Accessibility, Transportation Planning and Fairness

(May 12, 2016)

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Thanks to our volunteers Wafic El-Assi, Kathryn Grond and James Lamers
Justice and the transport system

Karel Martens

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Goals of transportation planning

• Economic development
• Activity participation
• Environmental quality
Goals of transportation planning

- Economic development
- Activity participation
- Environmental quality
Relation between accessibility and activity participation
Relation between accessibility and activity participation

Level of accessibility

Level of activity participation

Lower border
Relation between accessibility and activity participation

Level of accessibility

Level of activity participation

Lower border

Upper border

Level of accessibility
Relation between accessibility and activity participation
Accessibility Fairness Index
Depth of accessibility shortfalls
Prevalence of accessibility shortfalls
How fair is the transportation system of Amsterdam?
Sufficiency thresholds

Level of activity participation

Average accessibility

Level of accessibility
Sufficiency thresholds

Level of activity participation

Average accessibility

50%

Level of accessibility
Sufficiency thresholds

Level of activity participation

Level of accessibility

40%

Average accessibility
Sufficiency thresholds

Level of activity participation

Level of accessibility

Average accessibility

30%
Sufficiency thresholds

Level of activity participation

Average accessibility

Level of accessibility

20%
Sufficiency threshold of 50%
Sufficiency threshold of 40%
Sufficiency threshold of 20%
Urban or rural phenomenon?
Contribution by urbanization level

Urbanization level

<table>
<thead>
<tr>
<th>High</th>
<th>Low</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<td>4</td>
<td></td>
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<td>5</td>
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</table>
How fair is the public transport reform in Tel Aviv?
Spatial pattern of accessibility deficiency

Before

After
Change in population below sufficiency threshold

- 20% poverty line:
  - Before: 2%
  - After: 0%

- 50% poverty line:
  - Before: 14%
  - After: 8%
Conclusions

• Transportation planning should **guarantee** sufficient accessibility

• Transportation planning should start from **people**

• Government’s first responsibility lies with **persons below sufficiency threshold**

• Costs of improvements should be **carried by all**
Thank you

Karel Martens

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Accessibility, Transportation Planning and Fairness: The Toronto Context

Dr. Steven Farber
Panelist Remarks

May 12, 2016
# Fairness and Toronto Transportation

<table>
<thead>
<tr>
<th>Planning Issue</th>
<th>Equity Type</th>
</tr>
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<tbody>
<tr>
<td>Fare Integration</td>
<td>Pay for Use</td>
</tr>
<tr>
<td>DVP/Gardner Tolls</td>
<td>Pay for Use</td>
</tr>
<tr>
<td>Fare Equity Policy Framework</td>
<td>Vertical Equity (Income)</td>
</tr>
<tr>
<td>UP Express</td>
<td>Vertical Equity (Workers vs. Travelers)</td>
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<td>Scarborough Options</td>
<td>Spatial Equity</td>
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<tr>
<td>Bloor Bike Lanes</td>
<td>Right to the City (Local/Global)</td>
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<tr>
<td>Uber</td>
<td>Consumer Rights</td>
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</table>
Access to Destinations

- Counting reachable destinations is a way to quantify transportation benefits

- Often used in comparisons
  - Healthy versus unhealthy food (destinations)
  - Public transit versus automobile (mode)
  - High income versus low income (vertical)
  - Downtown versus suburbs (spatial)
Access to Jobs by Car

Number of Jobs that can be reached within 45 minutes of driving

- 300 households with an income less than $30,000

Major Highway

- Color scale indicating job numbers:
  - 2,400,000
  - 2,300,000
  - 2,200,000
  - 2,100,000
  - 2,000,000
  - 1,500,000
Access to Jobs by Transit

Number of Jobs that can be accessed within 45 minutes using public transit

- Existing Rapid Transit
- Existing Commuter Rail

- 300 households with an income less than $30,000
Transit / Car Access Ratio

- Existing Rapid Transit
- Existing Commuter Rail

- = 300 households with an income less than $30,000

\[
\text{Jobs Accessible by Transit} = \frac{\text{Jobs Accessible by Car}}{(\text{in 45 minutes})}
\]
Conclusions

- The automobile dominates the jobs accessibility landscape
- Planned transit expansions have moderate impact on “transit poverty”
- Sprawling employment and poverty must be given equal attention
Acknowledgements

- Maria Grandez
- Jeff Allen
Next Stop Health: Transit Affordability in Toronto

Rita Paul Sengupta and Monica Campbell
Healthy Public Policy

Source: Statistics Canada, 2006 Census of Canada (CANSIM Table: 97-561-XCB2006015.IVT)
Cost of Monthly Transit Pass as Percent of Monthly Minimum Wage Income: Select Canadian Cities/ Municipalities, 2009

Source: Federation of Canadian Municipalities, Quality of Life Reporting System. Ottawa, Ontario
# Metro Pass Affordability – Income Left Over After Paying for Rent, Food and a Metro Pass (2012)

<table>
<thead>
<tr>
<th>Family Type</th>
<th>Total Income</th>
<th>Cost of Rent &amp; Food</th>
<th>Cost of Metro Pass</th>
<th>Remaining</th>
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<tbody>
<tr>
<td>Median Income</td>
<td>$6360</td>
<td>$2151</td>
<td>$129</td>
<td>$4080</td>
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<tr>
<td>Minimum Wage</td>
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<td>$2151</td>
<td>$129</td>
<td>$359</td>
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<td>$2032</td>
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<td></td>
<td>$1115</td>
<td>$1265</td>
<td>$129</td>
<td>-$278</td>
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<tr>
<td>Disability Support Program</td>
<td>$642</td>
<td>$1064</td>
<td>$129</td>
<td>-$550</td>
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Source: Adapted from the May 2012 Nutritious Food Basket Scenarios, Toronto Employment & Social Services. Note: Numbers are rounded. For more information http://www.toronto.ca/legdocs/mmis/2012/hl/bgrd/backgroundfile-49920.pdf
Transit enables people to access employment, education, health and social services, food, and recreation, which contribute to health.

It is particularly important for people on a low income who are often dependent on transit.
Toronto Public Health reports on transit affordability available at:

http://www.toronto.ca/health
Panel Discussion:

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