cycling in cities:

Understanding people, neighbourhoods and infrastructure to guide policy to increase active transportation

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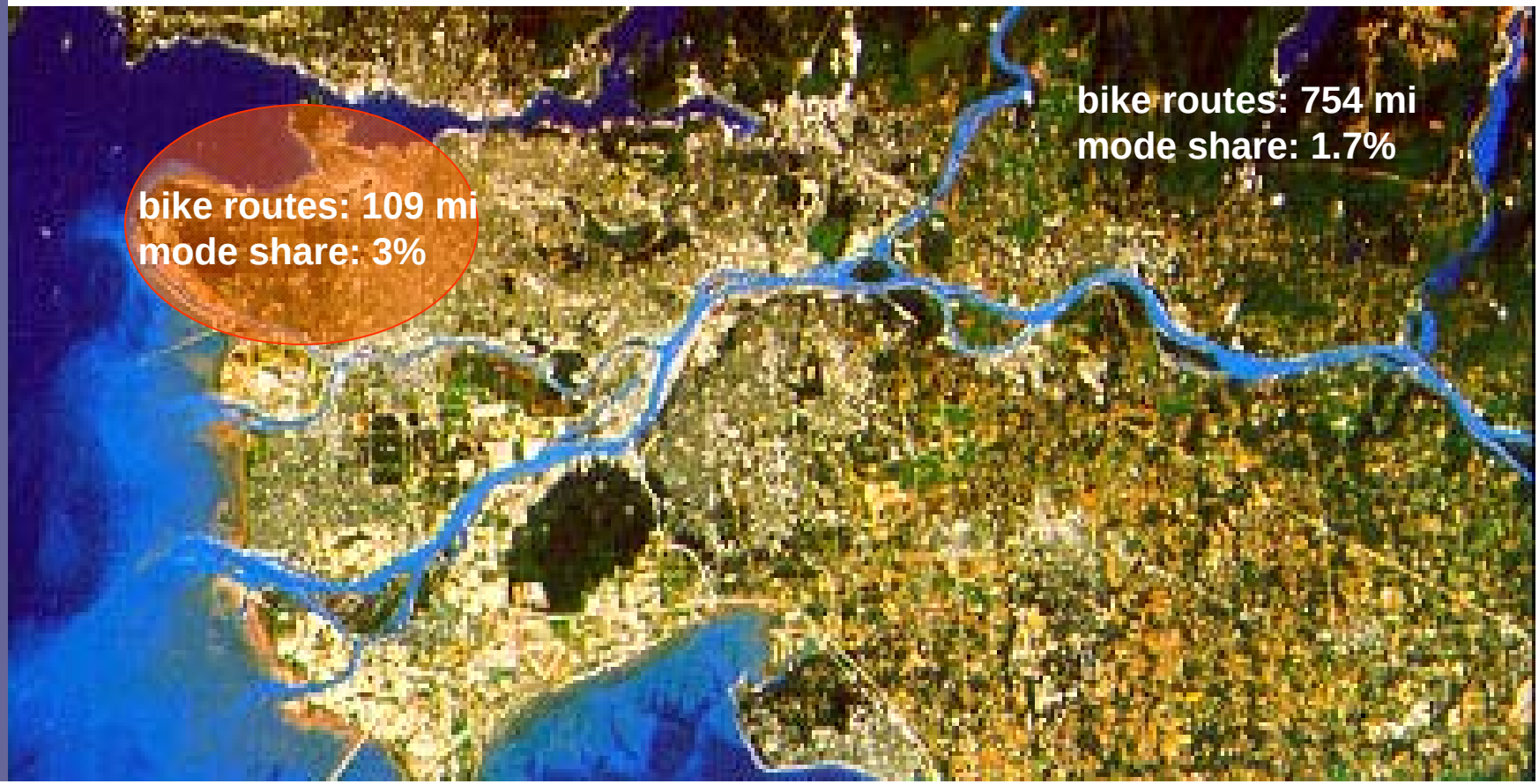
regional context

Metro Vancouver
Population – 2,100,000
Size– 1,098 Sq miles

Vancouver City
Population – 590,000
Size– 44.3 Sq miles



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methods

Survey Development

- detailed review of 70
- focus gro

eligibility: access to a bicycle and either:
1) cycled in the past year or
2) willing to in the future

SURVEY
Demographics
→ **Trips**& travel mode

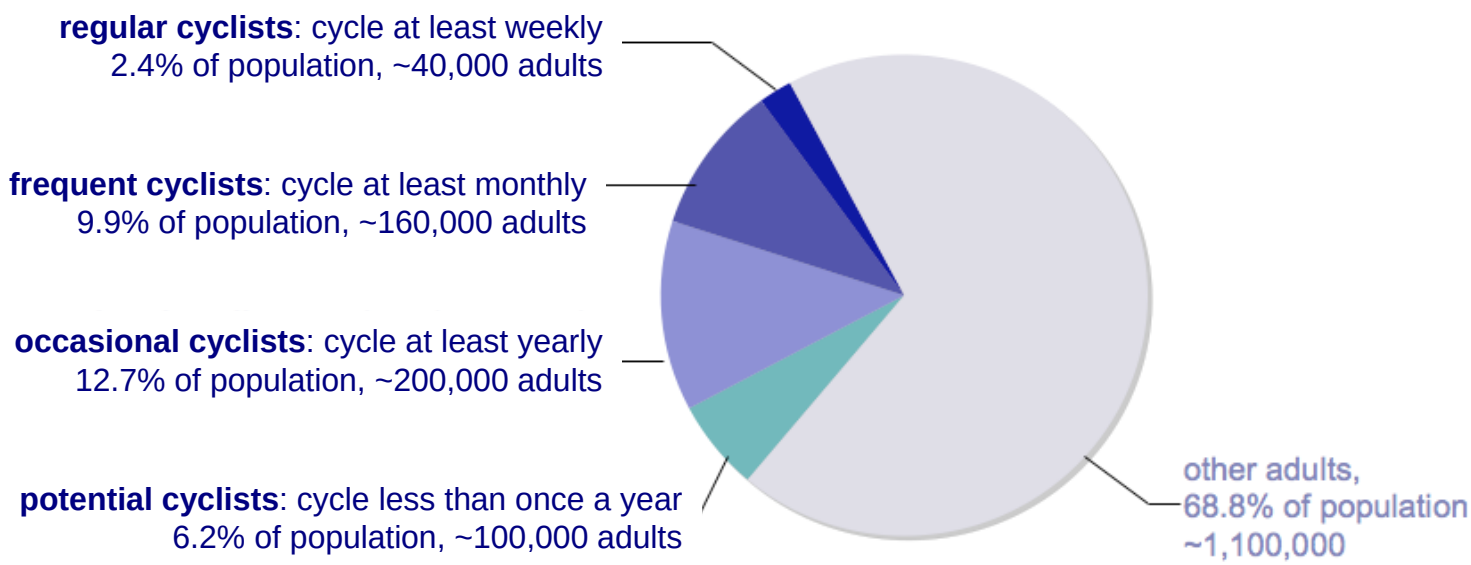
2) WEB/ MAIL SURVEY
→73 **motivators and deterrents**
→ 16 **route types**, with photos

Random sample of Metro Vancouver adults, in three waves

- winter, summer, fall 2006

survey population

- **31% of population** in the **“near market for cycling”**
- n = 2,149 for telephone interview; n = 1,402 for web/mail questionnaire



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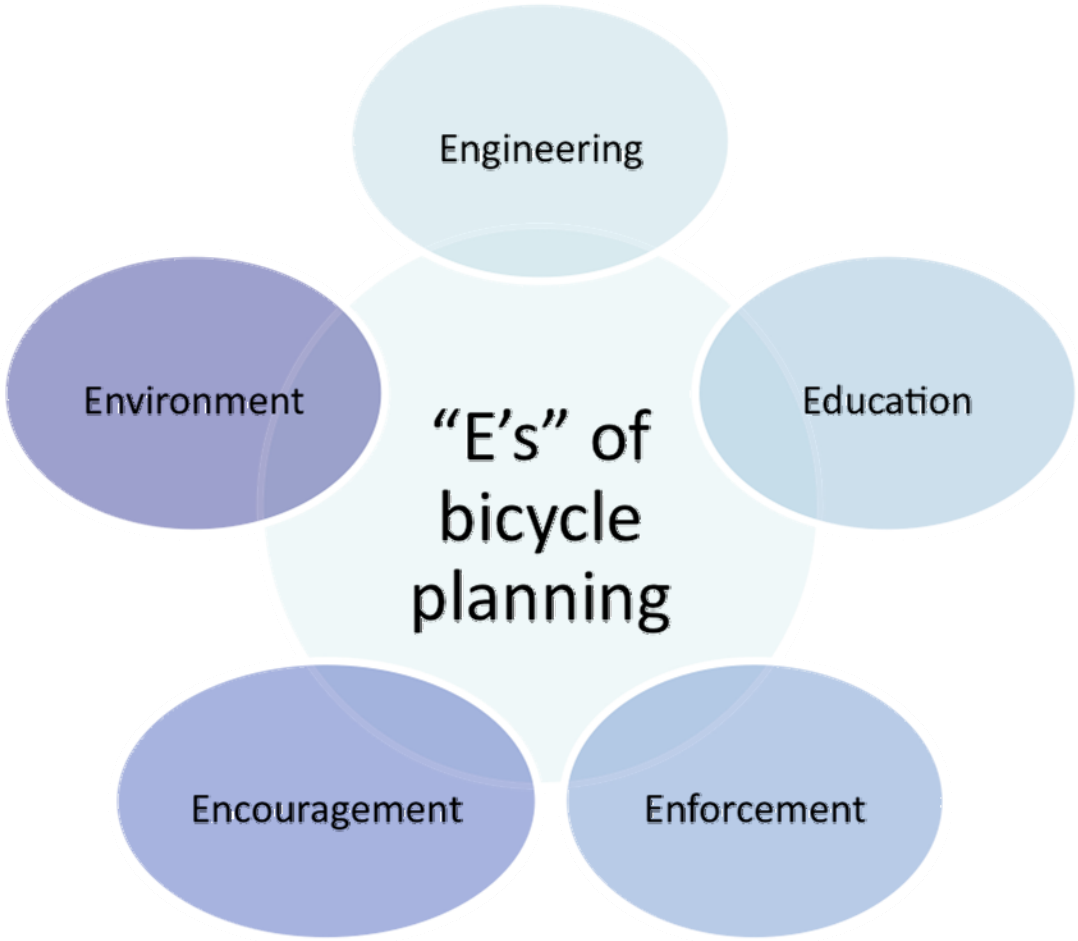
influences on cycling



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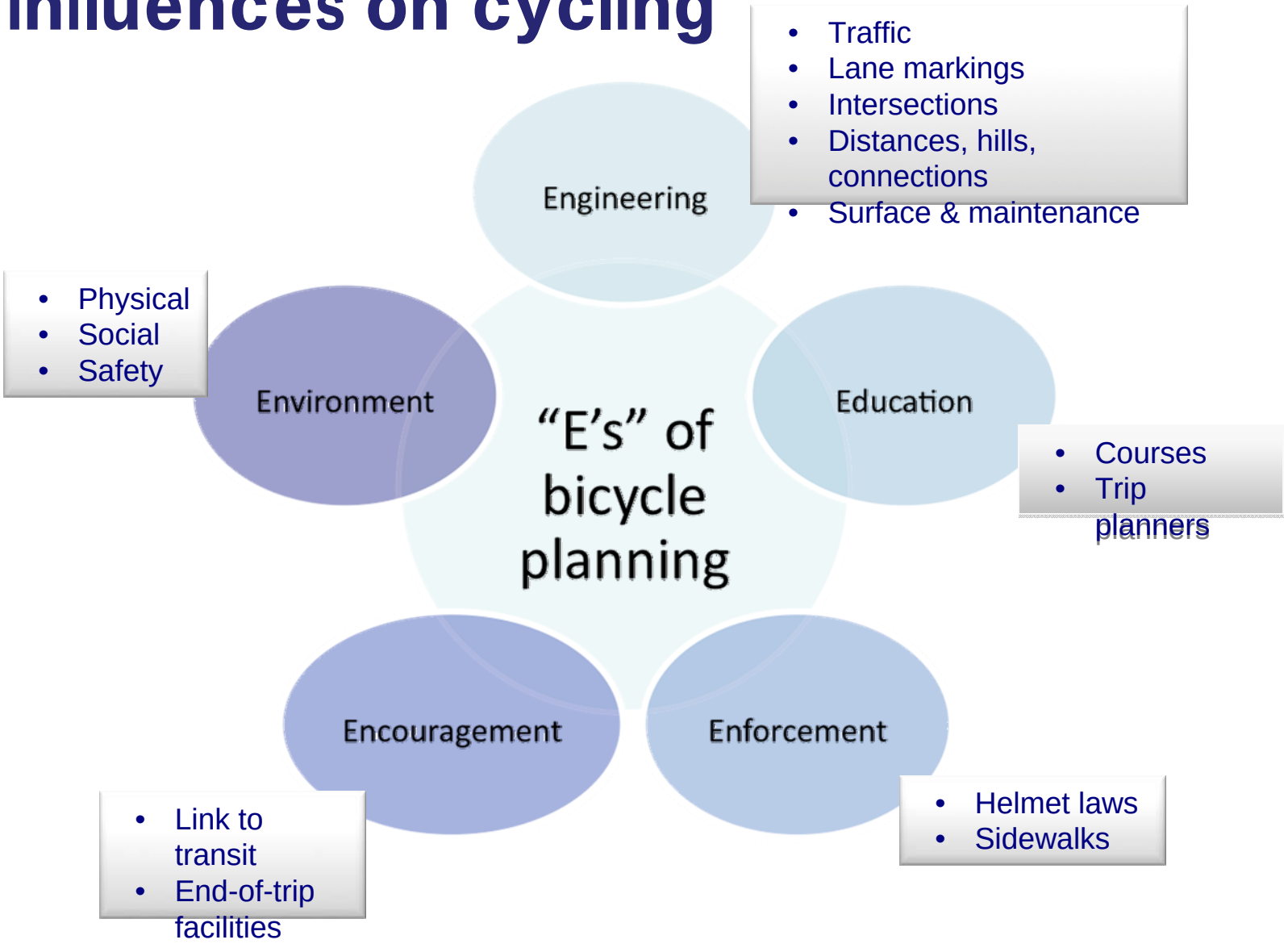
influences on cycling



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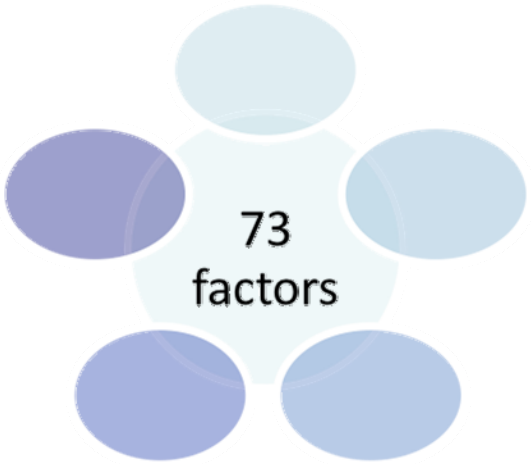
influences on cycling



score	How would this factor **influence your decision to cycle?**
+ 1	much more likely to cycle
0.5	more likely to cycle
0	no influence
-0.5	less likely to cycle
- -1	much less likely to cycle

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influences on cycling (of 73 factors)

top 5 motivators	LIKELIHOOD OF CYCLING +1=much more likely to cycle 0=neutral -1=much less likely to cycle
The route is away from traffic noise & air pollution	0.8
The route has beautiful scenery	0.7
The route has bicycle paths separated from traffic for the entire distance	0.7
The route is flat	0.6
Cycling to the destination takes less time than traveling by other modes	0.6

top 5 deterrents	LIKELIHOOD OF CYCLING +1=much more likely to cycle 0=neutral -1=much less likely to cycle
The route is icy or snowy	-0.9
The street has a lot of car, bus, & truck traffic	-0.8
The route has glass or debris	-0.8
Vehicles drive faster than 50 km/hr	-0.8
The risk from motorists who don't know how to drive safely near bicycles	-0.7

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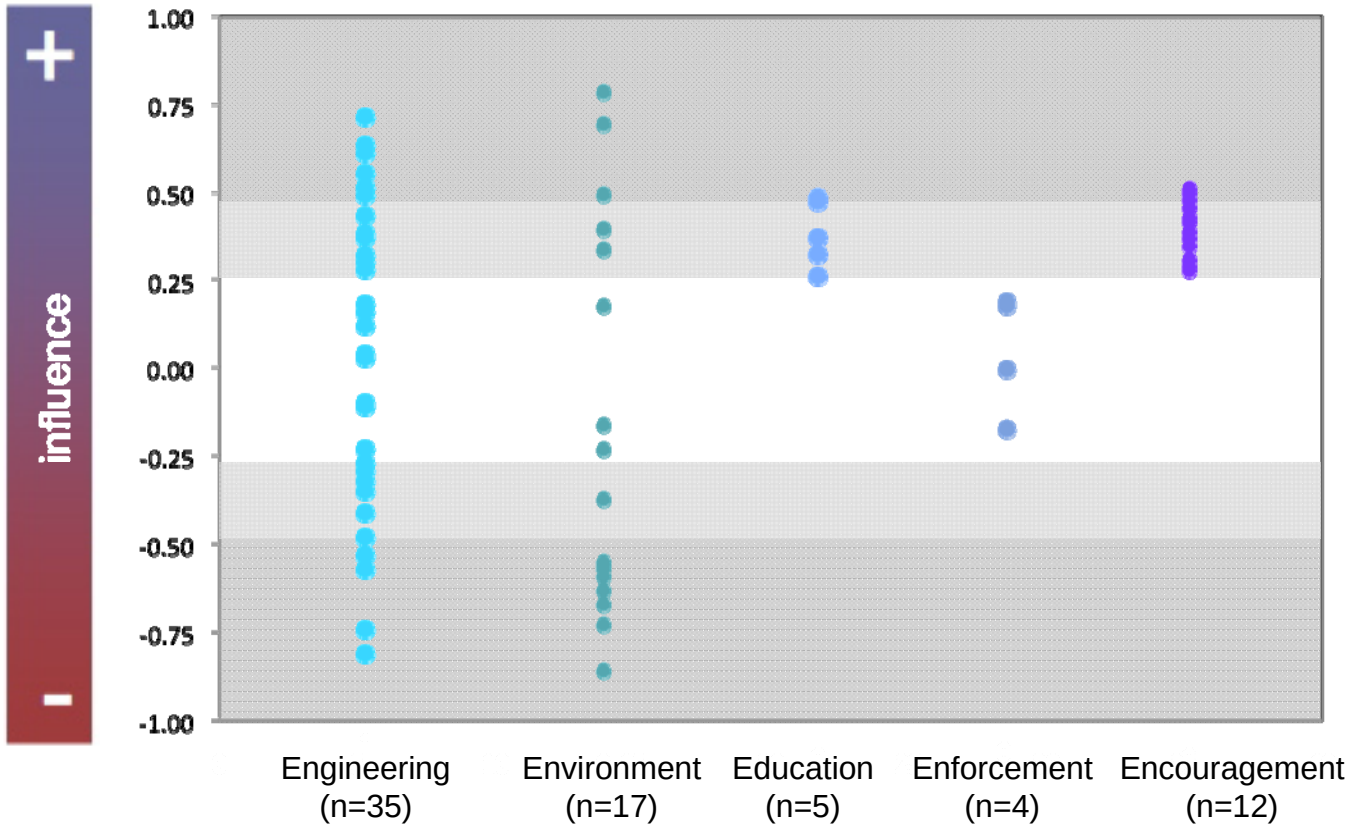
comparing the 5E's



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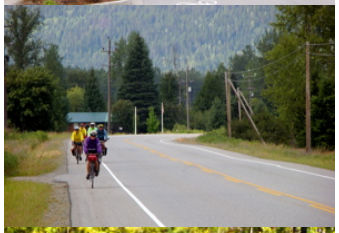
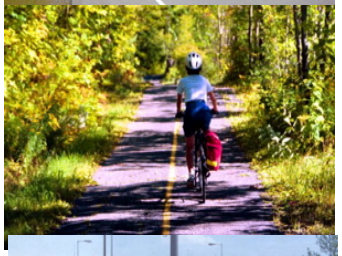
routes types

major city streets (6 types)
- bike symbols, bike lanes, parking or no

residential streets (3 types)
- designated bike routes, traffic calming



rural roads and highways (3 types)
- paved shoulder, bike symbols



off-street paths (3 types)
- paving, multi-use or bikes only

cycle paths next to major street, separated by barrier

route preferences: top 5 of 16

paved off-street cycle paths for bikes only
(82% likely to choose; score = +0.6)

paved off-street multi-use paths
(78% likely to choose; score = +0.5)

unpaved off-street multi-use paths
(69% likely to choose; score = +0.4)

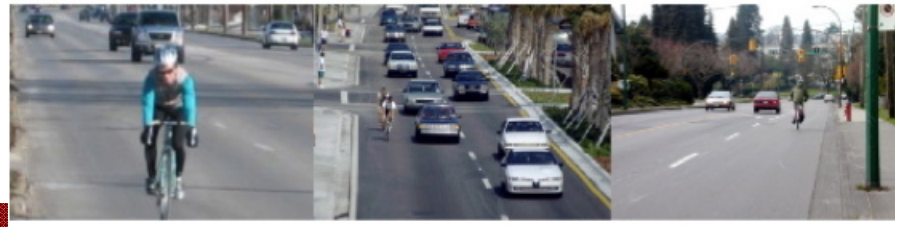
cycle paths by major streets, separated by barrier
(68% likely to choose; score = +0.4)

residential street bike routes, traffic calming
(66% likely to choose; score = +0.4)

route preferences: bottom 5 of 16

major streets, parked cars
(71% unlikely to choose; score = -0.5)

major city streets, no parked cars
(70% unlikely to choose; score = -0.5)



rural road, no paved shoulder
(61% unlikely to choose; score = -0.4)

rural road, paved shoulder
(49% unlikely to choose; score = -0.2)

major streets with bike symbols, parked cars
(48% unlikely to choose; score = -0.2)

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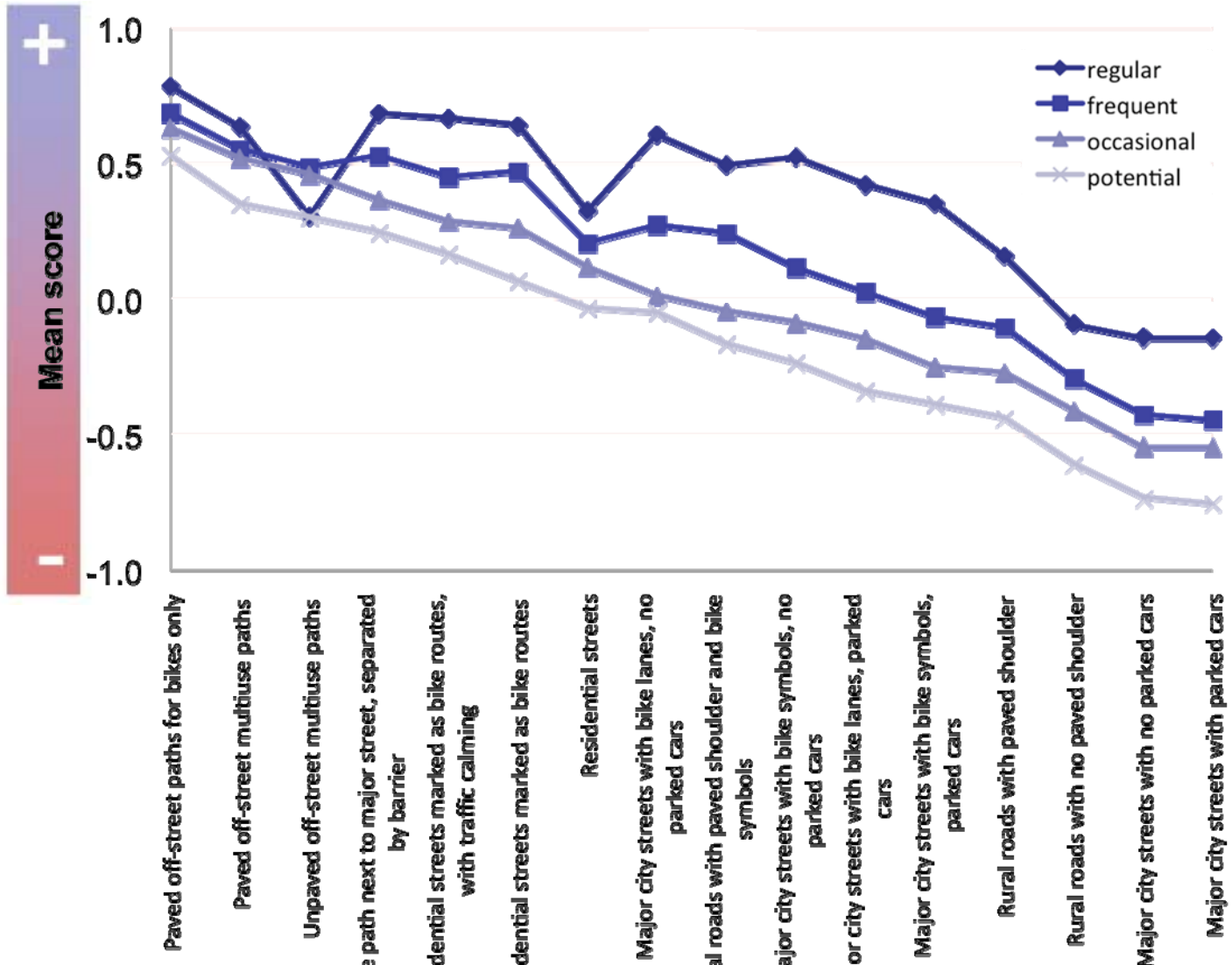
differences in preferences, by segment



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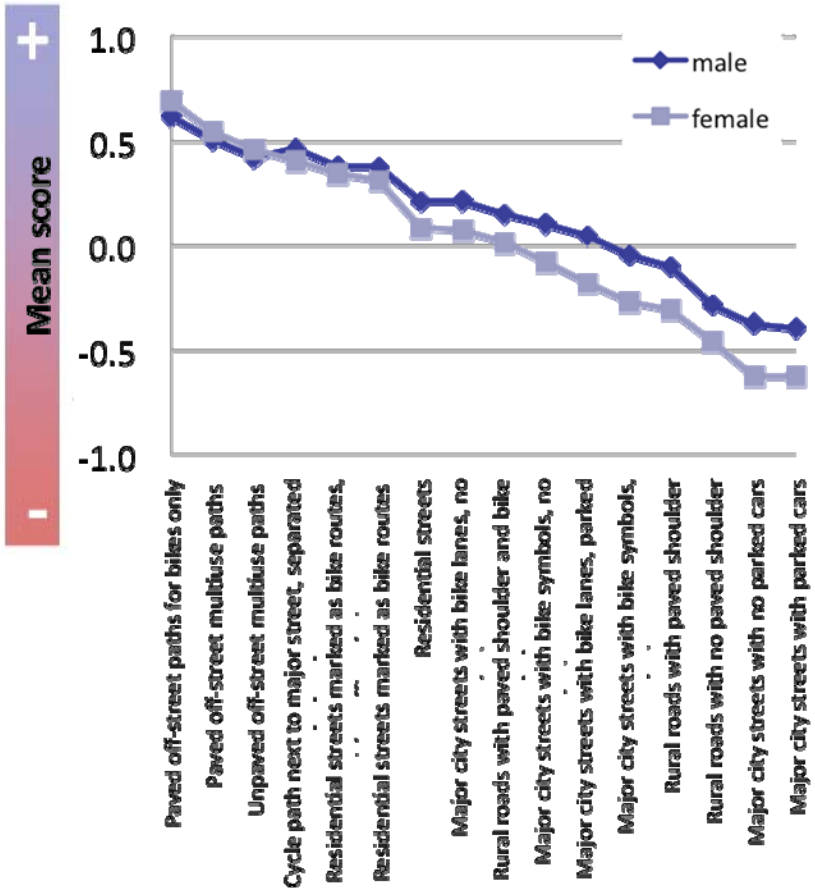
differences in preferences

no difference by

- **city of residence**: Vancouver *vs*. other
- level of **education**
- low *vs.* high **income**

differences by

- **age group**: but no clear pattern
- **children in the household**: ratings not different for high preference routes, but those with children are less likely to choose the low preference routes
- **gender**: ratings not different for high preference routes, but women are less likely to choose the low preference routes



implications for policy and planning

- environment and engineering factors are a strong influence on cycling

- to reach the next wave of cyclists → build the most desired route types
  - **off-road paths:** paved & for cyclists only
  - **major streets:** paths separated from motor vehicle lanes by a curb or other barrier
  - **residential streets:** marked for cycling & with traffic calming

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www.cher.ubc.ca/cyclingincities

acknowledgements

- Kay Teschke
- NRG Research Group
- Gavin Davidson
- Diana Kao
- Jack Becker

funding

- Metro Vancouver municipalities
- TransLink
- Transport Canada MOST program

CIHR IRSC

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