Look to NEW Transit Metropolises

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Summary

Old Transit Cities, Traffic Saturated Cities and New Transit Cities

When did New Transit Metropolises get their mass transit systems?

What actions took New Transit Cities from traffic saturation to transit-orientation?
OLD TRANSIT CITIES, TRAFFIC SATURATED CITIES AND NEW TRANSIT CITIES
OLD Transit Cities

Tokyo, Osaka, Paris and London for example

Had large traffic-immune mass transit systems BEFORE mass motorization started
OLD Transit Cities

Public transport kept a crucial central role despite rise of cars

Often after a political struggle

Useful lessons but not always relevant for India’s cities?

Former Old Transit Cities

Many large cities in the West

Transit-oriented cores but now car-oriented over wide area

Struggles in many to reduce car-dependence and regain a liveable core

- High Density Commercial Use Core
- Commercial, Retail and Industrial Land Use separated and dispersed throughout metropolitan area
- Long distance origin and destination patterns highly dispersed throughout the metropolitan area

Source: Peter Newman (1995)
Traffic Saturated Cities

Most large Southeast Asian cities, most large Latin American cities, many large Chinese cities, India’s Metros and 2nd Tier Cities!

Lacked mass transit that was traffic-immune at start of: -economic surge -big urban expansions and -(potential) mass motorization

Carlos Pardo, 2008
Traffic Saturated Cities

Vehicle flood creates congestion and harms alternatives creating vicious cycles that escalate quickly in large, dense cities without mass transit.
Traffic Saturated Cities

Early responses to traffic saturation crises?

Many attempt initially to accommodate cars:

- Road capacity focus
- Planning for dispersal and capped densities
- Car-oriented planning norms (including street widths, setbacks, parking norms, etc.)
NEW Transit Cities

Also little or no traffic-immune mass transit at start of this pivotal era but reacted differently

Includes Singapore, Hong Kong, Seoul, Taipei, Shanghai, Curitiba, Bogotá

Also includes some moderately transit-oriented cities in Europe (such as Munich, Stockholm and others)
NEW Transit Cities

Traffic saturation crises

Key responses resisted not welcomed cars

Private mobility still increased but at slower rate

Public transport mobility increased too, in some cities faster than private!

A change of path
Pathways for cities that enter mass-motorization era without significant mass transit

- **Chronic traffic saturation**
  - Some muddle on
  - Motorization; very high road investment, suburbanization
  - Car dependence “built in”

- **Traffic-saturated cities**
  - Some increase their efforts to welcome cars
  - Continued rapid motorization
  - Low transport investment

- **Automobile dependent cities**
  - Motorization; very high road investment, suburbanization
  - Car dependence “built in”

- **Newly motorizing cities without much traffic-immune mass transit**
  - Some cities act early to change mindsets and policies on cars
  - Rapidly rising car ownership
  - Low transport investment

- **NEW TRANSIT CITIES**
  - Avoid car subsidies and restrain growth of car ownership and/or use
  - Improve public transport institutions, investment, capacity and quality
  - Transit-oriented land-use planning and development

- **Traffic-saturated cities**
  - Restrain car use, invest in public transport & NMT
  - But how late is too late?

- **A spectrum between the extremes (depending on priority for cars versus alternatives)**
  - Low mobility
  - High mobility
NEW Transit Cities

Responses to traffic saturation crises

- Cars as luxury not necessity
- Public transport investments AND effort on institutions AND spatial priority
- Transit-oriented planning
- Walkability and “placemaking” (places worth saving from traffic!)
NEW Transit Cities

Political struggles that changed mindsets NOT just policies

Repeated struggles to overcome objections to these policies “but I need my car!"

Cars are optional! Need to work hard to make sure this stays true
(at least for most people, across much of the city)
Europe’s new *moderately* transit-oriented cities

Motorization, economic boom and urban growth in NW Europe from 1950s and most *initially* welcomed cars

But traffic saturation then badly hit medium-sized tram-based cities (worse than large Old Transit Cities)

Some resisted car-dependence better than most (examples: Munich and Stockholm)
WHEN DID NEW TRANSIT CITIES GET THEIR MASS TRANSIT SYSTEMS?
Singapore

MRT initial system opened **1987**

Hong Kong

MTR lines from 1979;
Kowloon-Canton Railway (KCR) double-track & electric only from 1983
Seoul

Suburban rail line upgrading from *1970s*

First subway line *1974*, 2nd, 3rd and 4th in 1984-85

Image via [http://www.urbannrl.net/as/kr/seoul/seoul-map.htm](http://www.urbannrl.net/as/kr/seoul/seoul-map.htm)
Taipei metro since 1996

Some Taiwan Railway Administration services provide suburban service
Shanghai

Shanghai metro first line opened in 1993

Image via Wikimedia Commons user ASDFGH
Curitiba

First trunk BRT line opened in 1974
Bogotá’s Transmilenio BRT system first phase opened in 2000
Munich

U-bahn built from 1965

S-bahn (regional lines turned into strong suburban rail network only since 1971)

Images both via Wikimedia Commons Maximilian Dörrbecker (Chumwa)
Stockholm

Metro first line 1950

Commuter rail small with poor service until major improvements from 1970s and especially in 80s and 90s

WHAT ACTIONS TOOK NEW TRANSIT CITIES FROM TRAFFIC SATURATION TO TRANSIT-ORIENTATION?
Private cars treated as luxury not necessity: local fuel surcharges

Bogotá:

Colombian cities have a 20% surcharge on all gasoline sales

Half of Bogotá’s fuel surcharge goes to TransMilenio infrastructure

Seoul has also long had an urban fuel surcharge

Transmilenio in the city centre
Private cars treated as luxury not necessity: vehicle quotas

Singapore’s Vehicle Quota System (VQS) with its Certificates of Entitlement (COEs) since 1989

Shanghai vehicle quota with ‘vehicle license auction’ since 2002

Beijing new vehicle quota uses lottery not an auction

Several other Chinese cities likely to soon follow

Singapore’s vehicle quota is more powerful than its congestion pricing
Private cars treated as luxury not necessity: parking supply restraint in city centres

Seoul business districts: parking supply restricted; on-street prices highest band

Many European cities also strongly restrict central parking supply (see ITDP’s European Parking U-Turn)

Singapore: CBD parking supply limited (in different ways over the years)

Hong Kong: low parking norms and high market prices charged, even for government parking lots

For more on parking policy see http://www.reinventingparking.org
Median monthly unreserved CBD parking price (US$)

Source: Colliers International Global CBD Parking Rate Survey 2011
Private cars treated as luxury not necessity: parking policy and car ownership

**Hong Kong:** tightly restricted parking with housing until 1981

**Singapore public housing and most Hong Kong housing:** parking charges are unbundled from the price of housing

**In most New Transit Cities:** limited parking supply and strengthening on-street parking management is de-facto constraint on car-ownership in older, inner-city areas

Residents pay at least S$60 (Rs3000) per month. Visitors pay S$1 (Rs50) per hour

For more on parking policy see [http://www.reinventparking.org](http://www.reinventparking.org)
Effort on public transport: ...
AND organization/institutions

Hong Kong and Singapore: bus regulation strengthened in 1970s.
Area Franchises with service standards

Bus regulatory options (diagram by Paul Barter)

Government takes much responsibility for outcomes

Public monopolies

Proactive planning with service contracts

Well-regulated Franchises

Passive franchises

Deregulation

Compatible with ambitious integration

Incompatible with integration

Competition for the market possible

Competition in the market
Effort on public transport: organization/institutions

Stockholm, Munich and Seoul regions:

mixes of public-sector and private operators
now under gross cost contracts with incentives
improved integrated, planned and scheduled by public agency

Network reforms enabled by Seoul;'s “semi-public” bus system reforms

Source: Kim, GC 2007 with permission
Effort on public transport: organization/institutions

Bogotá: Transmilenio public infrastructure/private operations (under competitively tendered gross-cost contracts with incentives)

Source: Transmilenio website
Effort on public transport: spatial priority

Singapore and Hong Kong: traditional bus lanes with quite strong enforcement since 1970s

Munich: program of on-road tram priority yielding 30% operating speed increase

Singapore has both all-day (as here) and peak-only bus lanes

Image credit: Flickr user Merlijn Hoek
Effort on public transport: spatial priority

Taipei 1990s effort on bus priority throughout inner city

Using median bus lanes
(yes these ARE almost always better then kerbside lanes)
Effort on public transport: spatial priority

Amsterdam

Bogotá

Image credit Flickr user mariordo59

Seoul (by Kim, GC 2007 with permission)
Transit-oriented, not auto-oriented planning

Intensification of key transit-oriented business districts

Singapore

Shanghai

Image credit Flickr user Andy*Enero
Transit-oriented, not auto-oriented planning

Allow dense development

Below is a LOW density area in Singapore:

- FAR (FSI) 1.4 for private ‘landed properties’
- The HDB public housing is 2.8 or 3.0 in this area
- A condominium area is 3.5
Transit-oriented, not auto-oriented planning

Allow dense development

By early 1990s, Taipei was saturated with cars and especially 2-wheelers

But stayed dense and compact with intense infill and little sprawl

Fertile ground for change of approach in mid-1990s
Transit-oriented, not auto-oriented planning

Avoid car-oriented street width and set back standards
Transit-oriented, not auto-oriented planning

Parking standards/norms/minimums:

Keep at low levels (Seoul, HK, Singapore, Shanghai, Taipei, Bogotá); make flexible (Stockholm); switch to maximums (Seoul CBDs, Munich inner city)

Prices in a Hong Kong government-owned parking structure. HK$22 per hour = Rs170
Transit-oriented, not auto-oriented planning

Market-based transit-oriented development

Needs excellent transit of course

AND for planning regulations to not stand in the way

In Bangkok, where planning is very weak, Skytrain has begun to strongly influence real estate development
Transit-oriented, not auto-oriented planning

Planning led transit-oriented development

For example, Singapore’s metropolitan-scale transit-oriented planning since 1971
Walkability, “placemaking” and liveable streets

Fill the city with great places to be!
Reward for the ‘sacrifice’ and often a key part of the politics

Europe’s new transit cities are strong on this
Chinese cities increasingly taking this seriously
Walkability, “placemaking” and liveable streets

Seoul

Elevated highway demolished for return of waterway (*Cheonggyecheon*)
Reinstated ground-level crossings
Pedestrian zones, expanded footways, traffic calming, placemaking
Walkability, “placemaking” and liveable streets

Bogotá parking reforms reclaimed public space for people
See Reinventing Parking Blog “Bogotá’s Parking Revolution”

Calle 5 in Bogotá, Before and After
Key Messages

NEW Transit Cities seem especially relevant for India’s cities

Were faced with challenging circumstances similar to those facing India’s cities today

Resisted the idea that cars are a necessity and acted to make sure cars remained optional