

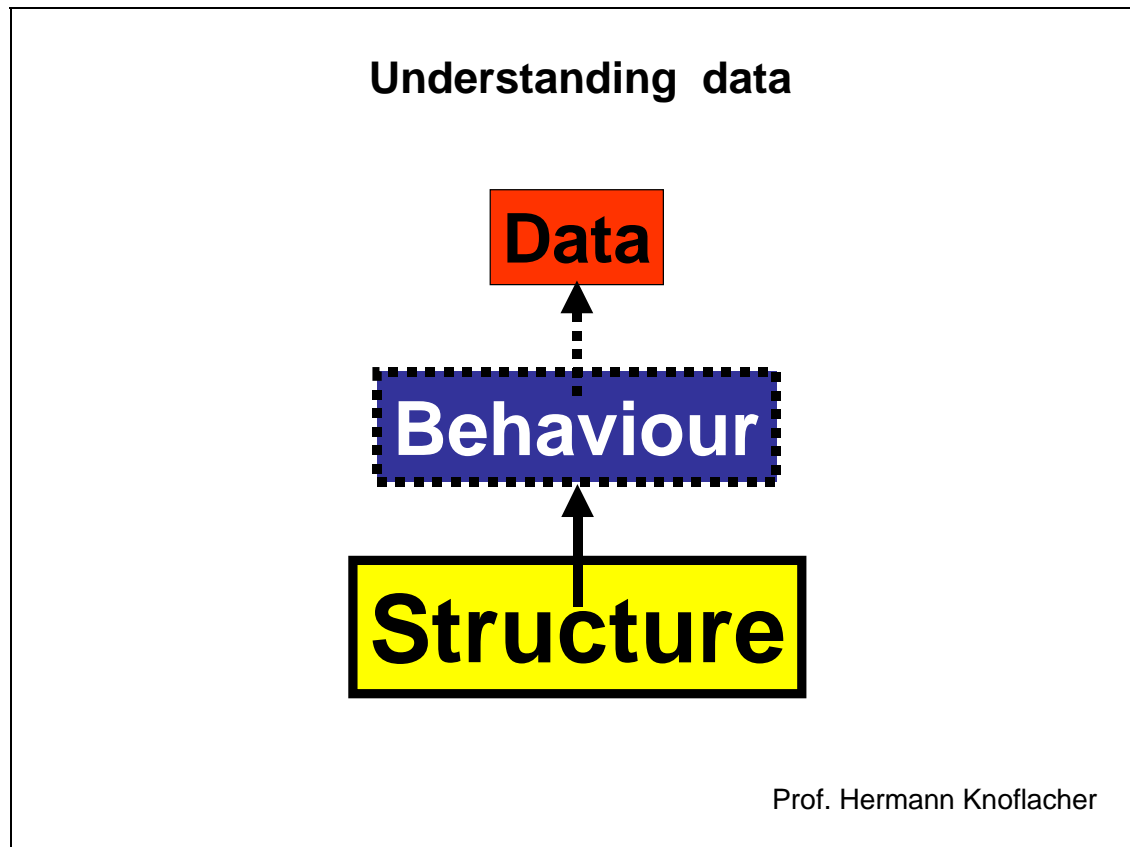
# **UNDERSTANDING DATA: INFLUENCE OF CITY STRUCTURE ON HUMAN BEHAVIOUR, TRAFFIC AND PUBLIC TRANSPORT**

Institute for Transport Planning and Traffic Engineering  
Technical University of Vienna, Austria.

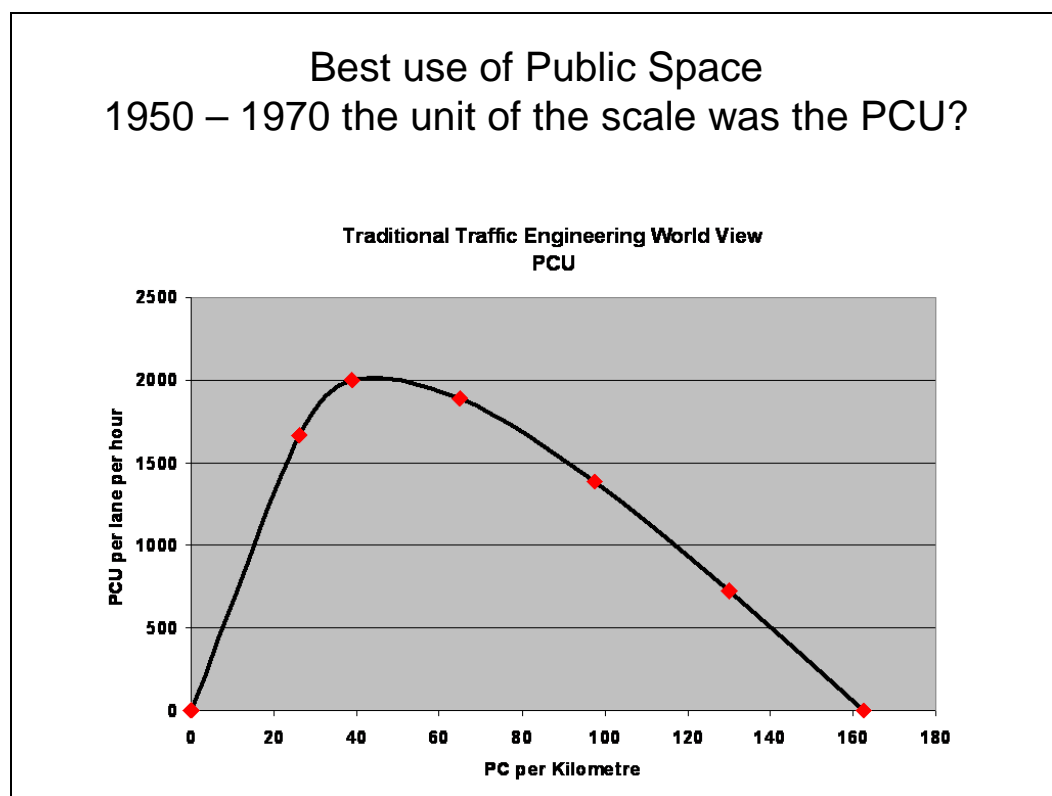
## **Summary of Presentation: Hermann Knoflacher**

Slide Number	Description
1 - 3	Understanding data
4 - 14	Road user behaviour, cars, structures and capacity
15 - 18	Examples of effective measures
19 - 26	Motorisation, parking, access and public transport
27 - 29	The corridor – distance between stops
30 - 31	Not only physical structures
32 - 35	International recommendations for urban transport measures
36 - 40	Delhi specific issues

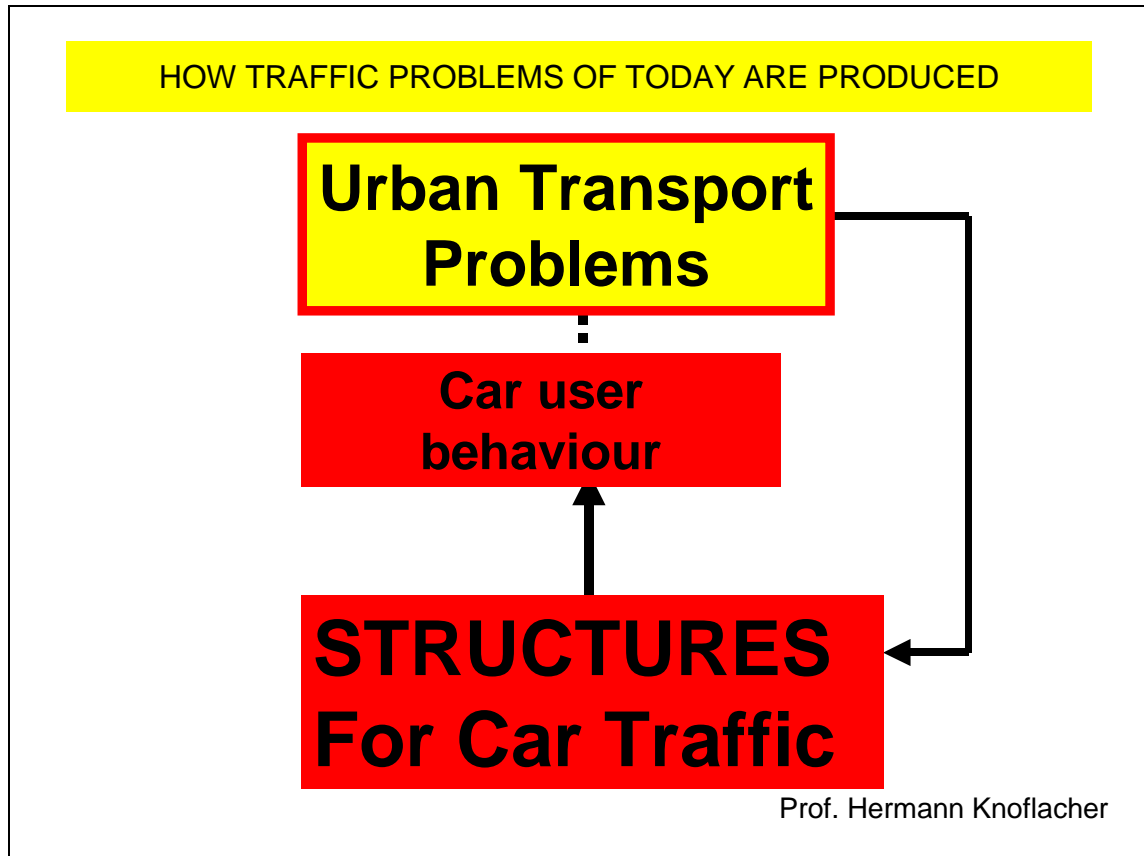
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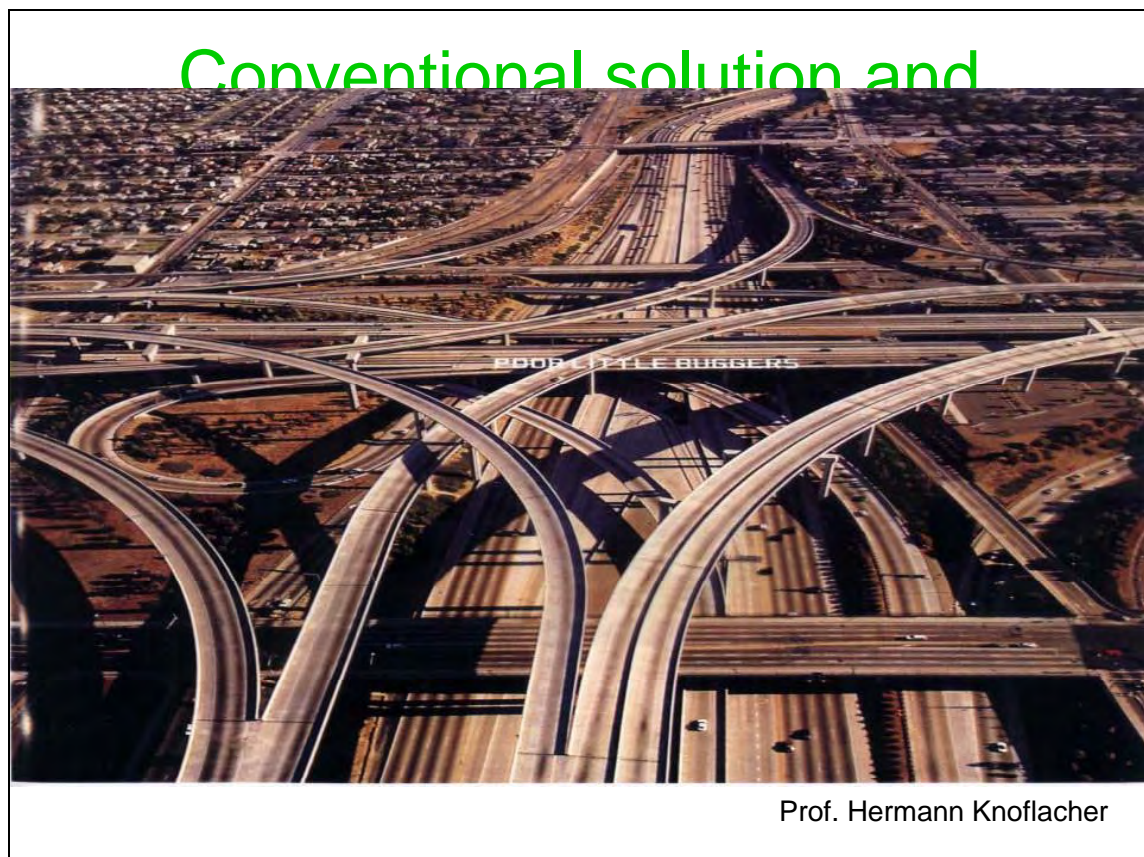
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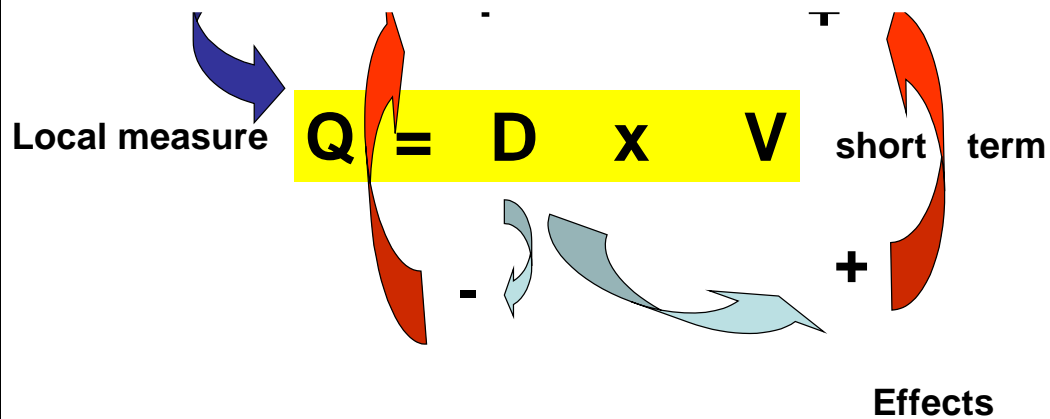
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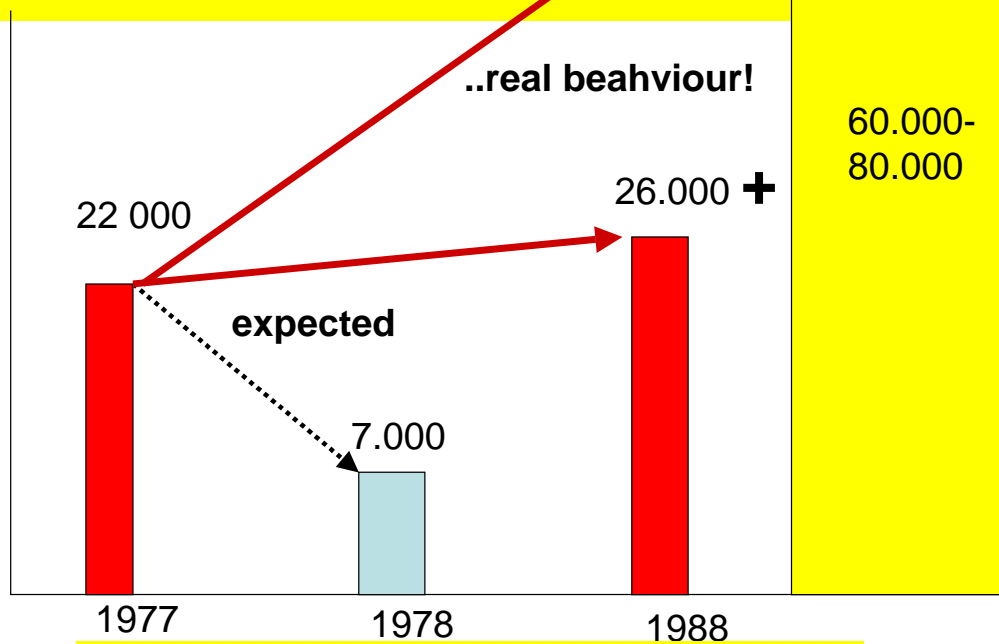


...if capacity is enhanced

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Slide 6

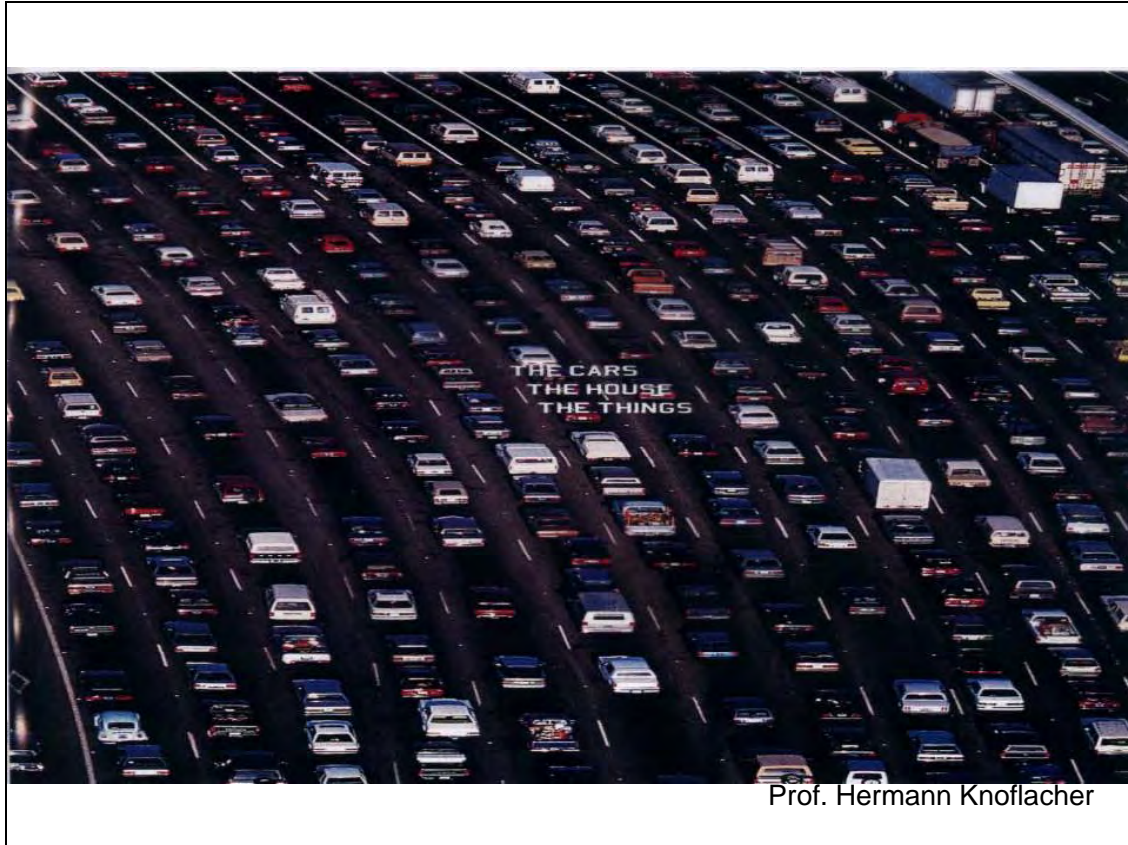
Example: Schlachthausgasse und A 23



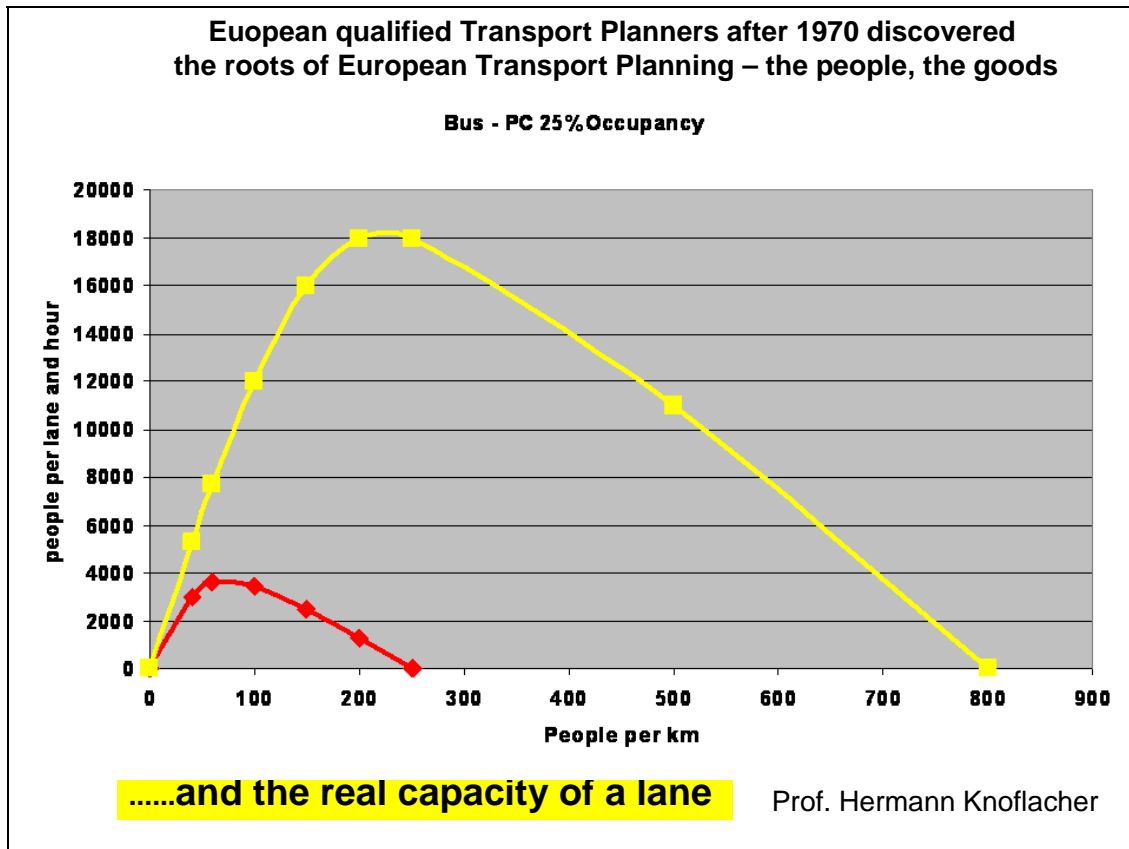
before .....after A23 .....10 years after A23

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Slide 7

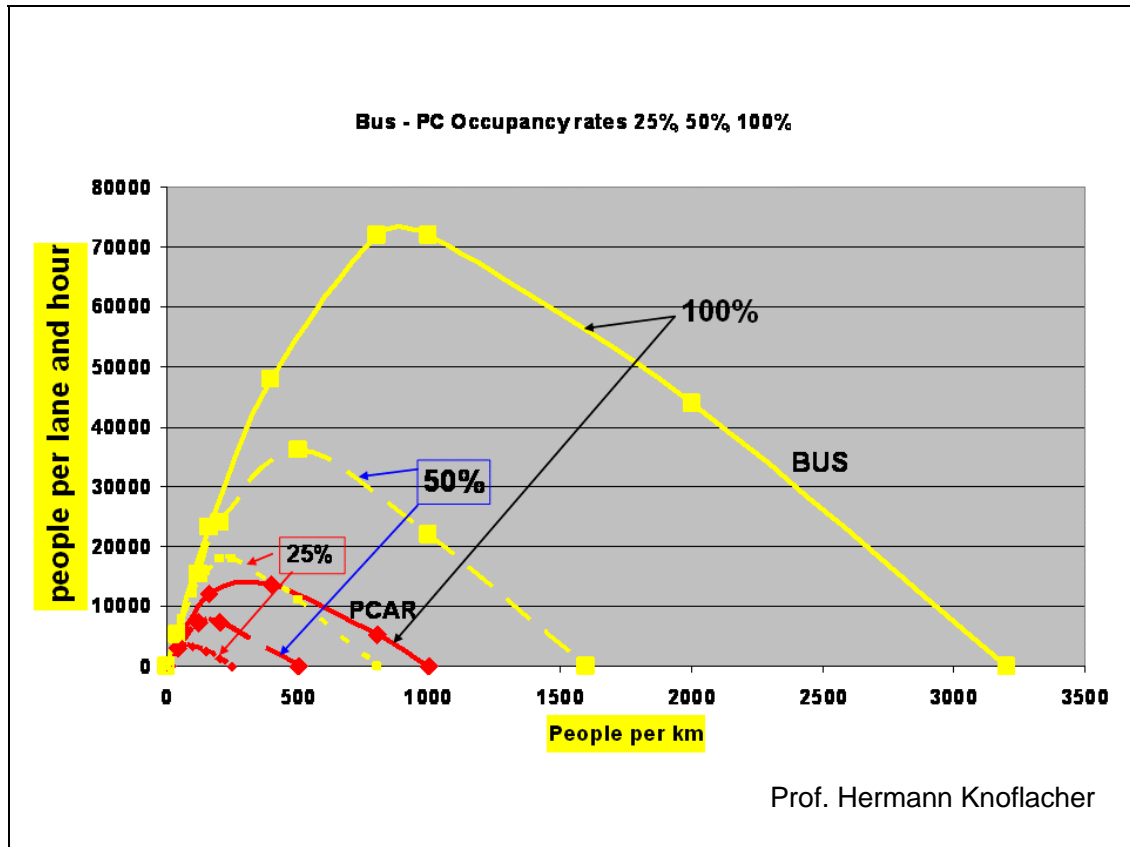


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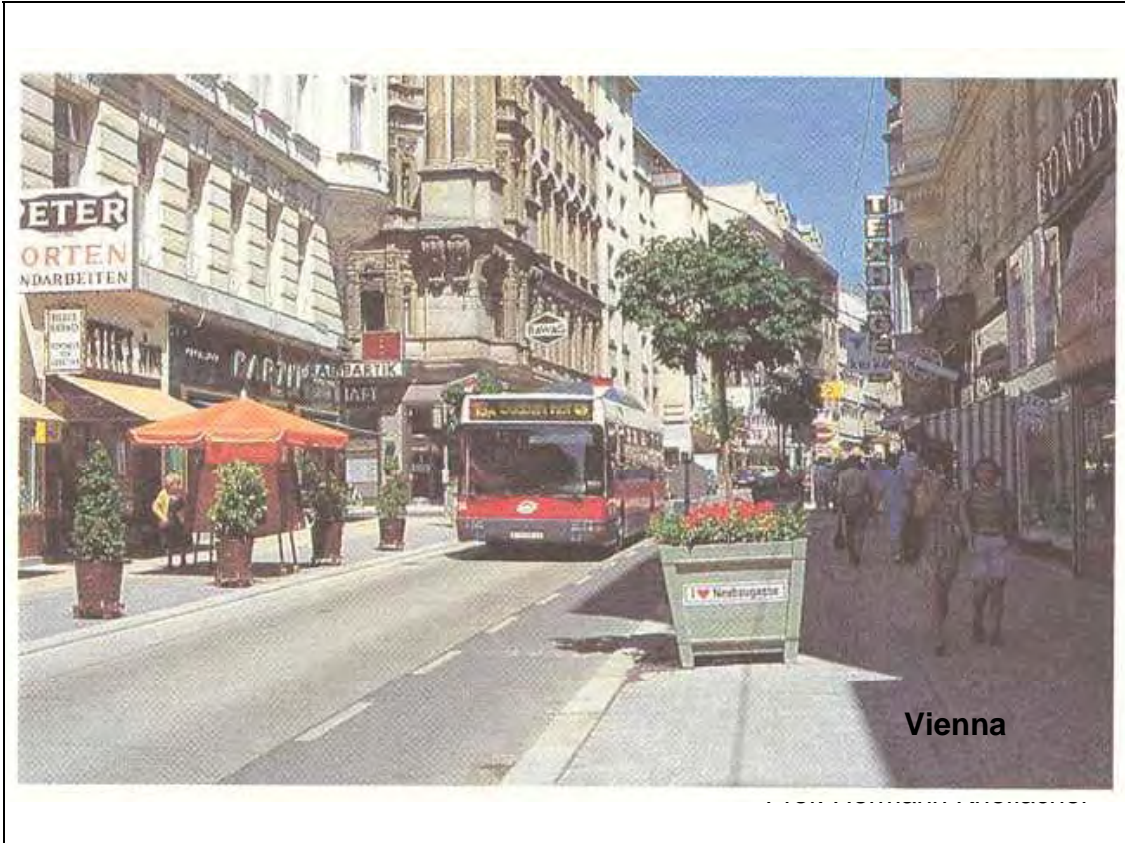
Slide 9



Slide 10



Slide 11



Slide 12





Slide 13



Slide 14

## Long way to political action

**Mayor Hans Joachim Vogel Munich 1970**

“..each million we invest into urban motorways is an investment to destroy the city“

- **Mayor Ken Livingston 2003**
  - “...in central London, it is impossible financially or physically to solve transport needs on the basis of further extending use of private cars.
  - It is for this reason that we must radically improve public transport and introduce measures to reduce congestion.”

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Slide 15

## Examples of Effective Measures

Vienna 1995 parking fee in all Inner districts

- Commuter car traffic reduced by 25%
- Public transport use increased by 6%
- Speed increased from less than 10km/h to 14 – 16km/h
- Benefits for shops
- Congestion is not a problem anymore in this part of the city

•London Results (February 2004)

- Traffic reduced by 20% (cars by 30%);
- Delays reduced by 32% – 40%;
- Speeds increased by 30%;
- Journey times to central London reduced by 14%;
- Bus patronage increased by 14% (morning peak hour);
- Number of buses in the zone increased by 19%; and
- Excess waiting time at bus stops fell by one-third.
- Cycle traffic increases by 20%

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Slide 16

Eisenstadt Before 10 000 cars, 6000 pedestrians per day



Slide 17

Eisenstadt after: 30 000 pedestrians per day plus .....



Slide 18

HOW TRAFFIC PROBLEMS can be solved

**Urban Problems  
solved**



**Social Behaviour  
or Urban People**



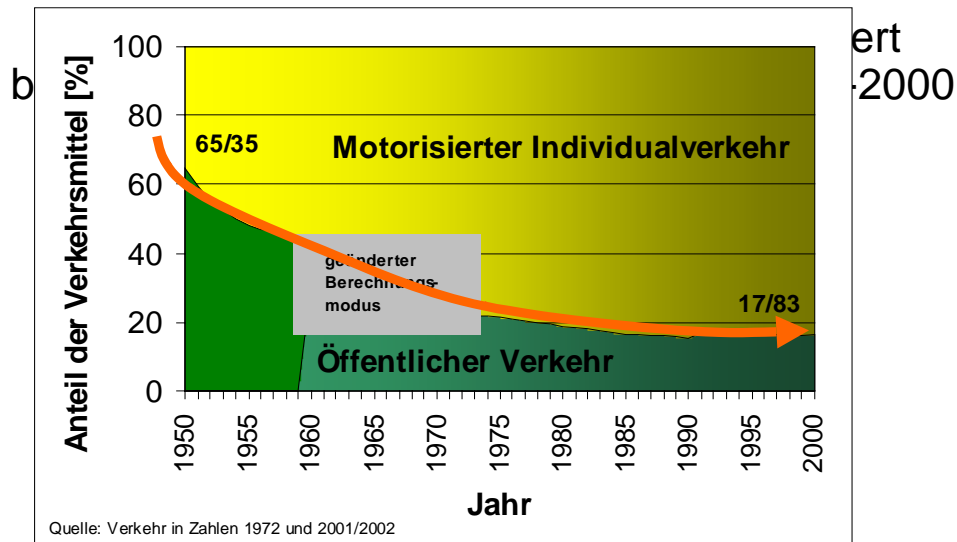
**Structures for  
Pedestrian  
Cyclists  
Public Public Transport**



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## Slide 19

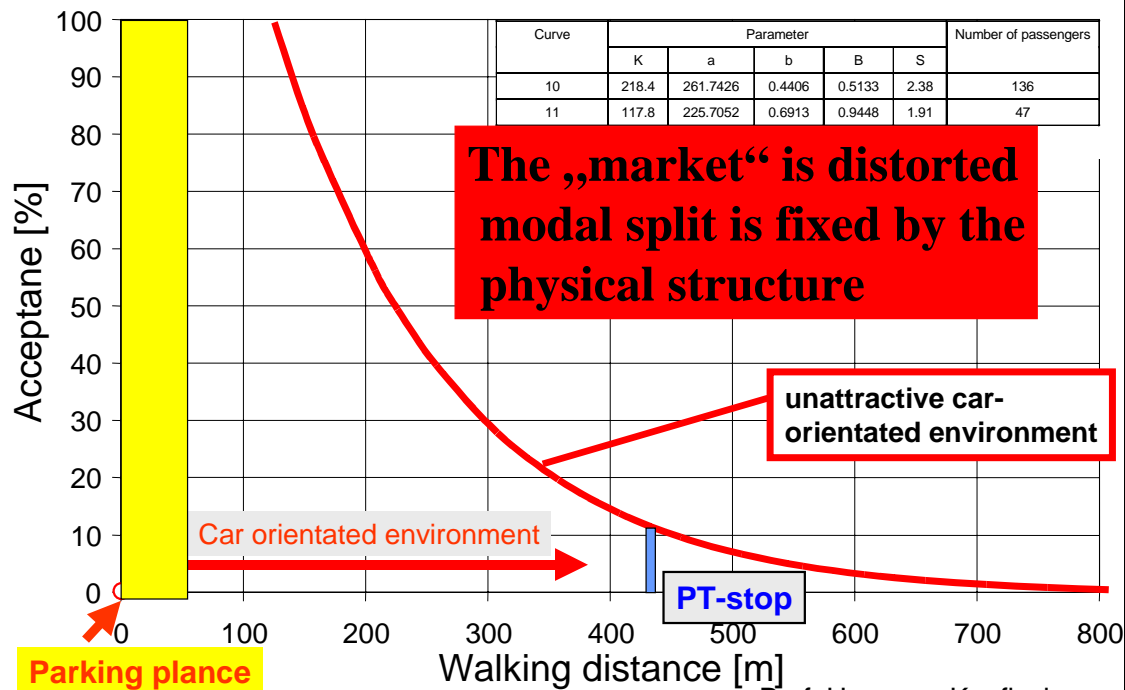
If we don't learn from the past we have no chance in the future. **Europe was very late!**



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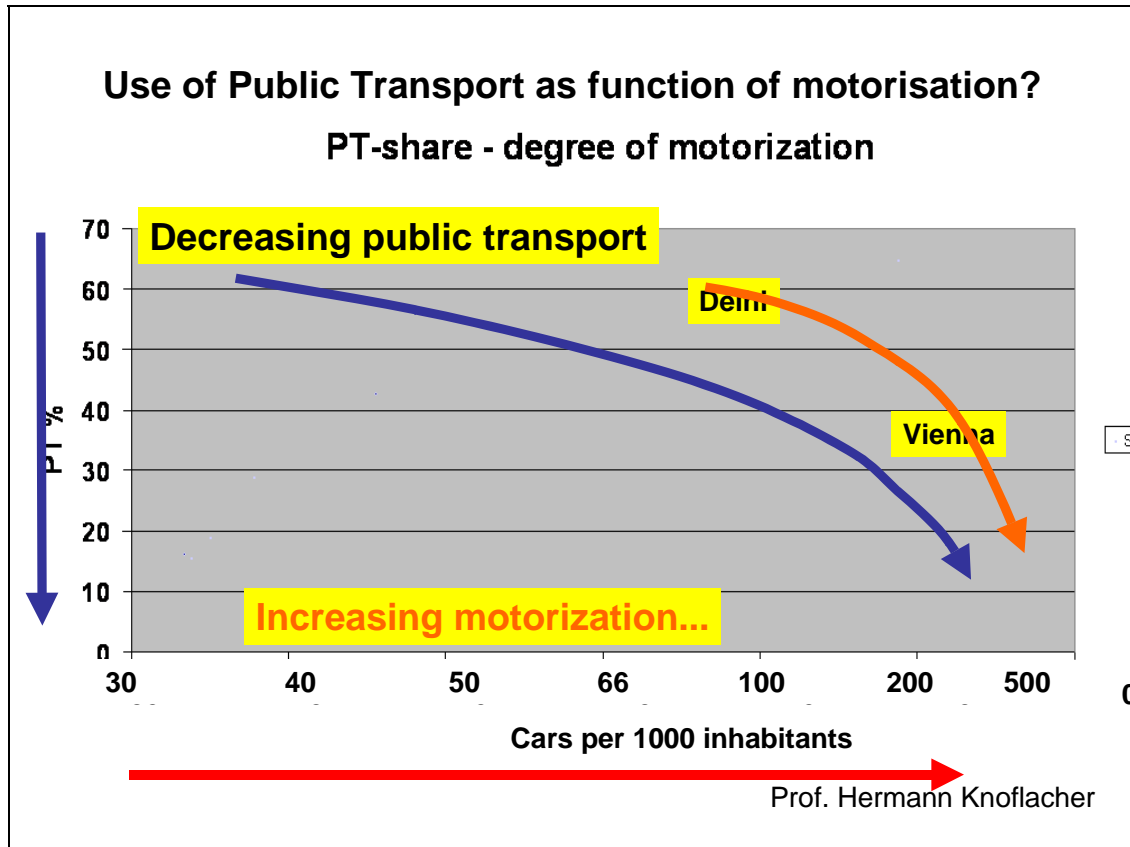
## Slide 20

## How People behave?

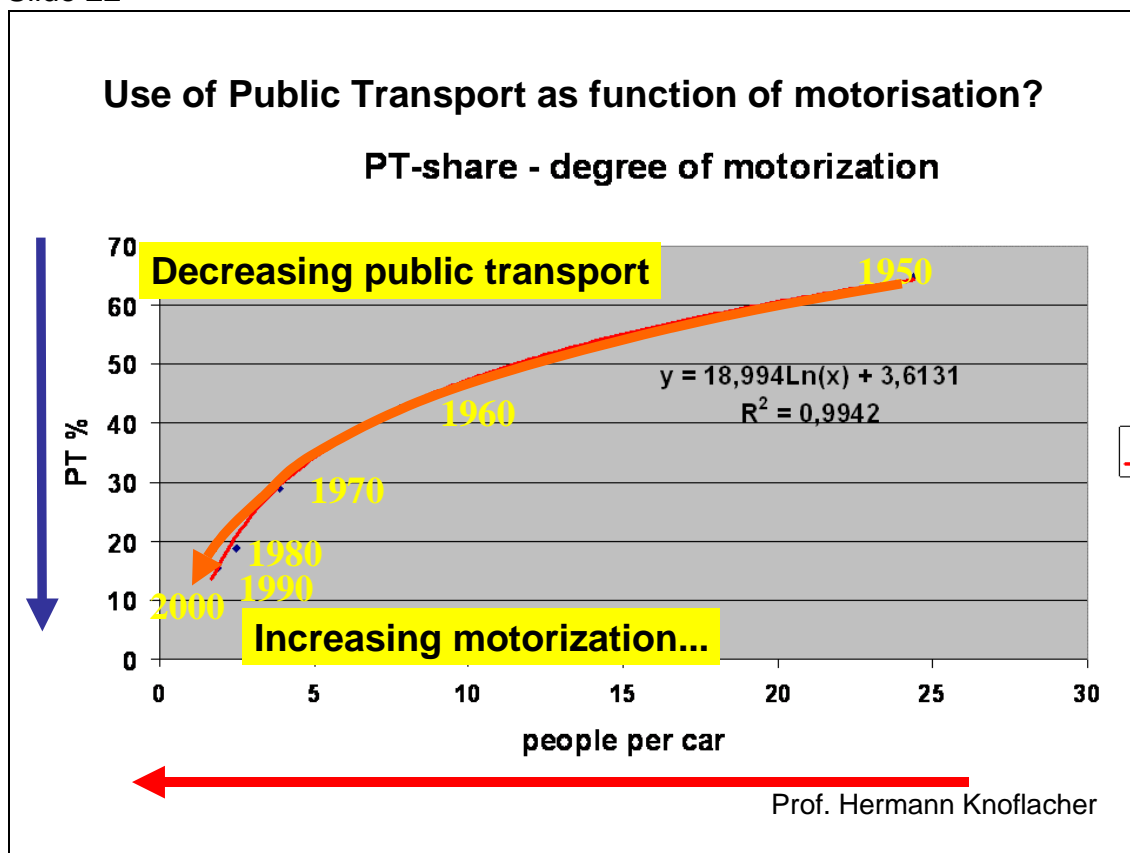


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Slide 21

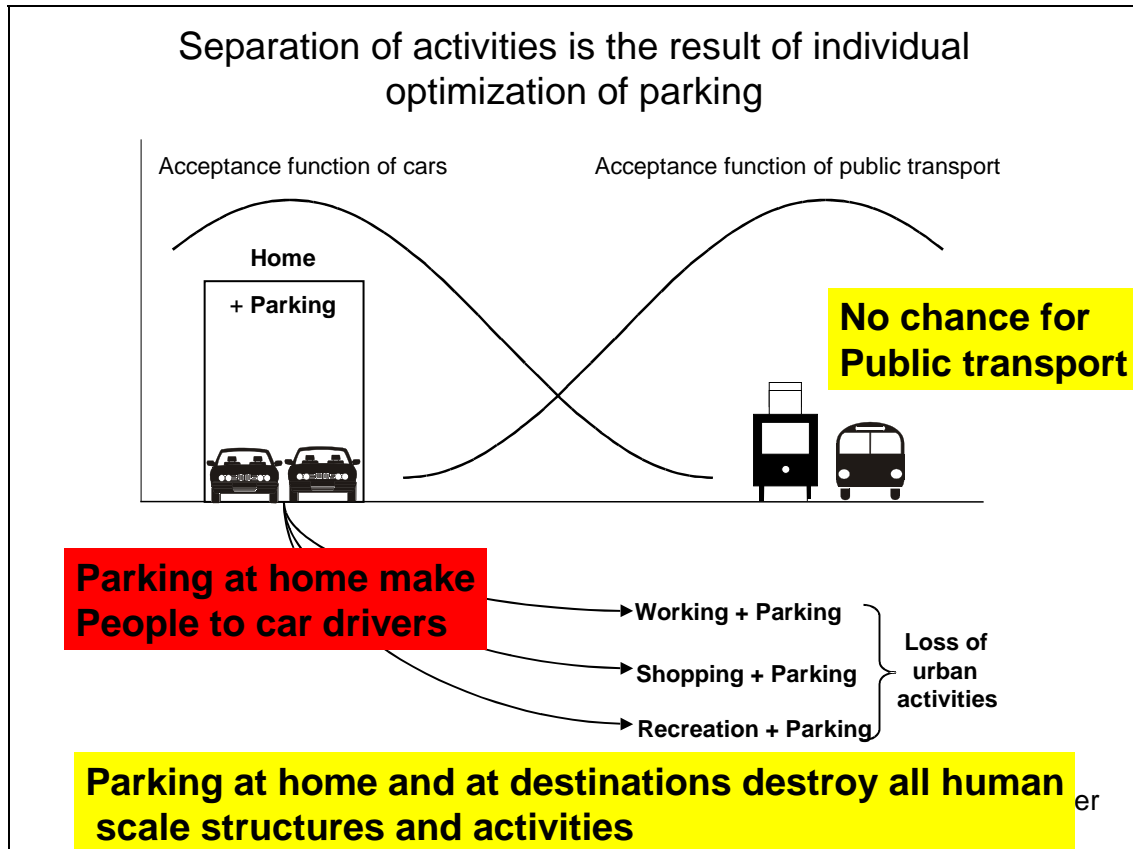


Slide 22

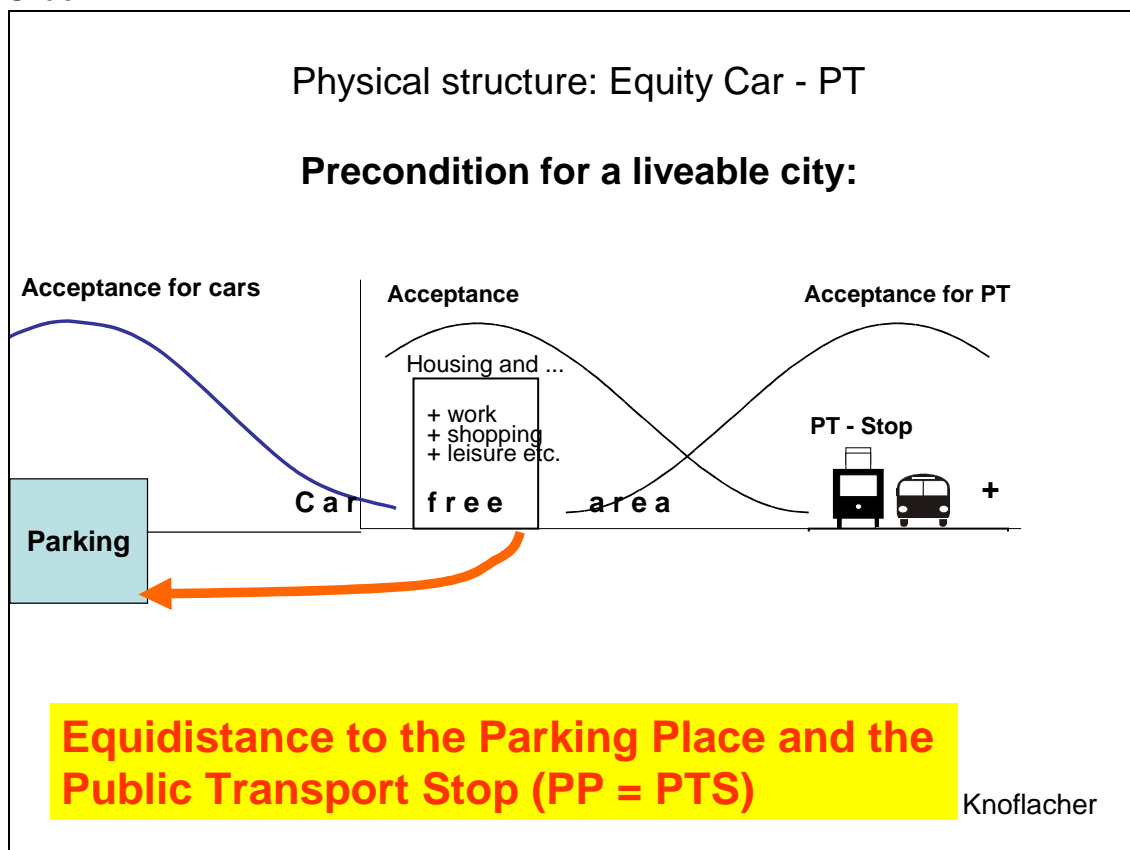


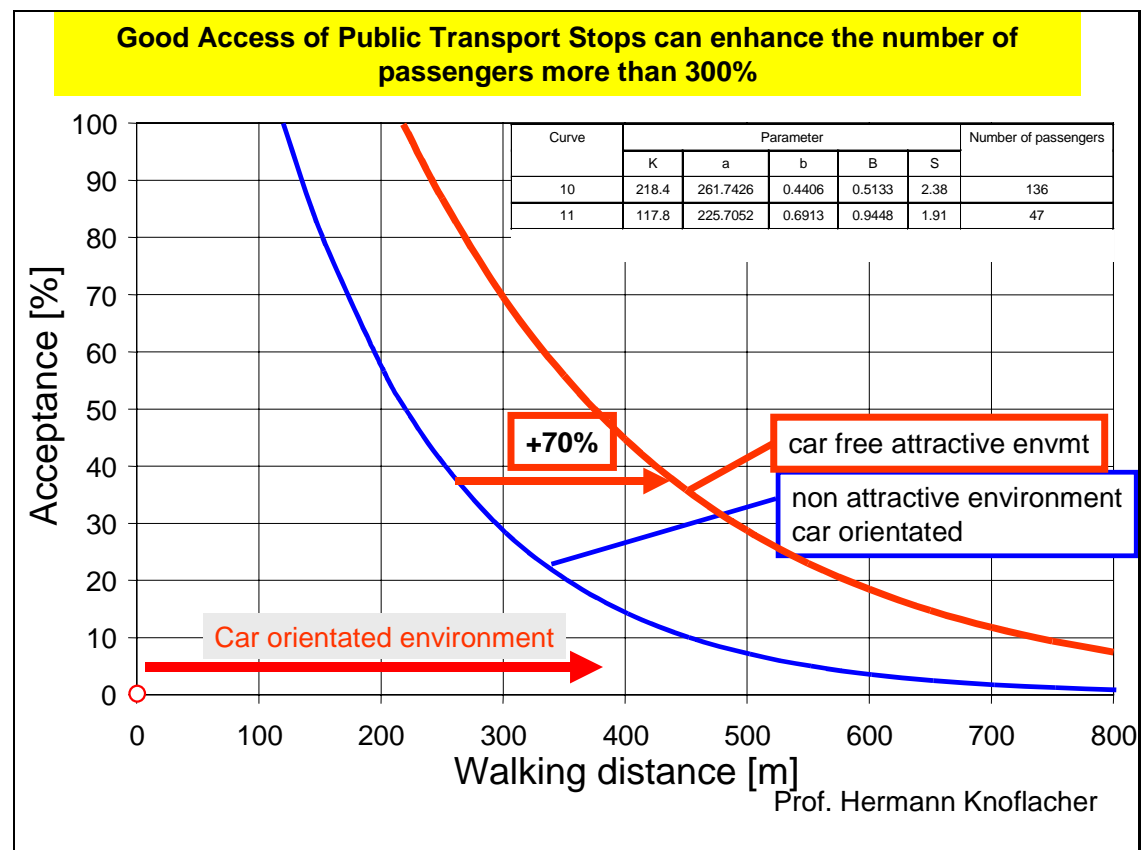
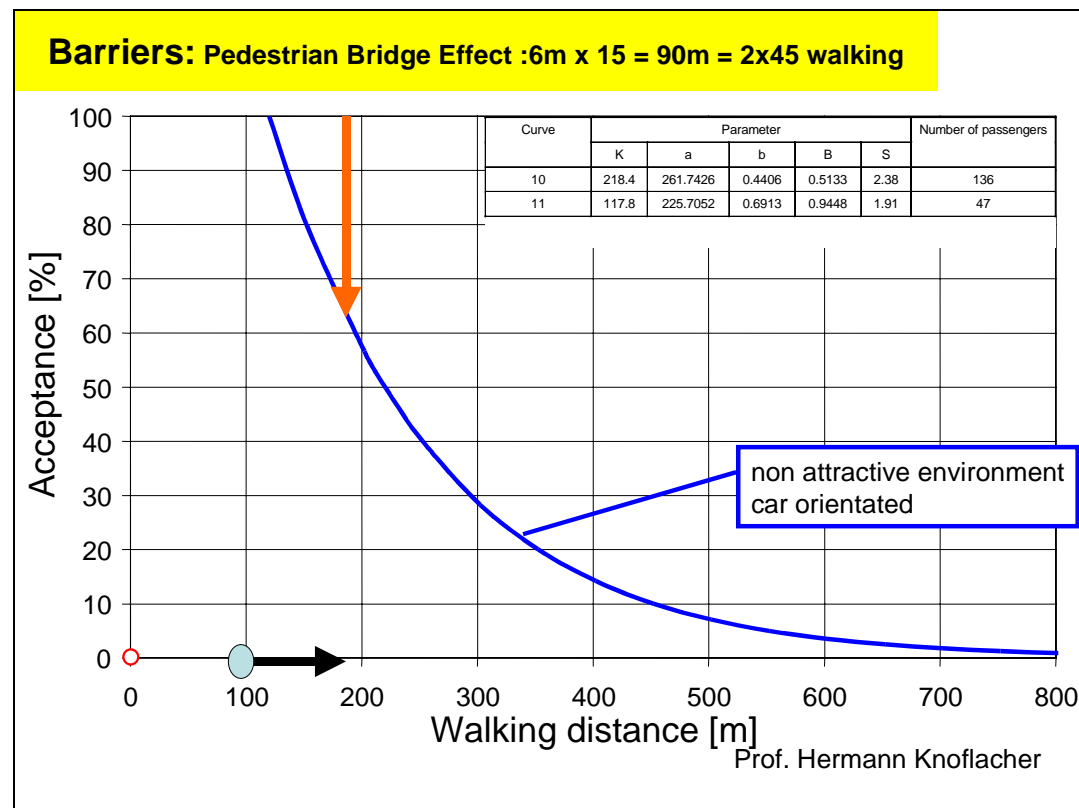


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## Slide 24





Slide 27

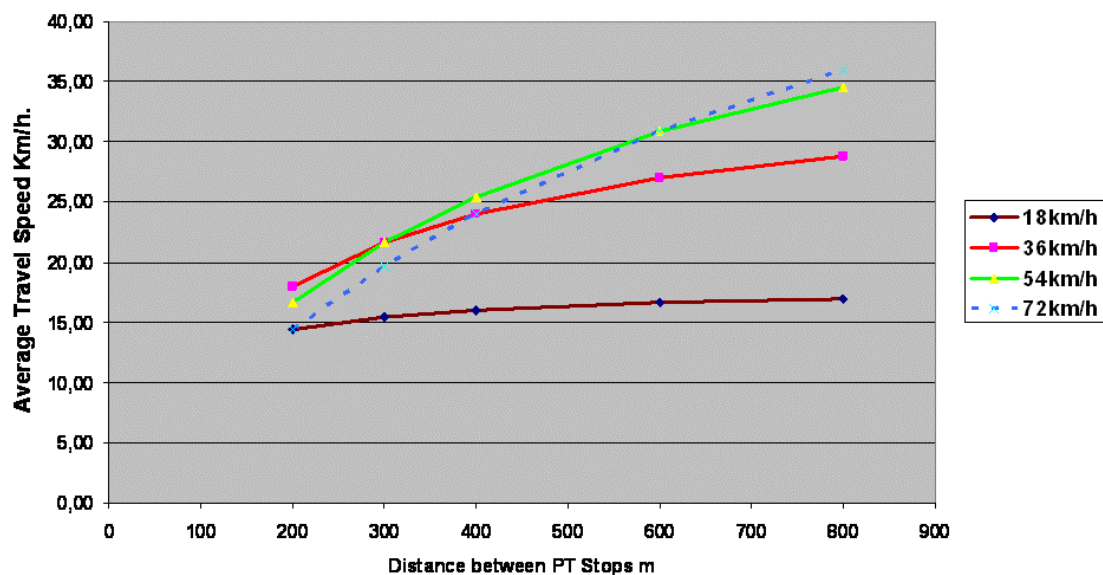
# The corridor

**What is the right distance between  
Bus stops?**

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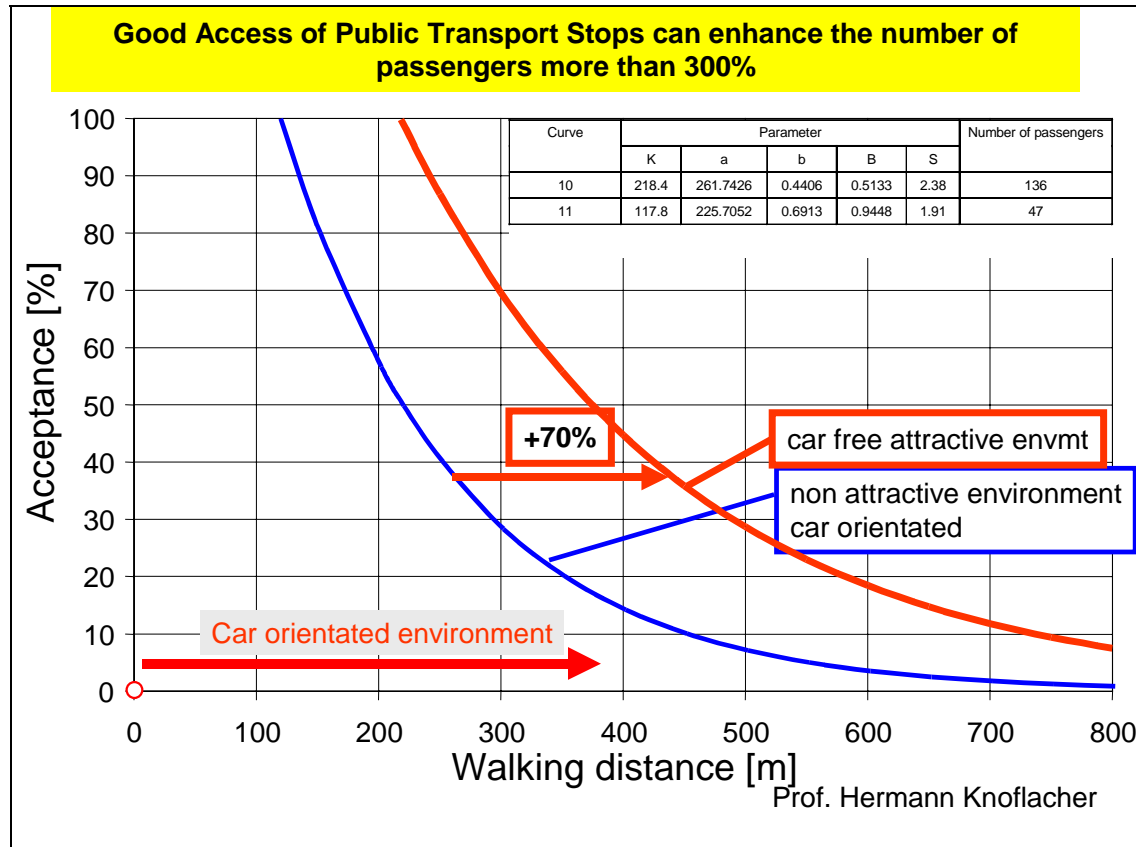
Slide 28

**Distance between Stops – Average Travel Speed**  
Acc/Decc 1m/sec<sup>2</sup> + Boarding time



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Slide 29



Slide 30

## Not only **Physical Structures..**

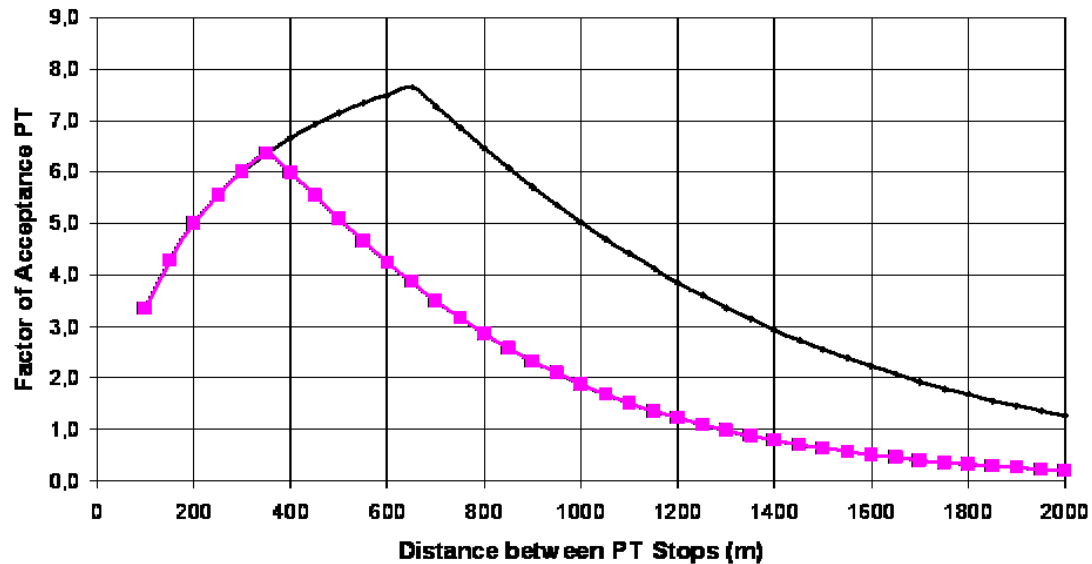
- **...but also Organisation, Regulations and Law**
- **Financing**
- **Management and Monitoring**
- **Culture**
- **Promotion**

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Slide 31

### Optimal Distance between PT stops, taking into account real human behaviour



Maximum Speed 50 km/h

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Slide 32

## International ....

- Trends,
  - Guidelines
  - Recommendations
- for Urban Transport Measures

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Slide 33

**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL,  
THE EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL  
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**Towards a thematic strategy on the urban environment**

*“... promoting an integrated horizontal approach across Community policies and improving the quality of urban environment, taking into account progress made in implementing the existing co-operation framework, reviewing it where necessary, and addressing:*

- the promotion of Local Agenda 21;*
- the reduction of the link between economic growth and passenger transport demand;*
- **the need for an increased share in public transport, rail, inland waterways, walking and cycling modes;***
- **the need to tackle rising volumes of traffic and bring about a significant decoupling of transport growth and GDP growth;***

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Slide 34

**„We as European Cities, who make all efforts to improve the quality of life by supporting Walking, Cycling and Public Transport, can not understand, why Majors in the developing countries still invest so much into car traffic, which deteriorate the quality of urban life and urban economy.“**

**European Mayors 2005**



a worldwide series of conferences  
investigating the future of cities

organised by the Cities Programme  
at the London School of Economics and  
Political Science and the Alfred Herrhausen Society,  
the International Forum of Deutsche Bank

Slide 35

**.....but....**

**..the System is an**

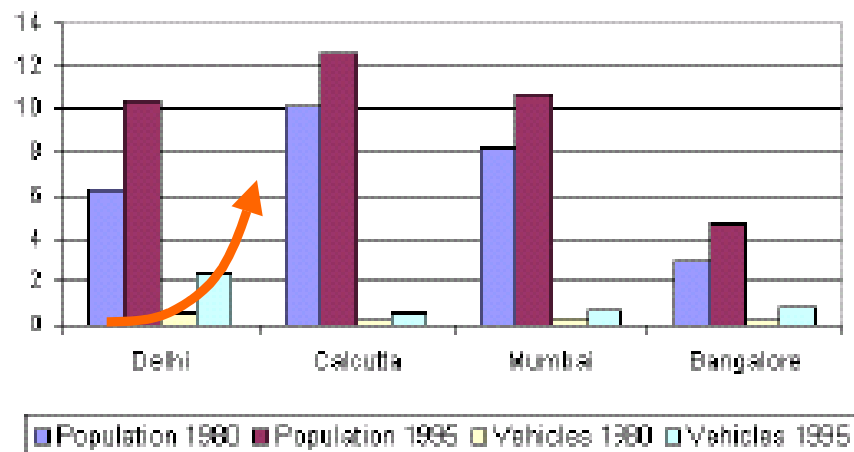
**Dynamic System**

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Slide 36

### Speed of motorization - How can you catch up?

#### Growth in Population and Motor vehicles



**Figure 1** Growth in Population and Motor vehicles (million)  
 Sources: GOI (1991), GOI (1996) and Reddy (1995). Cited in Bose (1998)

Slide 37

From Words to Actions  
**Speed matters**

- If we are to late
- Costs can not bring back lost chances

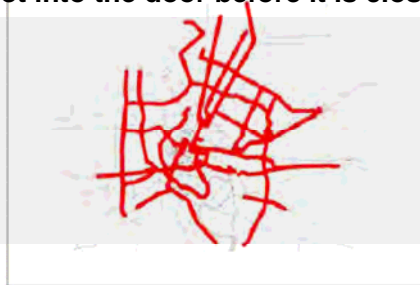
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Slide 38

**Systems at the same cost**

„set the foot into the door before it is closed“

How much does  
1 billion US\$  
buy



426 kilometres of BRT



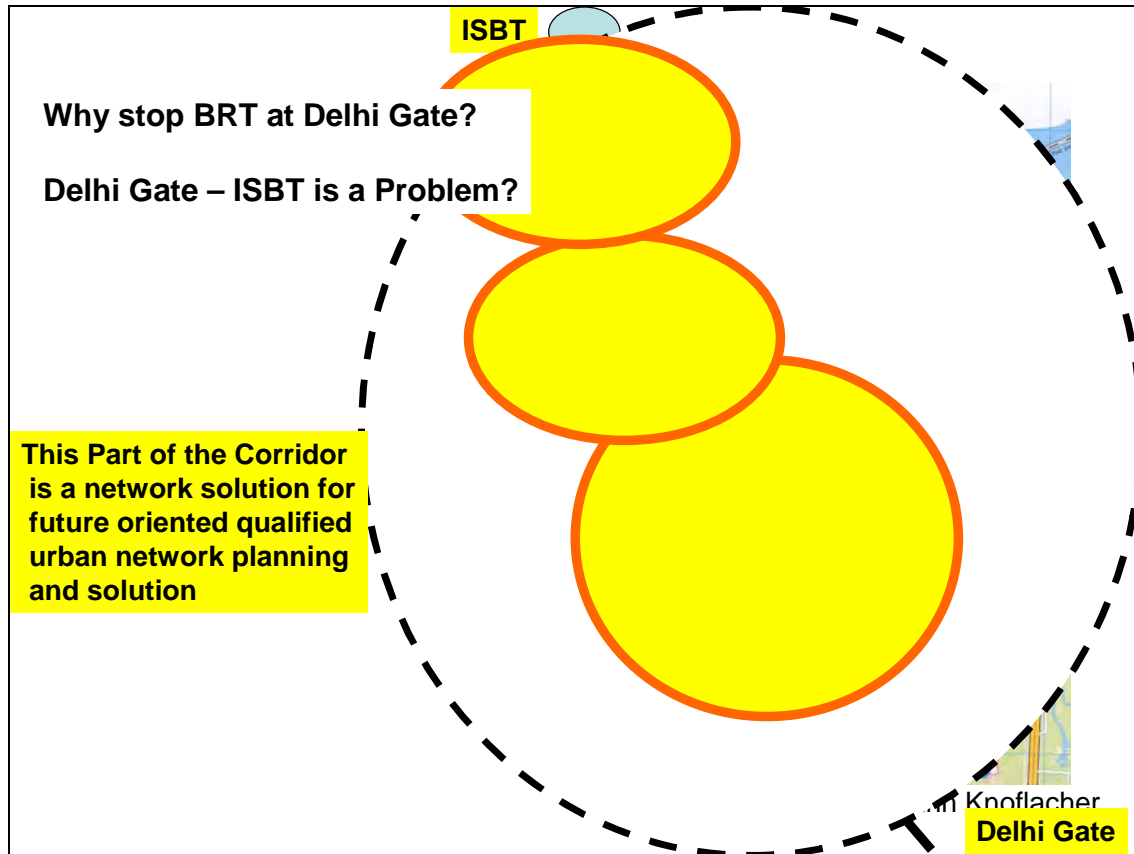
14 kilometres of elevated rail (BTS)



7 kilometres of subway (MRTA)



Slide 39



Slide 40

