstaking research and for their thoughtful analysis. Their work will inform the public policy debate on the role of the automobile in urban America for this decade and beyond.

M. J. Rossant, Director
The Twentieth Century Fund

Acknowledgments

In 1964 Harvard University Press published *The Urban Transportation Problem* by John Meyer (one of the present authors), John Kain, and Martin Wohl. Although the passage of time has treated many of its arguments kindly, urban transportation policy and problems have changed markedly since then. Specifically, a number of new public policy concerns have come to the fore—energy conservation, air quality, environmental blight, safety, and mobility for the handicapped. This book provides a fresh and current overview of urban transportation policy, tendered in the same spirit and intended for much the same audience as the original work.

We have received a great deal of assistance in our efforts, most notably from the Twentieth Century Fund, which was the principal source of financial support for the writing and research. The 1907 Foundation (now the United Parcel Service Foundation), through its generous endowment of the chair occupied by the senior author, provided substantial aid for the project, including funds for research assistance, clerical, and other such help. Similarly, earlier research that provided most of the basic materials for Chapters 4 and 5 was funded by a grant from the Urban Mass Transportation Administration (UMTA) to the Division of Research of the Harvard Business School. The Harvard Business School Division of Research also provided invaluable logistical and administrative support throughout the project.

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Several of our faculty colleagues provided much-appreciated encouragement and advice during the course of this project. Professors John Kain, Greg Ingram, Gary Fauth, Don Pickrell, David Segal, and Arnold Howitt all allowed us to borrow freely from their important research results and gave us valuable counsel. Professor Martin Wohl of Carnegie Mellon University was one of the first to see the need for a new book in this area, and made helpful comments on early thoughts and drafts.

Editing and organizing our manuscript proved to be a major effort, and we received important aid from several sources. Especially helpful were Murray Rossant, director of the Twentieth Century Fund, the late Walter Klein of the Fund's staff, and Max Hall, who had "shepherded" the earlier book through the Harvard University Press; they reviewed early manuscripts and suggested numerous ways to shorten and focus our arguments so that the book would be clearer and more readable. Pamela Gilfond of the Twentieth Century Fund did a superb job in editing the final manuscript; she shortened the text, improved the prose, and carefully ferreted out many inconsistencies and errors.

We are also indebted to several of our former students and others who provided research assistance during the course of this project. The statistics on urban travel trends in Chapter 2 were painstakingly collected from obscure reports by Peter Stump, Robert Emslie, Leslie Meyer, and Sally Ferris. Robert Emslie also gathered materials for Chapters 11 and 13, while Robert Dewer collected information used in Chapters 5, 10, and 12.

Last but by no means least, we would like to thank Eleanor Lintner, who served as the principal secretary and coordinator for the project. Mrs. Lintner typed many drafts with constant good cheer, kept track of the manuscript chapters despite our tendencies to lose them, and assisted us in finding missing facts and citations.

Even with the help of all these friends, the manuscript undoubtedly still contains many errors. The responsibility for these rests, of course, with us.

John R. Meyer
José A. Gómez-Ibáñez

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PART I

ANTECEDENTS

1

The Evolution of Public Concerns and Policies

Urban transportation in the United States is dominated by the private automobile. By the 1980s, no matter how measured, well over 80 percent of all trips in American cities (beyond the house or workplace) were made in automobiles, and there seems little prospect that this will change much in the near future. Indeed, folklore has it that the most distinctive aspect of the American culture of the twentieth century is dependence on the automobile. Through the automobile, in this view, Americans find status, romance, and access to all that is worthwhile—and much that is not. Perhaps the finest succinct summary of the interdependence between American life and the automobile was made by Secretary of Defense Charles Wilson, when he stated that what was good for his former employer, General Motors, “was also good for the country.” No one particularly challenged this statement on its merits; rather, outrage was expressed at its brazenness.

Critics of the American automobile, both domestic and foreign, come in droves. Perhaps the most strident complainers about the industry have taken aim at its marketing practices, specifically at the fact that it historically has garnered some of its best profit margins from non-

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utilitarian frills. The tail fins of the late 1950s were perhaps the most blatant and commonly resented of such effects. Many critics have suggested that such frills diverted the industry's energies from more constructive pursuits, such as improvements in technology and safety. The industry, of course, has had its answers. One of the most famous was that voiced by Boss Kettering, also of General Motors, when he asserted: "It isn't that we are such lousy car builders, but rather that they are such lousy car customers."

Whoever may be at fault, it is clear that extensive reliance on the automobile has posed serious problems for the nation's urban areas. The public policy response, unfortunately, has been largely ineffectual. These policies, moreover, have often involved billions of dollars in expenditures, making the failures all the more difficult to accept.

The essential difficulty is that governments have grossly oversimplified the problem and have tended to lurch from one panacea to another. Urban transportation is one small part of the complex and highly interdependent systems that constitute the large urban conurbations of modern industrial society. Changes in one sector almost invariably affect many others, often in ways that are little understood or anticipated. To devise better solutions to the problems posed by extensive use of automobiles requires an understanding of the workings of these systems in order to define how and where different policies, of *all* kinds, can contribute. Some policies may make only limited contributions but nevertheless may be well worth the effort. Other, frequently expensive, policies may be found to contribute little or nothing once their indirect as well as direct effects are understood. No simple or easy solutions are likely to emerge. Instead, a comprehensive, multifaceted attack—mainly consisting of nibbling at many small margins—offers the best hope of making urban transportation policies work more efficiently and equitably.

Only one conclusion is absolutely undeniable: solving problems created by the automobile will require modifications in both the use and design of the automobile itself. Nothing less will suffice. Other policies, such as improving alternative types of transit, can help, but cannot do the job alone.

AUTOMOBILES AND SUBURBANIZATION: 1920–1955

The automobile emerged into preeminence on the American transportation scene somewhat slowly, the process being seriously disrupted by the Great Depression and World War II. The number of cars per thousand of population reached an early peak around 1929–1930 (just

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under 200 automobiles per thousand of population) and remained more or less stable over the next fifteen years. During the early 1930s, high unemployment rates arrested the growth of automobile ownership. During World War II, the automobile supply was limited as manufacturers concentrated on armaments production, and automobile ownership declined both absolutely (by almost four million vehicles) and in relation to population (from over 200 per thousand of population just before the war to about 190 as the war ended).¹

A surge in incomes during World War II, coupled with wartime controls that constrained consumption, led to a substantial accumulation of personal savings and many unrequited demands for consumer durables. This set the stage for rapid consumer investment following the war, not only in automobiles, but also in housing, where production also had backed up because of the Great Depression and World War II. Housing starts had peaked as early as 1925 and did not regain the same level until 1946. The home construction industry, always characterized by many small and highly adaptable suppliers, apparently made the postwar transition easily and rapidly: housing starts tripled between 1945 and 1946.²

During the Great Depression and World War II, many young couples had postponed marriage, or, if they married, had tended to live with parents and postpone having children. After the war, they began to form their own households and made a start on what was later to be known as the "great postwar baby boom." Home construction was boosted, too, by government programs that offered housing loans to veterans at lower-than-market interest rates—even lower than those available from previously established government housing programs.

All this "catching up" in demography and housing had enormous effects, among which was the increased importance of the American suburb. New households that had young children and that were well financed through savings and government loan programs were clearly ideal candidates to buy new suburban housing. In the late 1940s, too, job opportunities began to migrate toward suburban and even exurban locations.³ The manufacturing industry, for example, decentralized because the suburbs offered open land sufficient for sprawling single-level plants. Restaurant and hotel services decentralized as the airplane became an increasingly popular means of travel.

The automobile industry, rather than creating these trends toward decentralization, as has often been suggested, actually lagged in its response. It took about three years after World War II for automobile production and sales to reach their prewar level (in sharp contrast to the quick expansion of the housing industry). By 1949, though, the industry was producing and selling cars at annual rates well above any-

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thing ever before experienced.⁴ Herbert Hoover's "chicken in every pot and two cars in every garage" was finally on its way to realization—for better or worse.

THE HIGHWAY ERA: LATE 1950s AND EARLY 1960s

With the proliferation of suburban housing and the rise in automobile ownership in the late 1940s and early 1950s, cities as systems were seriously disequilibrated. In particular, existing urban streets and highways proved quite inadequate. An increase in the number of cars per capita and in the number of miles traveled by the typical metropolitan dweller further compounded the problem.

The result, of course, was traffic congestion. The seemingly obvious solution at the time was to build more streets and highways. In particular, a need was perceived for high-performance urban highways, expected to relieve congestion either by directly augmenting existing street capacity or by providing bypasses around high-density areas. In ways that curiously reflected differences in local customs and attitudes, these high-performance highways were called turnpikes (and charged tolls) in some parts of the United States, whereas in others they were called expressways, freeways, or even thruways.

Prototypes for these high-performance urban highways existed, and showed how helpful such facilities could be. In the late 1930s, California developed the urban freeway, which allowed for improved urban highway speeds, particularly during the nonrush hours. Other high-performance urban highways were built just before the outbreak of World War II and in the early 1950s in Connecticut, New Jersey, and New York State; these provided important bypasses and connections around and through New York City, Buffalo, Newark, and Jersey City. By 1956, about 480 miles of high-performance urban highways were complete or under construction in central U.S. cities, of which 290 miles were in New York City, Los Angeles, and Chicago.⁵

Thus, to many, the high-performance highway had been tested and had proved effective as a means of alleviating traffic congestion. Furthermore, there was evidence, especially in the eastern part of the United States, that motorists were willing to pay the cost of constructing such facilities. Turnpike and thruway authorities were established in the northeastern states on a self-financing basis, and revenues collected at toll booths were generally sufficient to cover all building and operating costs. However, certain particularly high-cost urban highways, such as some "urban-only" toll roads like Chicago's Calumet Skyway, did not realize revenues equal to their costs. In the postwar euphoria, though, these local problems were generally overlooked.

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The political issue at that time was not whether to build more and better urban expressways, but how to finance them. Should they be "free" (in the sense of being paid for through gasoline or other vehicle-related excise taxes) or toll roads? As might be expected, the eastern states that had already built or were building toll roads tended to favor the toll concept, while western states without toll roads preferred financing through gasoline and similar excise taxes. Even more predictably, the railroad industry gave strong support to the concept of toll roads, while trucking interests preferred the excise-tax approach.⁶

The issue of highway financing was essentially decided in 1956 with the enactment of the Interstate and Defense Highway Act. The act provided for the construction of about 41,000 miles of high-performance "interstate highways" at an estimated cost of \$27 billion (revised to \$41 billion in 1958, \$89 billion in 1975, and \$104 billion in 1977). Of the original \$27 billion, about \$15 billion was to be spent on urban portions, representing about 8,000 miles of the total system. Ninety percent of the cost of these interstate highways was to be paid through a federal highway trust fund financed by a 3-cents-a-gallon federal tax on vehicle fuels, an 8-cents-a-pound tax on tires, and special excises on heavy trucks. Clauses were written into the act to compensate, at least partially, those northeastern states that had already built major portions of the projected interstate systems as toll roads. At the time of its passage, the Interstate Highway System was the largest public works program ever undertaken in the United States.

But the high expectations for the interstate highway program were never realized. For one thing, the system was not finished on time. Originally scheduled for completion in 1972, it remained incomplete in 1980, with the prospect that certain portions might never be built. The costs greatly exceeded original projections, in part due to inflation and to design changes. Significantly, the unfinished portions of the system, and those most likely never to be completed, are in major urban areas where communities did not take kindly to the notion of an interstate highway proceeding through their terrain. Such routing often led to the displacement of residences and businesses, the diminution of property tax rolls, and increased air and noise pollution. The greatest disappointment with the interstate highway program, though, was that it did not seem to achieve its major objective of reducing traffic congestion.

Many explanations were advanced as to why this was so. Highway builders argued that the benefits of urban high-performance highway systems became apparent only as full completion approached. It was therefore unfair to judge systems that were incomplete because time or funding had not permitted finishing the construction or because local community objections had totally prevented the undertaking.

Another explanation was that the new urban interstates had improved performance, but not so dramatically as to be appreciated by the commuting public. Typically, rush hour commuting speeds would only rise from, say, 25 to 35 miles per hour on both expressways and surface streets when new expressways were completed. The improvement in the nonrush hours with the completion of an expressway was almost invariably more dramatic: speeds of 50–60 miles per hour were not uncommon. Needless to say, dashing across a major metropolitan area at such high speeds during the off-peak hours could be an exhilarating experience. By contrast, a mere improvement from 25 to 35 miles per hour or so during the rush hour was a disappointment.

A particularly underappreciated improvement brought about by the new urban interstates was a shortening of the peak congestion periods in most metropolitan areas. Without a very substantial increase in capacity, to levels that often would be deemed excessive, a few central portions in almost every city's highway network will be congested for at least a few minutes every day. In a sense, the phenomenon is much like that experienced on highways or streets surrounding a football stadium just after the termination of a big game: few would expect that the nearby streets would not be congested for a short period after the final whistle. Much the same holds true for streets surrounding major employment centers at, say, 5:00 P.M. In such intensive traffic, the impact of additional highway capacity is simply to shorten the duration of the congestion. The level of congestion measured by mileage per hour during the height of the rush hour peak thus would often be little affected, and commuters going home from work at the peak hours might not be aware of a change. The new highways helped, but not in ways that were necessarily noticeable to those commuters traveling to or from work during the peak rush periods.⁷

Furthermore, regardless of efforts to curtail congestion, the typical commuter trip by automobile in medium-sized cities in the United States has remained in the range of 20–25 minutes (one way). This constancy of the average commuter trip in the face of substantial additions to urban expressway capacity strongly suggests that many people have been trading a longer commuter trip for an improvement (within income or budget constraints) in their housing. This concept has been cited in the economics and city-planning literature by several authors.⁸ In essence, the new highway improvements made it easier to develop and market good housing at lower-cost locations.

Suburbanization and growth in automobile ownership in the early postwar years thus reinforced each other and, in turn, created a demand, even a need, for more urban highway capacity, which fed back to augment the demand for suburbanization and automobile ownership.