

LEARNINGS FROM CYCLING IN COPENHAGEN AND PARIS TO APPLY TO HELP ACHIEVE TORONTO'S ACTIVE TRANSPORTATION GOAL

SSM1100Y

STUDENT: NATALIE BIRINGER | SUPERVISOR: JOHN ROBINSON



INTRODUCTION

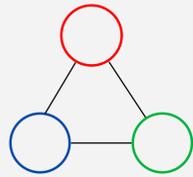
In 2021, Toronto published an updated climate action plan called TransformTO, aligned to its 2040 net-zero goal. TransformTO included sustainability goals in Toronto's highest polluting sectors (the second highest being transportation) (City of Toronto, 2021). One of the two transportation goals is that 75% of trips under 5km must be walked, biked, or taken by transit by 2030*. As Toronto has only seven years left to reach this goal, it is worth examining what other cities have done to successfully increase their cycling modal share, and determine which of these elements can be employed in Toronto (as well as additional actions the city can take) to help progress on the goal.

SOCIAL PRACTICE THEORY FRAMEWORK

SPT is a framework that examines the elements (materials, meanings, and competences) that create and perpetuate a practice (Shove et al., 2012). It is useful for analyzing cycling because it provides a means of understanding it as a social issue with complex dynamics, rather than solely an individual behaviour (Spotswood et al., 2015).

Materials: things, technologies, tangible & physical entities (e.g., bike lanes, bike parking)

Competences: skill, know-how, and technique (e.g., skills to ride a bike, know-how of road rules)



Meanings: symbolic meanings, ideas, and aspirations (e.g., cycling culture, cycling events)

METHODOLOGY



Literature Review:

- Academic literature
- Grey literature



Interviews: 20 interviews conducted with four types of cycling experts from Toronto, Copenhagen, and Paris:

- Municipal officials
- Urban planners from private firms
- Cycling advocacy NGOs
- Active transportation academics (professors & PhD students)

* The baseline is 67% for walking and biking (Ministry of Transportation, 2016); the statistic for public transport is not available.

WHY COPENHAGEN & PARIS AS CASE STUDY CITIES?

They are at different stages of maturity with cycling and offer unique lessons for Toronto. Copenhagen is an established leader (in the top 2 cycling cities in world since 2011) (Copenhagenize Design Co., 2019) and Paris is a recently emerged leader Paris is a recently emerged leader but with growing pains (in the top 20 cycling cities in world since 2011, but rose to top 10 in 2019) (Copenhagenize Design Co., 2019).

RESULTS

I. BEST PRACTICES & LESSONS FROM COPENHAGEN

MATERIALS

- Safe, well connected, and cohesive bike lane infrastructure (including add-ons like footrests and tilted garbage bins at intersections)
- Data-driven, consultation-informed infrastructure
- Urban development built around strong public transit

COMPETENCES

- ITS (e.g., 'green wave' light at intersections)
- Cycling skills are taught in school to children
- Drivers are taught cyclist rules of the road (competences) and most drivers are also cyclists which makes them considerate of cyclists (meanings)

MEANINGS

- Normalized and preferred because it is "the fastest and easiest [transportation] option - period" (Technical and Environmental Administration of the City of Copenhagen, 2011, p. 5)
- Strong 'I Bike CPH' brand identity
- Annual 'We Bike to Work' and 'All Kids Cycle' campaigns perpetuate cycling culture

II. BEST PRACTICES & LESSONS FROM PARIS

MATERIALS

- Built an abundance of bike lanes, quickly
 - However, has inconsistent infrastructure design and lack of clarity around road conduct for cyclists, drivers, & e-scooters
- Replacement of car parking with bike parking spaces increases access to materials and changes perceptions (meanings)
- Government subsidy of €500 for e-bike purchase increases access to materials

COMPETENCES

- Traffic-calming and car-free zones help build cycling competences and evolve meanings around cycling
- Children's cycling skills are built through bike rental program and school cycling curriculum

MEANINGS

- In general, historically limited cycling culture creates resistance to changed meanings around cycling
 - However, recurring car-free *Paris respire* events are helping to build cycling culture

ANALYSIS

In order to evaluate how and to what degree Copenhagen & Paris' best practices could be applied in Toronto, I assessed Copenhagen and Paris against Toronto in terms of four areas:

- Political system
- Economic (i.e., cycling budget)
- Environmental (topography, climate, built form)
- Level of cycling culture

I factored these into my recommendations and additionally sought feedback on them from the City of Toronto Transportation Services division. I then finalized them (below).



RECOMMENDATIONS FOR TORONTO

MATERIALS

- Support suburban cycling through separated cycle tracks on arterials in suburbs
- Build more 'neighbourhood greenways' (e.g., Shaw St.) to increase modal share for 'interested but concerned' cyclists
- Protected bike parking at TTC and GO stations
- E-bike and 'bike to work' financial incentive schemes

COMPETENCES

- Interdivisional and multi-unit collaboration within the City of Toronto
- Ensure Complete Streets are the default for all road rehabilitation projects
- Streamline City Council processes (through delegated authority) for approved projects in the Cycling Network Plan
- Continue to reduce speed limits to 30km/h on residential roads and by 10 km/h on arterial roads, city-wide
- Expand community bike hubs in the suburbs
- Include cycling training in children's school curriculum to cultivate skills and culture from a young age
- Improve competences in snow service for bike lanes

MEANINGS

- Recurring car-free events (e.g., ActiveTO) to build cycling competences and culture
- Solidify a cycling brand identity and conduct marketing campaigns (social media, 'bike to work' events, etc.)

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