

# Reading Record

[Pan and Doulet, 2003]

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Date

*Reading Record for [Pan and Doulet, 2003]*

## 1 Introduction

Close to an operational work in urbanism/mobility. Franco-Chinese colloquium (october 2001)

**Reflexion on evolving cities** Mobility crucial for modernity ; urban growth linked to intermodality/multimodality ; exchange experiences and ideas ; joint seminar.

**Benefits of scientific/cultural exchange**

**City as a preferred field of exchange** International and interdisciplinary (practitioners and scientists).

## 2 Linear Reading

### 2.1 Part 1 : Places of Intermodality

Importance of intermodality hubs in its concretisation.

#### 2.1.1 Perspective on Urban Mobility

Twentieth century was all about transitions ; latest is urban mobility.

**Pedestrian cities** Size of former cities determined by walking radius (around 3km) : pedestrian cities

**Multimodal cities** Industrial revolution : new transportation modes.

**Car cities** From the States, progressive diffusion of the all-for-cars model.

**Reasoned multimodal cities** Negative externalities of car have rapidly induced limitation of its share. Cities become multi-scalar. Requires a general political action for mobility.

**Only one model ?** Diverse trajectories across the globe. Bus can be before car. Or train for density (Japan) or political (URSS) reasons. China : bike.

### 2.1.2 Problems and Solutions in Development of Urban Transportation in China

#### Context

- Very fast economic growth and mutation of industrial structure induced an accelerated urban growth.
- Combined to an exponential growth of automobile ownership.
- Strong real estate and environmental constraints.

#### Current issues

1. Congestion for bikes as no dedicated road system.
2. Small share of public transportation
3. Increase of taxis share
4. Increase of private car
5. Specific strategy for lightweight rail
6. High construction density
7. Center redevelopment induce functional mutation and population migrations from center to sub-urbs
8. High pollution impact

**Solutions** Criteria : economic feasibility ; financial equilibrium ; social acceptation ; environmental sustainability.

Solutions : coupled development (à-la-TOD) ; concrete measures for public transportation ; increase investments in infrastructures ; specialization of road network ; projects of circulation ; increase regulation role of central government ; NTIC.

### 2.1.3 Transportation and Intermodality in Ile-de-France

**What is intermodality** Transfer between two modes. In practice implies a collective mode.

#### Requirements

- Physical organization of transfer space
- Coordination of timetables
- Coordination of tarification
- Information of travelers

Places of intermodality : exchange poles, multimodal poles, intermodal poles, multimodal platform.

**Why encourage it ?** Negative externalities of private car ; disillusion of Modern Urbanism.

Reduce use of car, preserve health, urban quality of life reduce infrastructure cost, energy consumption.  
One way to create a desirable city.

**Organisation in the past (70-95)** Concentration on commuting, radial trajectories, peak hours, between public transportation. Creation of “Carte Orange”.

Later understood need to encourage car-public transportation intermodality. (P+R). fail, because no significant improvement for the user. : larger span, in suburban stations. Then larger multimodal poles : La Defense, and 3 new high speed stations.

**Recent directions** New multimodal poles, densification around stations, quality improvement for median poles. Improvement of insertion in the city : less urban cuts e.g., better accesses, quality of exchange, services in stations, etc.

**Quantification** 552 P+R. 11% TC-multimodal.

Strong potential but geographical inequalities (long and very long travels have the strongest intermodal share).

**Current issues and perspectives** Weak penetration rate. Strong dispersion of responsibilities (governance of poles). Logistics and fret.

**Conclusion** Necessity of very large poles, but need of smaller as car is generalized. Answer for an efficient, agreeable and sustainable city.

#### 2.1.4 Project presentation of Beijing new transportation hub

In Beijing : 50 years ago, “cyclopousses”, 30 : bike, 20 : subway, 10 : car, 5 : public transportation (bus, subway, suburban rail). Transportation hub as a new urban component. Not only superposition, importance of organization (taking into account flows evolution on long time scales). Also tertiary hotspot. Conception : Chinese construction minister, in partnership with AREP.

In growth context.

#### 2.1.5 Invent the city of “mechanical transportation” (Duthilleul)

**Still to invent** Organisation of networks (modernism) was not enough, everything still to write.

**New spaces to construct** Hub as a concentrated urban space, convergence of flows.

Modern and agreeable city invented around all transportation modes. For the user, the space between infrastructures is crucial. The project, the expression of an ideal.

**Examples** CDG2 : new place of life ; Valence ; Aix : optimal exchange space ; Lille : generate an economic development thanks to dynamism - the station as a new street ; Paris (RERE) : new parisian spaces, no “over” and “under”, all levels of the city are noble (*reflexion on that point : which implication for the superposition of networks. the multi-layer city is physically realized. the technical performance allows the complexity of network-territories interactions - reread Dupuy on that - on the importance of technical networks as veins of the city ?*) ; Marseille : keep identity ; Shanghai : Circular space, identity of this city far East, from which the sun rises on all other Chinese cities.

#### 2.1.6 Analysis of modal structure of mobility

Crucial step for planification. Frequency and distance of commuting depending on economical regime (planified or market economy).

Factors of modal choices ? formula of multimodal travel times : analysis of concurrency between two modes, as a function of  $\Delta t$  between modes (roughly).

Implications for policies to change its sign : examples : increase density of public transportation ; better info (GPS) ; improve traffic conditions ; coordinate timetables ; incentives for users.

Impact of congestion if use of individual modes. Change in income : change in transportation mode.

Taxis and motorbikes also strongly problematic. Cars : income transition, corresponds to when subway was built in European cities. Each mode has its corresponding spatial span. Depending on modal share structure for a given city, corresponding policies.

## References

[Pan and Doulet, 2003] Pan, H. and Doulet, J.-F. (2003). Croissance urbaine, modes de transport et intermodalité: actes du séminaire organisé à Chengdu (Sichuan), dans le cadre du colloque du Comité France-Chine des 29 et 30 octobre 2001. Presses de l'université de Tongji.