8-11-2015

Webinar, Part II: Four Types of Cyclists: A National Look

Jennifer Dill
Portland State University, jdill@pdx.edu

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Four Types of Cyclists

Jennifer Dill, Ph.D.
Professor, Urban Studies & Planning
Director, Transportation Research & Education Center (TREC)
Portland State University
Portland, OR, USA

NITC Webinar, August 11, 2015
Portland’s “Four Types”

Four Types of Transportation Cyclists in Portland
By Proportion of Population

- Interested but Concerned: 60%
- No Way No How: 33%
- Strong & Fearless: <1%
- Enthused & Confident: 7%

Roger Geller, Bicycle Coordinator, Portland Office of Transportation, *Four Types of Cyclists*
http://www.portlandonline.com/transportation/index.cfm?a=264746&c=44597
Where did they come from?
Who are they?

• Strong & Fearless
  “will ride in Portland regardless of roadway conditions”

• Enthused & Confident
  “comfortable sharing the roadway with automotive traffic, but they prefer to do so operating on their own facilities”
  “They appreciate bicycle lanes and bicycle boulevards”
  “attracted to cycling in Portland by...its bicycle network and supporting infrastructure”
About 60% of this group may now ride regularly for transportation
Who are they?

- Interested but Concerned
  “curious about bicycling...They like riding a bicycle”
  “But, they are afraid to ride.”
  “Very few of these people regularly ride bicycles”

- No Way No How
  “not interested in bicycling at all, for reasons of topography, inability, or simply a complete and utter lack of interest.”

“The separation between these four broad groups is not generally clear-cut...likely quite a bit of blurring...”
Important!

- The types are defined primarily by comfort level bicycling in different environments, NOT by their current bicycling behavior.
# Previous Research: Portland

- Random phone survey of ~900 adults in the Portland, OR metropolitan area (2011)

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>City of Portland</th>
<th>Rest of region</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strong &amp; Fearless</strong></td>
<td>Very comfortable without bike lanes</td>
<td>6%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Enthused &amp; Confident</strong></td>
<td>Very comfortable with bike lanes</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Interested but Concerned</strong></td>
<td>Not very comfortable, interested in biking more</td>
<td>60%</td>
<td>53%</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>Not very comfortable, currently cycling for transportation but not interested in biking more</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>No Way No How</strong></td>
<td>Physically unable or don’t know</td>
<td>25%</td>
<td>37%</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>Very uncomfortable on paths</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not very comfortable, not interested, not cycling for transportation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Previous Research: Portland

- Online Seminar: [http://trec.pdx.edu/events/professional-development/four-types-cyclists-what-do-we-know-and-how-can-it-help](http://trec.pdx.edu/events/professional-development/four-types-cyclists-what-do-we-know-and-how-can-it-help)

This Research: Survey

• Survey done in cooperation with the National Association of Realtors®
• The sample included adults living in the 50 largest metropolitan statistical areas (MSAs) in the U.S.
• The survey was conducted May 13-19, 2015.
  – 1,000 respondents were interviewed by phone by American Strategies (679 by landline and 322 by wireless phone). Margin of error 3.1%
  – 2,000 respondents were surveyed on-line by YouGov. Margin of error 2.2%
• Responses were weighted to better match demographics according to the American Community Survey and the two samples were combined.
Methodology: Metro Areas Sampled
Our Sample vs. ACS (Census) data

The survey sample is pretty similar to the population

<table>
<thead>
<tr>
<th></th>
<th>50 largest MSAs</th>
<th>Survey sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HH Income (2013 3yr ACS)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Than $15,000</td>
<td>11.7%</td>
<td>11.2%</td>
</tr>
<tr>
<td>$15,000 to less than $50,000</td>
<td>31.7%</td>
<td>38.2%</td>
</tr>
<tr>
<td>$50,000 to less than $75,000</td>
<td>17.5%</td>
<td>18.9%</td>
</tr>
<tr>
<td>$75,000 to less than $100,000</td>
<td>12.2%</td>
<td>12.2%</td>
</tr>
<tr>
<td>$100,000 to less than $150,000</td>
<td>14.4%</td>
<td>10.6%</td>
</tr>
<tr>
<td>$150,000 or more</td>
<td>12.6%</td>
<td>8.9%</td>
</tr>
<tr>
<td><strong>Gender (2013 ACS 5yr)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49.0%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Female</td>
<td>51.0%</td>
<td>52.4%</td>
</tr>
<tr>
<td><strong>Age (2013 ACS 5yr)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 24 years</td>
<td>12.6%</td>
<td>10.9%</td>
</tr>
<tr>
<td>25 to 34 years</td>
<td>18.7%</td>
<td>17.0%</td>
</tr>
<tr>
<td>35 to 44 years</td>
<td>18.2%</td>
<td>17.3%</td>
</tr>
<tr>
<td>45 to 54 years</td>
<td>19.1%</td>
<td>17.9%</td>
</tr>
<tr>
<td>55 to 64 years</td>
<td>15.2%</td>
<td>19.3%</td>
</tr>
<tr>
<td>65 to 74 years</td>
<td>8.8%</td>
<td>11.1%</td>
</tr>
<tr>
<td>75 or older</td>
<td>7.3%</td>
<td>6.5%</td>
</tr>
<tr>
<td><strong>Education - 25 years and over (2013 ACS 5yr)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not complete high school</td>
<td>13.6%</td>
<td>6.3%</td>
</tr>
<tr>
<td>High school graduate (includes equivalency)</td>
<td>25.0%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Some college or Associates</td>
<td>28.0%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>20.7%</td>
<td>21.3%</td>
</tr>
<tr>
<td>Graduate or professional degree</td>
<td>12.7%</td>
<td>11.9%</td>
</tr>
</tbody>
</table>
Overview of Process

• Part 1: Level of comfort
  – Based upon stated level of comfort bicycling on non-residential streets with and without bike lanes

• Part 2: Interest in bicycling more
  – With adjustment for actual cycling behavior
Part 1: Level of Comfort

I'm going to read a list of places you could ride a bike. For each place, please tell me how comfortable you would feel biking there using a scale of 1 to 4, with 1 meaning you would be "very uncomfortable," and 4 meaning you would be "very comfortable."

– A path or trail separate from the street.
– "a major urban or suburban street with four lanes, on-street parking, traffic speeds of 30-35 miles per hour, and no bike lane." (How comfortable would you be biking there?)
– What if a striped bike lane was added? (How comfortable would you be biking there?)
# Part 1: Level of Comfort

<table>
<thead>
<tr>
<th>Level of Comfort</th>
<th>Possible Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very comfortable on non-residential street without bike lanes</td>
<td>Strong and Fearless</td>
</tr>
<tr>
<td>Very comfortable on non-residential street with bike lanes</td>
<td>Enthused and Confident</td>
</tr>
<tr>
<td>Less than very comfortable on non-residential street with or without bike lanes</td>
<td>Interested (??) but Concerned</td>
</tr>
<tr>
<td>Very uncomfortable on path or trail separate from the street</td>
<td>Now Way No How</td>
</tr>
<tr>
<td>Physically unable to ride a bicycle or don’t know how to ride a bicycle</td>
<td>Now Way No How</td>
</tr>
</tbody>
</table>
Part 2: Interest in Cycling

Please tell me if you strongly disagree, somewhat disagree, somewhat agree, or strongly agree.

...I would like to travel by bike more than I do now.
## Part 1 + Part 2

<table>
<thead>
<tr>
<th>Level of Comfort</th>
<th>Interest in riding more</th>
<th>Possible Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very comfortable on non-residential street without bike lanes</td>
<td>Any response</td>
<td>Strong and Fearless</td>
</tr>
<tr>
<td>Very comfortable on non-residential street with bike lanes</td>
<td>Any response</td>
<td>Enthused and Confident</td>
</tr>
<tr>
<td>Less than very comfortable on non-residential street with or without bike lanes</td>
<td>Strongly agree, somewhat agree, somewhat disagree, I don’t know</td>
<td>Interested but Concerned</td>
</tr>
<tr>
<td></td>
<td>Strongly disagree</td>
<td>Now Way No How</td>
</tr>
<tr>
<td>Very uncomfortable on path or trail separate from the street</td>
<td>Any response</td>
<td>Now Way No How</td>
</tr>
<tr>
<td>Physically unable to ride a bicycle or don’t know how to ride a bicycle</td>
<td>Any response</td>
<td>Now Way No How</td>
</tr>
<tr>
<td>Level of Comfort</td>
<td>Interest in riding more</td>
<td>Possible Type</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Very comfortable on non-residential street without bike lanes</td>
<td>Any response</td>
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<td>Any response</td>
<td>Now Way No How</td>
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<tr>
<td>Physically unable to ride a bicycle or don’t know how to ride a bicycle</td>
<td>Any response</td>
<td>Now Way No How</td>
</tr>
</tbody>
</table>
## Results

<table>
<thead>
<tr>
<th>Type</th>
<th>Geller estimate for Portland</th>
<th>Our Portland region survey</th>
<th>National Survey (metro areas)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong &amp; Fearless</td>
<td>&lt;1%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Enthused &amp; Confident</td>
<td>7%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>Interested but Concerned</td>
<td>60%</td>
<td>56%</td>
<td>51%</td>
</tr>
<tr>
<td>No Way No How</td>
<td>33%</td>
<td>31%</td>
<td>37%</td>
</tr>
</tbody>
</table>

12%
Why differences?

• There likely are differences geographically
• Method was abbreviated in the national sample (1 comfort question vs. 3)
  ➔ Less stable measure of comfort, particularly for the Strong and Fearless.
More importantly...

• Don’t focus on the exact numbers
Who are they?
Gender

- Strong and Fearless
  - Men: 8%
  - Women: 6%

- Confident
  - Men: 7%
  - Women: 3%

- Interested but Concerned
  - Men: 55%
  - Women: 47%

- No Way No How
  - Men: 29%
  - Women: 44%
Income

- **Less than $50k**: 8%, 7%, 8%, 6%
- **$50k to <$100k**: 5%, 6%, 4%, 3%
- **$100k and above**: 49%, 52%, 56%, 49%
- **Don’t know/refused**: 49%, 52%, 56%, 49%

- **Strong and Fearless**: 8%, 7%, 8%, 6%
- **Enthused and Confident**: 5%, 6%, 4%, 3%
- **Interested but Concerned**: 39%, 35%, 32%, 42%
- **No Way No How**: 39%, 35%, 32%, 42%
Race/Ethnicity

- **White (non-Hispanic)**
- **African American, Black**
- **Asian**
- **Hispanic/Mexican**

### Strong and Fearless
- White (non-Hispanic): 7%
- African American, Black: 8%
- Asian: 10%
- Hispanic/Mexican: 8%

### Enthused and Confident
- White (non-Hispanic): 3%
- African American, Black: 6%
- Asian: 6%
- Hispanic/Mexican: 6%

### Interested but Concerned
- White (non-Hispanic): 49%
- African American, Black: 49%
- Asian: 59%
- Hispanic/Mexican: 58%

### No Way No How
- White (non-Hispanic): 41%
- African American, Black: 36%
- Asian: 24%
- Hispanic/Mexican: 28%
How much do they bike?
In the past 30 days...

- Did not bike in last 30 days
- Biked in last 30 days, including some for transportation
- Biked in last 30 days, but only for exercise

### Strong and Fearless
- Did not bike: 64%
- Biked for transportation: 16%
- Biked for exercise: 20%

### Enthused and Confident
- Did not bike: 59%
- Biked for transportation: 21%
- Biked for exercise: 20%

### Interested but Concerned
- Did not bike: 67%
- Biked for transportation: 12%
- Biked for exercise: 21%

### No Way No How
- Did not bike: 100%
- Biked for transportation: 0%
- Biked for exercise: 0%

Less likely to bike for transportation.
Any of the bike trips in the past 30 days...

- Strong and Fearless: 31% (Orange), 42% (Green), 83% (Purple)
- Enthused and Confident: 23% (Orange), 37% (Green), 88% (Purple)
- Interested but Concerned: 12% (Orange), 26% (Green), 87% (Purple)

Legend:
- Orange: On the way to or from work
- Green: Running errands, shopping, or eating out
- Purple: Just for exercise
In the past 30 days...

Mean # Days Bicycling (in past 30, those who biked)

- Bike less often if they do bike

9.7

10.4

6.7

0

No Way No How
What might influence future behavior?
Environment & Attitudes

Strongly agree

- There are bike lanes and paths nearby
- I like riding a bike
- I like driving

Strongly disagree

- Strong and Fearless
- Enthused and Confident
- Interested but Concerned
- No Way No How
Barriers

Did not bike in past 30 days

- I do not have a bike to ride: 46% Strong and Fearless, 51% Enthused and Confident, 56% Interested but Concerned
- Need vehicle for work/school/other reasons: 54% Strong and Fearless, 53% Enthused and Confident, 53% Interested but Concerned
- Poor/unpredictable weather: 28% Strong and Fearless, 36% Enthused and Confident, 38% Interested but Concerned
- The places I need to go are too far to bike: 44% Strong and Fearless, 43% Enthused and Confident, 43% Interested but Concerned
- Too few bike lanes or trails: 44% Strong and Fearless, 43% Enthused and Confident, 43% Interested but Concerned

Strong and Fearless, Enthused and Confident, Interested but Concerned
The role of infrastructure

More separation from motor vehicle traffic may help increase bicycling among Interested but Concerned.

*Remember that definitions are based on comfort level on major street with/without striped bike lanes.*
Conclusions

• The general consistency of the typology breakdown between Portland and this national survey suggests that the overall framework has merit.

• For planning efforts, it appears that around a third of the population is in the no way no how group and a plurality (or majority) in the interested but concerned group.

• The typology does not, in and of itself, indicate whether someone actually rides a bicycle at all.
  – May be related to frequency and type of riding
Conclusions

• Targeting the Interested but Concerned
  – Many don’t like driving (more than other groups)
  – They do like biking equally
  – Currently bike more for recreation/exercise
  – Infrastructure needs to address comfort level
  – Not having a bike is a barrier
Limitations, etc.

• Surveys have inherent limitations
• Assignment to a type based on fewer questions than previous research
• Many barriers and motivations for bicycling not addressed in this survey
• More analysis to be done, including linking to built environment
Questions?

• Funding support from NITC (US DOT National University Transportation Center) and National Association of Realtors®

• Thanks to co-author Nathan McNeil