Comfort + Convenience = More Women Biking

Susan Handy
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Share of Workers Commuting by Bicycle

The Davis Bicycle Studies

- Bicycling Behavior - Six-City Survey
- The Bike-to-Soccer Program
- Bicycling to High School
- UC Davis Campus Travel Survey
- E-Bike Early Adopters
- Formation of Attitudes Towards Bicycling
For Davis residents...

Share biking in last 7 days

Days biked in last 7 days

Source: Six City Survey, UC Davis
For UC Davis students and employees living in Davis...

<table>
<thead>
<tr>
<th></th>
<th>Any travel to campus by bike</th>
<th>All travel to campus by bike</th>
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<tbody>
<tr>
<td>Women</td>
<td>52%</td>
<td>29%</td>
</tr>
<tr>
<td>Men</td>
<td>58%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Source: 2010-11 Campus Travel Survey, UC Davis
Share of bike trips by women

Source: Pucher and Buehler (eds.) City Cycling. Cambridge, MA: MIT Press, 2012; UC Davis observations
Convenience

Source: 2010-11 Campus Travel Survey, UC Davis
Convenience?

Source: 2010-11 Campus Travel Survey, UC Davis

*Difference not statistically significant.
Confidence and Comfort

I am very confident riding a bike

- Women: 64%
- Men: 84%

Comfortable riding on a four-lane street with bike lane

- Women: 61%
- Men: 80%

Source: 2010-11 Campus Travel Survey, UC Davis
Safety Concerns

Source: Six City Survey, UC Davis

*Difference not statistically significant.
Attitudes

Source: 2010-11 Campus Travel Survey, UC Davis

- I like riding a bike:
  - Women: 76%
  - Men: 85%
- I enjoy physical exercise:
  - Women: 83%
  - Men: 89%
Key Points

• Convenience matters equally for women and men
• Women are less comfortable bicycling than men
• Women are more concerned for their safety than men
• Women like bicycling less than men
Percent Bicycling

Source: AYSO Survey and DHS Survey, UC Davis
I am always rushed to get ready in the morning. 57% of girls and 48% of boys feel this way.

I have lots of stuff to carry to school. 59% of girls and 42% of boys feel this way.

The clothes I wear make it hard to ride a bicycle. 17% of girls and 6% of boys feel this way.

Source: DHS Survey, UC Davis
Confidence and Comfort

I am confident in my bicycling ability. I feel comfortable bicycling on a busy street with a bicycle lane. I feel comfortable getting places on my own.

Source: DHS Survey, UC Davis
I like bicycling. I like being physically active. Protecting the environment is important to me.

Source: DHS Survey, UC Davis
My friends bicycle to school.

Driving is the coolest way to get to school.

I worry what my peers will think of me if I bike to school.*

Source: DHS Survey, UC Davis

*Difference not statistically significant.
Key Points

• Girls are bicycling less than boys from the start
• Girls are less confident and comfortable bicycling than boys
• Girls like bicycling less than boys but other have other favorable attitudes
• Convenience seems to factor in for high school girls
Implications

• Build facilities that are more comfortable for women, given their lower confidence level.
• Implement programs – for children, teens, adults – to help increase confidence for women.
• Adopt strategies to make bicycling more convenient for everyone.
• Evaluate these efforts, so we know what works!
# The 4 E’s of Bicycle Planning

<table>
<thead>
<tr>
<th>Engineering</th>
<th><img src="image1.png" alt="Engineering Image" /> <img src="image2.png" alt="Engineering Image" /></th>
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<tbody>
<tr>
<td>Education</td>
<td><img src="image3.png" alt="Education Image" /> <img src="image4.png" alt="Education Image" /></td>
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<tr>
<td>Encouragement</td>
<td><img src="image5.png" alt="Encouragement Image" /> <img src="image6.png" alt="Encouragement Image" /></td>
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<tr>
<td>Enforcement</td>
<td><img src="image7.png" alt="Enforcement Image" /> <img src="image8.png" alt="Enforcement Image" /></td>
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### The 5 E’s of Bicycle Planning

<table>
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<tbody>
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<tr>
<td>Equipment</td>
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</tbody>
</table>

| Environment | ![Image](image1) ![Image](image2)  
|-------------|-------------------------------------------------|  
| Education   | ![Image](image3) ![Image](image4)  
| Encouragement| ![Image](image5) ![Image](image6)  
| Enforcement | ![Image](image7)  
| Equipment   | ![Image](image8) ![Image](image9) ![Image](image10)  

*Images depict examples of each aspect of bicycle planning.*
Equipment Quotes

• “...after going to Copenhagen, and also Amsterdam and seeing women look so lovely on bicycles. And they were not slouched over with their butts up in the air, which is just so unfeminine... that was the first transition I made was a more female oriented bike.”

• “...most of the time I wear my hair in a ponytail, and then [wearing a helmet] goofs up your hair. I know it’s a silly thing...”

Source: Attitude Interviews, UC Davis
Equipment Quotes

• “… a little bit of pride that goes into it, like one time we went to Target. So, I have a two-year old son and so he was on the bike trailer. We went to Target and ended up buying all these storage baskets and bins... My son was carrying like 3 boxes in his lap, and then I had the back of the trailer stuffed full, and then I had like all these things that were precariously in my bike basket. I just felt kind of like proud of myself that I could do all that and get home without dropping anything.”

Source: Attitude Interviews, UC Davis
Where there’s a will there’s a way...

“I love my bike. It’s my car!”