

# **PUBLIC TRANSPORTATION INTRODUCTION**

# Outline

- **Current Status and Recent Trends**
- **Significant Influences**
- **A Critical Assessment**
- **Arguments Supporting Public Transport**
- **Future Influences**
- **Ingredients for Future Success**

# Current Status

- **Ridership stable but market share is small and continuing to decline**
- **Strong financial support from all levels of government**
- **Significant growth in number of new rail starts in past 25 years**
- **Major rebuilding of many older systems over past 15 years**
- **Little institutional or technological innovation, but growing recognition that fundamental change may be necessary for survival well into 21st century**

# Trends in Modal Split for Daily Travel in the United States (1969-2001)

Mode of Transportation	1969 <sup>1</sup>	1977	1983	1990	1995	2001
Auto <sup>2</sup>	81.8	83.7	82.0	87.1	86.5	86.4
Transit	3.2	2.6	2.2	2.0	1.8	1.6
Walk <sup>2</sup>	na	9.3	8.5	7.2	5.4	8.6
Bicycle	na	0.7	0.8	0.7	0.9	0.9
Other <sup>3</sup>	5.0	3.7	6.5	3.0	5.4	2.5

Source: Socioeconomics of Urban Travel: Evidence from the 2001 NHTS by John Pucher and John L. Renne, . Transportation Quarterly, Vol. 57, No. 3, Summer 2003 (49–77). Eno Transportation Foundation, Inc., Washington, DC.

Federal Highway Administration, Nationwide Personal Transportation Surveys 1969, 1977, 1983, 1990, and 1995; and National Household Travel Survey, 2001.

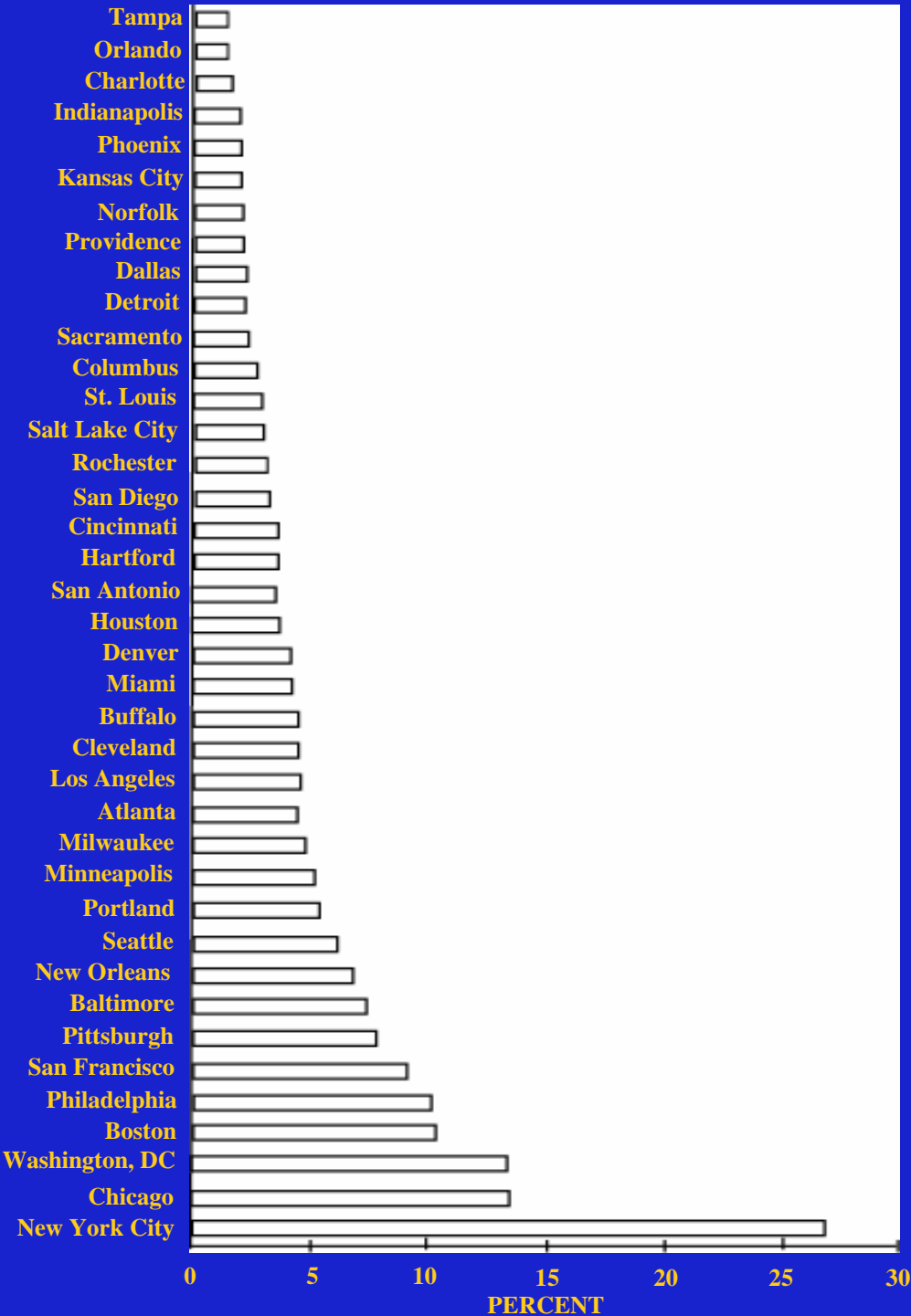
*Note:* Unlike all subsequent tables, these NPTS and NHTS modal split percentages are for daily, local travel in aggregate for the entire USA, both urban and rural, as reported by the FHWA in its own NPTS and NHTS reports. Our own tabulations, from Table 3 onward, include only local trips in urban areas.

1. The 1969 NPTS did not sample walk and bike trips, thus artificially inflating the modal split shares of the motorized mode compared to the NPTS surveys in later years. To ensure some degree of comparability, we adjusted downward the reported motorized shares of trips in 1969 by 10%, using the percentage of walk and bike trips in 1977. That is why the column adds to 90% and not 100%. Our adjustment is rough, but otherwise, the 1969 and later NPTS modal split distributions would be completely incomparable.

2. The decrease in auto mode share from 1995 to 2001, and the corresponding increase in walk mode share during the same period, are due to a change in sampling methodology that captures previously unreported walk trips.

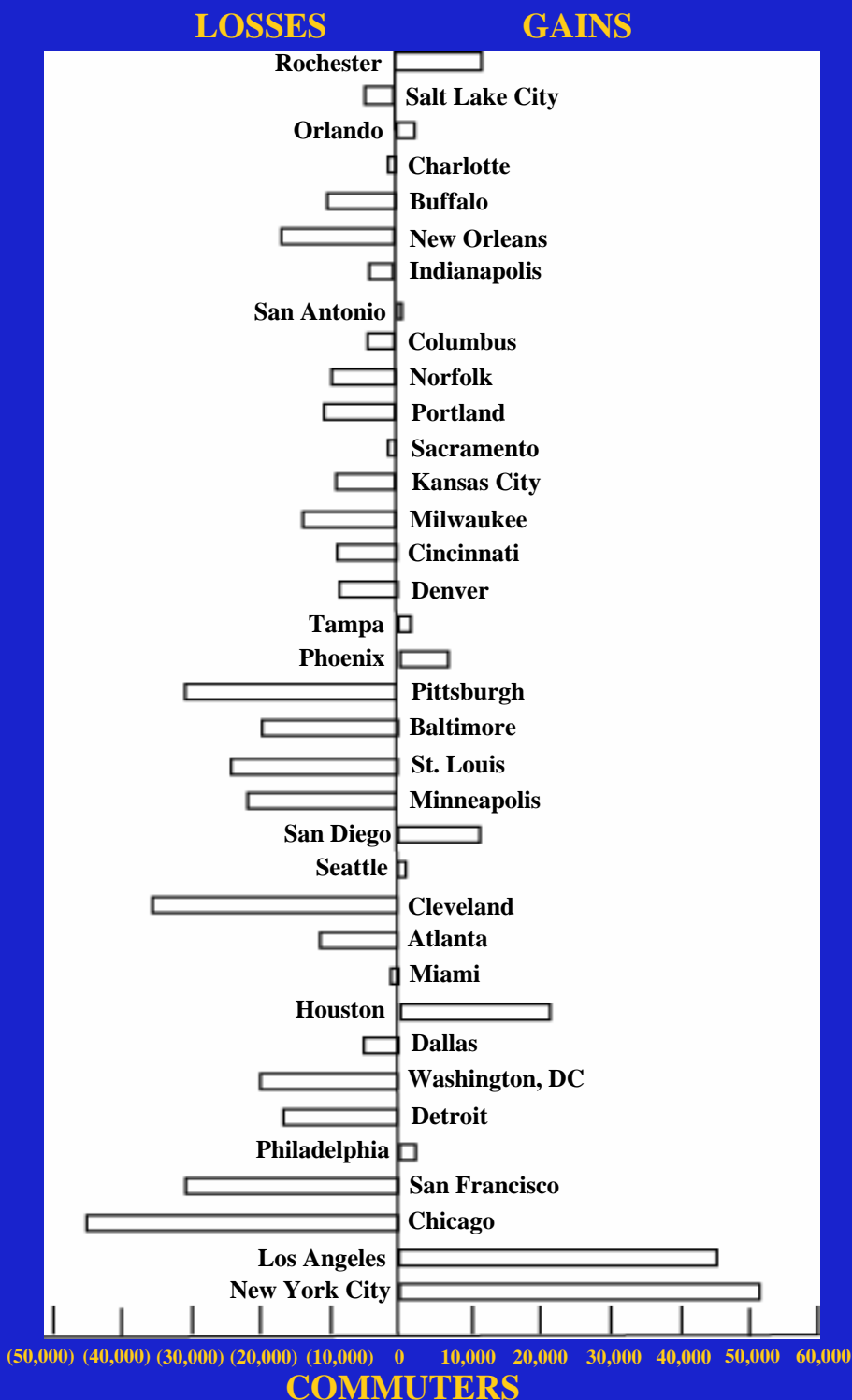
3. The “other” categories includes mainly school bus trips, which account for roughly 2 -3% of all trips in each of the survey years. It also includes taxicabs, ferries, airplanes, and helicopters.

# Transit Share of Commute for Metropolitan Areas Over 1 Million in Population (1990)



Adapted from:  
 Commuting in America  
 II: The Second National  
 Report on Commuting  
 Patterns and Trends.  
 Eno Transportation  
 Foundation, Inc., 1996

# Gains/Losses in Bus Riders, by Major Metropolitan Area (1980-1990)



Adapted from:  
**Commuting in America II:  
 The Second National  
 Report on Commuting  
 Patterns and Trends.**  
 Eno Transportation  
 Foundation, Inc., 1996

# Significant Influences

- **Suburbanization of homes, employment and attractors**
- **Low car ownership and operation costs**
- **Extensive urban road infrastructure**
- **Government policies towards roads and public transport**

# Suburbanization: 1990 Journey to Work

## A. Total Trips (in millions of daily trips)

	Jobs in:		
Homes in:	Central City	Suburbs	Total Homes
Central City	24.3 (28%)	5.9 (8%)	30.2 (36%)
Suburbs	15.2 (20%)	35.4 (44%)	50.6 (64%)
Total Jobs	39.5 (48%)	41.3 (52%)	

## B. Share of 1980-1990 Increase

	Jobs in:	
Homes in:	Central City	Suburbs
Central City	10%	12%
Suburbs	20%	58%

## C. Public Transport Mode Share

	Jobs in:	
Homes in:	Central City	Suburbs
Central City	14%	6%
Suburbs	6%	2%



# The Car-Road System\*

## High car ownership levels

- 600 cars per 1000 population

## High car usage

- 10,000 veh-km per capita annually

## Low taxes, fees and user charges for car ownership and use

- Sales taxes range from 5-8%
- Users pay only 60% of road infrastructure costs in US
- Petrol taxes are from 10-20% of European levels

## Urban parking supply is relatively widely available and often free

- 380 parking spaces per 1000 central city workers in 10 largest US cities
- 95% of car commuters enjoy free parking

## Highly developed urban road system

- 6.6 metres of road per capita in 10 largest US cities; 3 times European levels

\* Source: *The Urban Transportation Crisis in Europe and North America*, by John Pucher and Christian LeFevre, 1996.

# Public Transport Funding by Source (2001, in \$ billions)

	Capital	Operating
Fares	---	8.9 (35%)
Other directly generated	3.3 (29%)	3.6 (14%)
Local	1.3 (11%)	6.0 (24%)
State	1.1 (9%)	5.7 (23%)
Federal	5.8 (51%)	1.1 (4%)
Total	11.4 billion	25.3 billion

# A Critical Assessment

- **Public transport has been stabilized**
- **Many new rail initiatives in operation or under construction**
- **Some real success stories: New York City, Houston, Seattle**
- **Institutional change is occurring slowly**
- **Retention of political support**

# Arguments Supporting Public Transport

- **Equity:** access for those who cannot or do not choose to drive
- **Congestion:** the need for a high-quality alternative
- **Land use influence:** public transport is necessary, but not sufficient to change trends
- **Environmental:** car technology strategies are effective
- **Energy:** car technology strategies are effective

# Future Influences on Public Transport

- **Urban form**
  - continued growth on periphery is likely
- **Demographics**
  - rapid increase in numbers of elderly
- **Technological change**
  - telecommunications advances
  - ITS impacts on car/road system performance
- **Higher public expectations**
  - better service quality needed to attract choice riders
  - greater return for public support

# Ingredients for Future Success

- **Maintain supportive coalition**
  - expand base benefiting from public transport: rural, suburban, big cities
  - demonstrate that real change is occurring in response to changing needs and expectations
- **Expand the definition of public transport**
  - greater variety of services with more flexibility in use of funds
- **Greater private sector involvement**
  - greater use of partnerships and connections with private sector employers and activity provider
  - more reliance on innovative financing and procurement techniques
  - competition in the provision of services

# Ingredients for Future Success

- **Aggressive implementation of new technology**
  - better information provision: pre-trip and en route
  - more effective real-time operations control
  - improved vehicle design
- **Organizational change**
  - greater operating staff responsibility and inclusion
  - greater customer orientation