

MASS TRANSIT: PROBLEM AND PROMISE



DESIGN QUARTERLY 71

Editor: Peter Seitz

Circulation: Gale Sharpe

Design Quarterly is indexed in Art Index

Subscription rates are 4 issues \$3.50, 8 issues \$6.25, 12 issues \$9.00

Single issues \$1, Double issues \$2

Foreign postage \$1.00 for 4 issues. Design Quarterly is published by Walker Art Center, 1710 Lyndale Avenue South, Minneapolis, Minnesota 55403

Change of address: To insure receiving all copies, give the old address as well as the new one and allow five weeks for change to become effective.

WALKER ART CENTER

1710 Lyndale Avenue South

Minneapolis, Minnesota 55403

Martin Friedman, Director

WALKER ART CENTER BOARD OF DIRECTORS

David M. Winton, President
Pierce Butler, First Vice-President
Martin Friedman, Secretary
Donald C. Borrman, Treasurer
Mrs. C. Merritt Case, Jr.
John Cowles, Jr.
Thomas M. Crosby, Jr.
Mrs. Kenneth Dayton
Philip M. Harder
Norton Hintz
Donald W. Judkins
Mrs. Malcolm A. McCannel
Mrs. Richardson B. Okie
David H. Preus
Edmond R. Ruben
Gilmore T. Schjeldahl
William G. Shepherd
Justin V. Smith
Philip Von Blon
Archie D. Walker
Walter W. Walker
George Waters
Fred Weil, Jr.
Louis N. Zelle

Ex-Officio

Hon. Arthur Naftalin
Rev. David W. Preus
Bruce Smith

T. B. WALKER FOUNDATION

Trustees

Archie D. Walker, President
Walter W. Walker, Vice-President
Hudson D. Walker, Vice-President
Dana C. Smith, Vice-President
Justin V. Smith, Secretary and Treasurer
Mrs. Malcolm A. McCannel, Assistant Secretary
and Assistant Treasurer
Theodore S. Walker, Assistant Secretary
Mrs. Theodore S. Walker
Mrs. Willis J. Walker
Mrs. James van Loben Sels
Brooks Walker
Mrs. Wellington Henderson

Honorary Trustee

H. Harvard Arnason

Members

Mrs. Calvin Yeates
Mrs. Calvin Goodrich

MASS TRANSIT: PROBLEM AND PROMISE

By Patricia Conway George

INTRODUCTION

This issue of DESIGN QUARTERLY concerns itself basically with available or theoretically possible ground transportation systems and presents various solutions to an immediate problem in interurban and intraurban transportation. Walker Art Center also organized an exhibition on the same subject, supported by a grant from the Graham Foundation for Advanced Studies in the Fine Arts. This exhibition will open at the Walker Art Center and then travel to participating museums in major cities throughout the United States.

Transportation problems are evident in all areas of our society. To the intercity traveler, the suburban commuter or the individual in one of our major airports, transportation has become a critical issue. But Mass Transit has different meanings for different groups of our society. To the affluent motorist Mass Transit problems are apparent only during rush hour, bumper-to-bumper traffic or when he is desperately searching for a parking place in a downtown area already crowded by buses, trucks and taxicabs. At the same time the executive traveling from city to city will frequently find that his airport-to-downtown trip equals his city-to-city flying time. To the ghetto dweller, Mass Transit or the absence of it becomes de facto discrimination, the result of a society that has fled to the suburbs and, in the process, taken the industries with it.

Transportation, the movement of people as well as goods, is such a highly complex problem that it urgently demands new ways of finding solutions. The influence of Mass Transit on our environment, the continuous urbanization of our society and the fact that it often takes more than decades to develop the comprehensive systems needed makes it even more important. Systems analysis, a new science that applies mathematical programming and computer simulation to the systematic study of all facets of a complex problem, is already being applied to the Northeast Corridor. It attempts to describe the area from Boston to Washington in its present and future form and to predict the consequences of actions and possible alternatives in order to furnish legislators and agencies with pertinent information and forecasts.

Of special concern to all travelers is the interconnection between the various modes of transportation, particularly the feeder and distribution systems with the major transit networks. With airports moving further from the cities and the suburbs growing into new cities, it is essential to develop an interlocking system of transit. But with all the space age technology available, it is surprising to see the development of mass transit in the rail categories only.

The acceptance of advanced systems is appreciably risky; consequently they are seldom considered by individuals making high level decisions. Although this is understandable, another fact in transit design is not: this is the metamorphosis from good conceptual design to conventional products. Usually explained in terms of high re-tooling cost, the results often take the form of high-speed trains looking as if they had been designed and produced in the 1930 s.

It is important that we take a new look at Mass Transit Planning. Instead of pouring billions of dollars into programs such as the SST, whose sole purpose is getting to Paris or Istanbul faster, we have to view Mass Transit as a right for every individual and subsidize it accordingly. Systems engineers, industrial designers, architects and urban planners should work together with the various agencies in order to produce aesthetic and highly efficient systems for Mass Transit, which combine the flexibility of the private automobile with increased speed and safety.

P.S.

MASS TRANSIT: PROBLEM AND PROMISE

by Patricia Conway George

If there is anything more talked about and less acted upon than the weather, it must be the crisis in mass transportation. Despite the clamor of newspaper editorials and after-dinner speakers, our traffic jams are getting worse everyday.

Not that anyone expected the paltry \$375 million made available through the Transportation Act of 1964 to work miracles. It's just that after four years of listening to the same optimistic proposals, the same reports on yet another study, and the same enthusiastic descriptions of those marvelous subways in London, Paris and Moscow, many people are beginning to wonder if the long-heralded millenium will ever arrive.

True, there has been some progress. Montreal's Metro is a smashing success, proving that it *can* be done. Boston's 70-year-old transit system (the oldest in this country) is getting a bright, new look, demonstrating that there *is* hope, even for what has been described as "the most squalid public environment in the U.S.," the New York subway. And apologists for BART would have us believe that, in spite of financial difficulties, public disenchantment, political wrangling, and aesthetic compromise, San Francisco will soon be served by the most comfortable, convenient, and attractive rapid transit system in the world.

On the other hand, Cleveland has shattered pace-age illusions by coming forth with a car for its new airport-to-downtown link that looks as grim and uncommodious as anything General Grant ever had to contend with. Skeptics in the nation's capital hint privately that Washington's much-touted subway may never be built. Such an ignominious fate would not be unprecedented in the history of American transit planning. In 1919, Cincinnati laid several miles of track for a system that was never completed and has since been abandoned. And just as some of our more congested cities are turning to conventional rapid rail transit, advanced thinkers warn that the heyday of rapid rail has passed—that the future belongs to such sophisticated concepts as light-weight, bi-modal systems in which individual cars will lock into computer-controlled, electrically-powered guideways that will speed people door-to-door.

For the ordinary citizen wary of local politics and unfamiliar with computer technology, the most disturbing aspect of the current uproar over mass transportation is the "reality gap"—the seeming disparity between what he is being promised at election time and what he is likely, several years later, to be riding to work on every morning. The artist's rendering may be straight out of Buck Rogers, but the final design is too often neo-Civil War.

Although this country got off to a good start in railroading in the mid-1800's, the New York subway had hardly opened in 1904 when along came Ford's Model T. America fell in love with the private automobile, and New York was the last city in the United States to build a rapid transit system from scratch. In less affluent countries, highly developed rail systems provide almost the only means of interurban and intraurban transportation. Although rail service in Europe is now deteriorating with the rise of the automobile there, the U.S. still lags behind many other countries in rail technology and passenger service. For example, there is no interurban rail service in this country to rival the speed and comfort of Italy's "Rapido" or Japan's "Tokaido" line. In fact, timetables from 1861 indicate that service on some of our interurban lines was faster then than it is today. Total dependency on the private automobile also explains why only 6 out of the world's 44 urban rail systems are located in American cities.

Since World War II, U.S. railroads have seen their share of the passenger market decline steadily. Unlike the buses and airlines which enjoy indirect subsidies, the railroads are taxed on their trackage and subject to full-crew regulations. In recent years, operating losses on passenger runs have discouraged capital improvements, a factor that has not only stimulated the trend to air and highway travel, but has also arrested the development of rapid rail technology. For the most part, the railroads have met the competition from airlines, buses, and the private automobile negatively by cutting back schedules, reducing maintenance, and minimizing replacement. Since 1955, interurban service in this country has been curtailed by two-thirds, and there are now only 950 intercity runs still in operation. Passenger service between Pittsburgh and Cleveland—major cities only 125 miles apart and located along what the Department of Transportation has identified as one of the busiest corridors in the United States—was terminated as recently as 1965. Only a few months ago, the famed Twentieth Century Limited from New York to Chicago was replaced by a slower train. And America's fastest train, the Afternoon Zephyr between Chicago and St. Paul, averages 67.4 mph and takes 20 minutes longer to make the run than did its predecessor a generation ago.

The fate of intraurban public transportation has not been any happier than that of the interurban rail system. During the late forties and early fifties, many trolley systems and transit companies in medium-size cities went out of business. Big-city transit systems have also languished. Plagued by operating deficits and dwindling patronage, they have been unable to update equipment or meet changing transportation needs. More than one-fourth of all transit cars presently serving intraurban lines in this country were built prior to World War II.

The decline of interurban rail systems and the stagnation of intraurban transit have seriously depressed the passenger car building business. Except for deliveries of commuter coaches, mail and express cars, and an occasional day coach, the builders have not made a substantial sale in years. Some 60 per cent of all passenger cars now in operation were delivered before 1930. Like the railroads, the car manufacturers have been reluctant to invest in capital improvements, and the basic design of passenger cars has remained virtually unchanged for at least half a century. Now that renewed interest in rapid rail transit offers the prospect of a boom in the industry, builders are digging into their bottom drawers for the blueprints of that last job. Slicked up a bit, these are the designs that the manufacturers and the railroads are foisting off as "modern" rapid transit.

The trouble with this kind of marketing is that, while design in rail transport has atrophied, Detroit has been hard at work transforming the modest Tin Lizzie into a genuine plastic wood grain vinyl four-on-the-floor super eight overhead cam 380 horsepower magnesium hubcaps stereophonic automatic 36-months-to-pay status symbol. Similarly, the airlines have been wooing passengers with plush lounges, colorful planes, Rosenthal china, and free drinks—thereby creating an increased demand for luxury in public as well as private transportation. Americans may resent the fact that it takes longer to drive from home to the airport than to jet from one city to another; perhaps they *are* getting fed up with air pollution and traffic jams; they may even boggle at the thought of their country becoming one solid coast-to-coast parking lot. But it is not likely that, having been conditioned to a certain standard of comfort and convenience, they are about to abandon their private automobiles on the say-so of some expert who assures them that being squashed into a hot, dirty subway every morning is more efficient than riding to work in solitary, air conditioned