The spatio-temporal development of Copenhagen’s bicycle infrastructure 1912-2013 - assessment of impact factors

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Coherent network
Celebration of bicycle infrastructure
City branding “World best city for cycling”

Lessons to learn – the role of infrastructure and other drivers behind the development
Understanding drivers behind the expansion of the bicycle infrastructure in Copenhagen

1. When? Which rates? Where?

2. How is it linked to other processes of urban transformation?

3. How did the position of the bicycle change in the traffic system?
Methods and data


GIS analysis (ArcGIS 10)

Historical analysis of cycling cultures

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1. Where? When?
1. When? Which rates?

Development of bicycle infrastructure in Copenhagen
1912 - 2013

Data lacuna
2. How is it linked to other processes of urban transformation?

Index numbers for km of bicycle infrastructure; km of streets and road; traffic counts of bicycles and cars at Langebro; and population in Municipality of Copenhagen. Base year is 1927. Statistical Yearbook of Copenhagen, Frederiksberg and Gentofte Municipalities.
3. How did the position of the bicycle change in the traffic system?

4 sub-phases identified: reflecting changes in design, planning and advocates.

- The first cycling city (1910 to 1940s)
- The car city (1950s to 1960s)
- The liveable city (1970s to 1990s)
- The liveable cycling city (1990s to 2010s)
The first cycling city
(1910 to 1940s)

converting horse tracks, cobble stone, gravel roads, into (comfortable) bicycle friendly infrastructure

DCF (1905)

segregation for motorised vehicles (safety)

‘Vejregler’ (1943) - prescriptions for building bicycle paths (urban + rural)
The car city
(1950s to 1960s)

withdrawing from intersection, more cars only roads

car centred planning – regional.
Skitse til Generalplan 1956, City plan vest 68.

Abandon Vejregler in urban areas

Advocates?

City Plan Vest
The liveable city
(1970s to 1990s)

Mitigate negative impacts of cars for city dwellers
Improve safety and comfort for pedestrians and cyclists

traffic calming ... pedestrian roads, one-way, reclaiming central squares (from car parking)

Grassroot formulated principles and visions. Alternatives to the city of cars. Against motorways in the city. Reorganisation (rationalisation) of existing road network as alternative. Vejregler back (late 1970s)

Citizens, grassroots, planners
The liveable cycling city
(1990s to 2010s)

new dedicated infrastructure

linking mains arteries of the city to the urban region (regional cycle super highway)

prioritation (‘providing for cycling’)

Bicycle accounts (1996)
Bicycle policy (2002 -)

+ politicians
Conclusion

- Expansions in (relatively) constant pace
- Not closely attached to other processes of urban transformations
- 4 sub-phases reflecting the bicycle’s changing in the traffic system:
  - Introducing bicycles to the traffic system *The first cycling city*
  - Improve flow of cars *The car city*
  - Mitigate negative impacts of cars for city dweller *The liveable city*
  - Improve flow for cyclists *The liveable cycling city*
Conclusion

- Bicycle-friendly infrastructure is important – together with retrofitting of traffic system and advocates
- When cycling became policy it was ‘normalised’ in planning
- Cycling transport planners have been important advocates
Cycling in the 21st century - contemporary challenges

Capacity limits? – widening paths

Recent urban development in new neighbourhoods, e.g. Ørestad, Sydhavn, Nordhavn
- Car independent lifestyles?
- Improve flow for cars?

Cycling advocates is constantly required
Thank you