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Bike lanes work, PSU professor says

Researcher straps GPS devices on bikes to study riding patterns

BY JIM REDDEN

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Despite the harrumphing of talk-radio hosts and the carping of car chauvinists, bike lanes do, in fact, work — and Portland State University researcher Jennifer Dill thinks she can prove it.

A year after strapping Global Positioning System recorders on hundreds of local bicyclists, Dill thinks she has enough data to demonstrate that “bike infrastructure” such as bike lanes, bike routes, and so on really do encourage people to get out of their cars and steer bikes away from busy thoroughfares that aren’t designed to accommodate them.

Dill recruited 164 bicyclists to carry GPS recorders on their bike trips for seven days. Altogether, they took 1,777 trips between April and November of 2007.

Dill then used the GPS information to track their trips and determine whether they were taking the shortest routes or intentionally choosing longer ones.

Remarkably, the results showed that although only 8 percent of city streets are equipped with any kind of bike infrastructure, 51 percent of trips were taken on them. To Dill, this means that most riders are seeking out such routes, even if they are not the shortest.

“People are going out of their way to use bike infrastructure,” Dill said.

Roger Geller, the city’s bicycle coordinator with the Portland Office of Transportation, is excited by Dill’s findings.

“Basically it confirms the story we have been telling — if you build it, they will use it,” he said.

Women see danger, men plow on

As she was sifting through her research data, Dill was surprised to discover that she was the kind of person most likely to hop on a bike if the infrastructure were better.

“I’m a woman over 40 who would ride more if I felt the routes were safe,” said Dill, an associate professor of urban studies and planning at PSU’s College of Urban and Public Affairs.

According to Dill, most regular bicyclists are young men. This means that if the city wants to substantially increase the number of people riding bikes on a regular basis, it needs to reach out to young women and older people. And, Dill said, that is what public spending on bike infrastructure can accomplish, as she herself demonstrates.

“When I was in my 20s, I used to ride bicycles all the time and didn’t really think much about whether it was safe,” said Dill, who has taught courses on transportation, land use and planning policies at PSU for seven years.

“But as I got older, I got more cautious and cut back my riding. Now I’m riding more, but I take side streets and look for bike infrastructure like bike lanes.”

Her data also revealed a significant gender difference when it comes to safety. Men and women are virtually the same when it comes to agreeing that cars are safer than bikes — 56 percent of men and 60 percent of women subscribe to that statement.



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PSU associate professor Jennifer Dill has researched how bicyclists travel around town. She used GPS devices to track 164 riders’ bike trips over seven days.

But women are far more reluctant than men to ride a bicycle in heavy motor vehicle traffic. According to the survey, 52 percent of women view too much traffic as a barrier to biking, compared to only 34 percent of men.

The differences were even greater between frequent and infrequent riders. Some 76 percent of infrequent riders believe cars are safer than bikes, compared to 52 percent of frequent riders. And 57 percent of infrequent riders view too much traffic as a barrier to biking, compared to only 37 percent of frequent ones.

Once again, Dill identified with the finding. When she rides to PSU from her Northeast Portland home, she avoids the busiest streets, even though they are the most direct.

"I mostly ride on neighborhood streets," Dill said. "I wouldn't feel safe on Sandy Boulevard, even though it's a direct shot to downtown."

Findings buoy bike boulevards

The project is funded by the Active Living research program of the Robert Wood Johnson Foundation and the Oregon Transportation and Education Consortium. Dill currently is writing a report to the funders and preparing a paper on the project to be published in the *Journal of Public Health Policy*.

Dill also is in touch with transportation planners at the city of Portland and Metro, the elected government that prepares the Regional Transportation Plan for most of Multnomah, Clackamas and Washington counties.

Although Dill believes more research needs to be done, she thinks her preliminary results suggest the city can encourage more people to ride bikes by making their routes safer.

"If we want more people riding bikes, we need a wider range of people," Dill said. "If you make the environment safer for riders and given them more options, more people will ride bikes."

According to Geller, the findings support proposals to expand the city's bicycle infrastructure, including an idea developed by Mayor-elect Sam Adams to add 80 miles to the existing 30 miles of bike boulevards.

The project, currently estimated at around \$30 million, would encourage bikers to use neighborhood and side streets by restricting motor vehicle speeds and making it easier to cross busier arterial streets.

"We need to be able to prove what we can accomplish during the budget process," said Geller, who is working to update the city's Bicycle Master Plan before finalizing a specific funding request.

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