Portland boasts the nation’s highest percentage of workers who commute by bike—eight times the national average—and much to the chagrin of many motorists, that number is growing. Last year Portland saw a 28-percent increase in bike traffic citywide; now it’s estimated that bicycle commuters make nearly 17,000 trips across the city’s bridges every day on their way to and from work. That’s a lot of bikes. And with the economy in the tank and gas prices soaring, more and more commuters are choosing the pedal over the pump, resulting in increased tension between bicyclists and motorists and dangerously crowded roadways that are unequipped to manage the different modes of transportation.

Without developing infrastructure to sustain the changing transportation model, Portland risks heading towards a critical mass that puts commuters in danger and might cost the city its reputation as America’s favorite urban bike destination. Portland is a bike city. According to the League of American Bicyclists, it is the number-
one city in America for biking, and it repeatedly ranks at the top of Bicycling Magazine’s list of the best bicycling cities. And with the overriding ethos of sustainability that permeates the city, it’s not surprising that Portland draws residents who value two wheels to four.

Home to a booming green economy, and more LEED-certified buildings than any other city in the country, Portland is on the forefront of the sustainability movement. In fact, according to SustainLane U.S. City Rankings—a proprietary, peer-reviewed, national survey that ranks the largest 50 U.S. cities in terms of their sustainability practices—Portland was rated the #1 most sustainable city in America in 2008.

Every city has a signature industry. Detroit’s is auto manufacturing; Seattle’s is software development; Portland’s just might become bikes. According to The City of Portland, the bicycle industry supported approximately 1,000 jobs and generated nearly $90 million in receipts last year. There are over 125 bike-related businesses in Portland, which can manufacture anything from high-end components to racks. It’s not uncommon for someone to wait five years for a bike frame from one of Portland’s custom designers. And because of its identity as a bike city, Portland has become the natural home for several bike trade shows, including the North American Handmade Bicycle Show, which drew over 7,000 visitors to the Oregon Convention Center in February. But no amount of bicycle business can keep the streets safe. During the cycling boom last year, incidents of tension between cyclists and motorists grew proportionally to the increase in riders. First, in July, bicyclist Steven McAtee, an employee of Portland’s transportation department, became enraged after driver Colin Yates chastised him for running a red light on SE Belmont Avenue. McAtee then chased the vehicle down and, catching up to it on SE Stark Avenue, used his bicycle as a weapon to club both the driver and his car in front of the man’s family. A passerby who witnessed the act then knocked McAtee out with one punch. A week later, frustrated motorist James Millican tried to run over bicyclist Jason Rehnberg only to have Rehnberg land on the hood of his Ford Escort, clenching onto the windshield wipers as the car sped 60-mph down Southeast 58th Avenue. The wild scene happened to be captured on video by a witness and went viral on Youtube. Two days after Rehnberg’s wild ride, Adam Leckie was riding his bike in North Portland when Patrick Schrepping leaned out of the passenger seat of his friend’s SUV to admonish the bicyclist for unsafe riding and not wearing a helmet. Leckie then followed the SUV to Lorenzo’s restaurant, on N. Mississippi Ave., where he proceeded to scratch the entire length of the driver’s side door with his key. Schrepping confronted Leckie, and the two ended up brawling in the street. According to witnesses, Leckie pulled out his bike lock and took a swing, but Schrepping wrestled it away from him, and the fight ended when he used it to smack Leckie upside the head. And although every one of these incidents boils down to personal responsibility (or lack thereof), they are indicative of a greater problem: two fundamentally different modes of transportation being squeezed into the same space of road.

All things considered, it is understandable that bicyclists, who fear for their lives when riding just feet away from speeding 4,000-pound vehicles, react explosively when drivers are being unsafe. And it is equally understandable why drivers, who fear the emotional and legal consequences of hitting a bicyclist, become infuriated when bicyclists ride unsafely. According to Criminal Behavior by Elaine Cassel and Douglas A. Bernstein, research with animals and people suggests that crowded settings increase the tendency for stress and aggression. In their studies of rats and monkeys, Cassel and Bernstein found that high-density living arrangements caused “disintegration” in the respective species’ existing social orders. In other words, chaos and violence ensued. They found the same to be true when studying American prisons: riots and inmate murders increase with population increases. The same basic principles hold true on our roads. Of course, Portland is in no way en-route to chaos and social disorder just because bicyclists and motorists struggle to share the roads, but as competition for space on the streets becomes more dangerous and more intense, it’s only natural to see an increase in conflict. It’s happening all over the country. In Austin, Texas (which also experienced a bicycling boom last year), the number of collisions between cars and cyclists jumped 69 percent between 2006 and 2008. In Los Angeles, on the 4th of July last year, Dr. Christopher Thompson became enraged that two bicyclists weren’t riding single-file on the road. Words were exchanged. Then Thompson slammed on the brakes of his Infiniti sedan in front of the two cyclists, propelling one of them through the car window, and sending an-
other crashing to the pavement. One rider suffered broken teeth, cuts on his face and a broken nose that was nearly torn off. The other ended up with a shoulder separation that would require surgery. But conflict between motorists and bicyclists who are competing for space isn’t just an American problem. The number of bike commuters in Toronto, Canada went up 25 percent between 2001 and 2006. The increase has, similarly to Portland, led to an increase in incidents between motorists and bicyclists. Three years ago, in Toronto, a driver tossed a half-eaten Jamaican meat patty out of the window of his car, nearly hitting Leah Hollinsworth, a bike courier. The 26-year-old bicyclist then threw the food back into his car. The driver retaliated by tossing two cups of hot coffee at the courier, and then, after they exchanged insults, the driver got out and attacked both the woman and her bike. Images documenting the conflict were captured by a photographer and went on to make national news in Canada: bike-versus-motorist conflict was becoming recognized as a serious issue there. The following year, in 2007, just after morning rush hour in Toronto, a bicyclist became angry after being cut off by a driver. He then pedaled up to the car, leaned inside the open window, and stabbed the driver in the face and neck with a screwdriver. Although these anecdotes are obviously extreme situations that by no means represent the norm, they still cannot be ignored. This type of thing just wasn’t happening ten years ago; it’s a new phenomenon that has evolved in response to dated infrastructure that, in its current form, isn’t sustaining the change in transportation modes.

If a grid is designed with only one mode of transportation (which, in most cases, including Portland’s, is automobiles) in mind, then introducing a new mode inevitably causes friction. This is where city planning comes in. With adequate foresight, infrastructure can be put in place to allow cars and the growing number of bikes to coexist on the same roads.
Part of the reason Portland has been able to brag about being such a bike-friendly city is due to infrastructure plans that were enacted by the state almost forty years ago.

According to Scott Cohen's Comprehensive History of Portland's Transportation Systems, the 1960s and 1970s saw Oregonians (particularly Portlanders) questioning whether they wanted to rely solely on freeways and automobiles to get around.

In 1971, these advocates of alternative transportation successfully passed legislation called the Bicycle Bill, which required the state to set aside 1 percent of its highways funds for bicycle and pedestrian infrastructure development. But even though the money was there, Portland's bicycle network didn't really start taking shape for another twenty years.

During the 1990's, the I-205 bike path, three bicycle boulevards in inner SE, and several long stretches of bike lanes on roads like Highway 30 were built, and momentum for a bicycle-friendly culture was beginning to build.

Around that time a small group of cyclists formed an advocacy group, called the Bicycle Transportation Alliance (BTA), to make “bicycling safer, more convenient and more accessible.” Since that time, the BTA has helped to shape Portland's identity as the country's most bicycle-friendly city.

Despite its humble origins, the BTA is now a formidable power in lobbying. Today it has a membership of 4,500 plus hundreds of community volunteers at its disposal. Among its many accolades, the organization is credited with convincing TriMet to integrate bike storage on buses and MAX lines, and ensuring that countless projects in the Portland Metro area have been built in a way that accommodates bicycles instead of just cars. The BTA has become such a powerful force in bicycle-infrastructure development that it has inspired copycat groups in cities all over the country.

Thanks to advocacy organizations such as the BTA working in partnership with planners, Portland has come a long way in terms of alternative transportation. But now, as more people start taking advantage of Portland's current bicycle infrastructure, new challenges are emerging.

“New facilities for cyclists are so wildly popular that they are often full,” says Scott Bricker, Executive Director of the BTA. “The infrastructure has changed, and in those places, that's where cycling is the most crowded.”

Possibly the only memorable moment in the 1999 fantasy-drama, “Field of Dreams,” is when Kevin Costner, a rural Iowa farmer, hears a voice from his cornfield whisper, “if you build it, they will come.” Well the same has proven true with Portland's bicycle infrastructure – only instead of shoeless Joe Jackson, bicyclists came; and not just a few, but thousands of them.
Over the past 15 years, Portland has witnessed an increase of over 400 percent in bicyclists using the four bicycle-friendly bridges downtown. The increase in two-wheel traffic has been so profound that now it accounts for over 10 percent of all traffic on those bridges. But, paradoxically, as Portland's bicycle-friendly streets encourage more riders, the streets actually become less safe for riding.

One span that has experienced an inordinate influx of bicycle traffic in recent years is the Hawthorne Bridge. About 7,400 people on bikes travel over the bridge every weekday during the summers. Last summer, bicycles made up 20 percent of all traffic there.

The sheer number of bikes that cross the bridge every day is touted by some, like NYC-based StreetFilms (which used footage of the Hawthorne Bridge as an iconic symbol of Portland's successful bike infrastructure) as a victory for bicyclists nationwide. But for others, like those who have to commute across the bridge every day, the numbers can be alarming.

“Around 5:15 PM—mostly in the summer—the bridge is clogged with people. You can imagine the scene—slow cyclists, fast cyclists, walkers, people with strollers… it’s a zoo,” claimed an anonymous bicyclist in an email to Roger Geller, Portland's bicycle coordinator. “It’s one of the most dangerous stretches of a cycling route that I’ve seen.”

The email from the anonymous bicyclist, which was printed in full on bikeportland.org, was in response to a near-tragic accident that the writer witnessed on the congested Hawthorne Bridge.

The gruesome incident came about when 24-year old North Portland resident Erica Rothman had her handlebars clipped by another bicyclist (both were in the process of passing pedestrians) on the westbound side of the Hawthorne Bridge, knocking her off the path and into traffic.

The paths on the Hawthorne Bridge are each only 10-and-a-half-feet wide and, during peak traffic hours, jam up with pedestrians and bicyclists often moving in different directions. On the Hawthorne Bridge it’s not uncommon, for example, to see groups of pedestrians walking four abreast in the wrong direction. And since there’s no rail separating motorized traffic from the growing number of bicyclists and pedestrians crowding the paths, things can get hairy.

Bicyclists and pedestrians can be just as volatile a combination as bicyclists and cars. The 12-foot-wide Minuteman Bikeway in Lexington, Virginia, which is visited by two million annual users, has its fair share of conflict as well. In one of the most famous incidents, police were notified after a passing bicyclist kicked a Jack Russell terrier and yelled at the dog’s owner, “Get the [expletive] over to the right!”

With so many more bicyclists taking to the road each day, experts claim that it won’t be long before someone dies in an accident on the congested Hawthorne Bridge. This begs the question: is Bridge City’s beacon of bicycle commuting destined to become a symbol of failed planning, or will planners design improvements such as better signage (to keep everybody traveling in the right direction) and railings to separate vulnerable road users from car traffic?

Being America’s most bike-friendly city has its drawbacks, one of the biggest being that there aren’t many models to follow. Almost everything Portland planners create in terms of bicycle in-
Infrastructure is groundbreaking. And planners and advocacy groups such as the BTA have to learn from each new project.

The safety issues with the Hawthorne Bridge are providing valuable insight to new bridge projects. Currently the BTA is advocating that the bicycle/pedestrian path on the new Sellwood Bridge must be at least 12 feet wide and include an on-street segment of path to separate speeding bicyclists from slow-moving pedestrians. The paths on the new Columbia River Crossing Bridge will be at least 16 feet wide in both directions.

Putting wider paths on Portland’s bridges seems like a logical solution to congestion, but what about roads? Two-thirds of Portland residents say they would bike more if they had safer routes with a buffer from cars, but how does the city plan on keeping distance between bicyclists and automobiles?

In October 2005, the BTA introduced its “Blueprint for Better Biking: 40 Ways to Get There” report, listing the 40 projects the group believes would most improve biking in the Portland Metro region. One of the primary projects cited in the report was the need for east/west bikeways in North and Northeast Portland where, in some areas, well over 5 percent of trips are made by bicycle.

One option is to develop more bike lanes and bike boulevards, which turn low-traffic side streets into bicycle throughways. Bicycle boulevards such as SE Salmon Avenue and SE Ankeney Avenue, which experience no more than 3,000 cars per day, are designed to be more accommodating to bicycles than automobiles. On bike boulevards stop signs are turned to keep cyclists moving, and traffic lights and curb extensions help cyclists cross busy streets. Speed bumps discourage motorists from using bike boulevards as shortcuts. The resulting traffic calming slows cars down, and discourages motorist traffic.

The idea of bicycle boulevards may seem radical to many Portland motorists, but embracing a changing transporation system requires an open mind - one willing to accept an entirely new philosophy about road travel. For example, many cities in Europe have implemented bicycle-and-pedestrian-friendly infrastructure called shared, or naked, streets where the signage is removed entirely.

In The Netherlands several towns are experimenting with naked roadways. Makkinga, a town in the Dutch municipality of Ooststellingwerf, has no road markings and no stop signs or direction signs of any kind visible in its streets, and, according to reports, residents are enthusiastic about it. Accident figures at one busy intersection where traffic lights were removed in the Northern Dutch town of Drachten, one of the pioneering towns of naked streets, have dropped from an average of 36 in the four years prior to the undressing to two in the two years following it.

And it’s not just the Dutch. When shared streets were implemented in London’s Kensington High Street, casualties fell from 70 in the period before the street was remodeled to 40 afterwards - a drop of over 43 percent.

“The reason naked streets are successful is that they rob all commuters of their margin of safety,” says Philip Preville, a writer for the Toronto Life.
“Suddenly everyone, whether on foot, on pedals, or behind the wheel, must establish eye contact before entering an intersection.”

But whether Portland decides to tear down its current infrastructure system or add to it, bicycle infrastructure projects cost money: lots of money. For example, the BTA’s working list of 112 miles of potential bike boulevards would cost about $20 million to implement. And many Oregonians, particularly those who don’t ride bicycles, would rather see their transportation dollars spent on highway improvement projects.

“There’s a perception that money spent on bike improvement is money not spent on motorists,” says Jules Kopel-Bailey, State Rep. for House District 42 (SE Portland). In Salem, Bailey is an outspoken advocate for bicycle infrastructure improvement. He was one of the primary backers of the Idaho Stop Sign Law, and the chief sponsor on HB 2902, which would have authorized issuance of lottery bonds for transportation projects for non-motorized vehicles and pedestrians. Bailey has fought so hard for Portland’s bicycle community that when local alternative newsweekly The Portland Mercury wrote a story about him recently, the piece was accompanied by a picture of his smiling face superimposed over the head of Christ.

But convincing Oregon taxpayers to dedicate money towards bicycle infrastructure is not as easy as it was in 1971. Thanks to the economy, there is little money to work with this year. And the statewide ethos seems to have changed. Now talk of bicycle infrastructure projects brings up all the grudges that exist between motorists and bicyclists. As a result, many legislators aren’t willing to alienate their motorist constituents by dedicating transportation monies to bike projects.

The battle between bicyclists and motorists is not limited to the road. According to House Bill 2001, the new transportation package, Oregon motorists will be expected to pay $121.50 in fees and taxes this year. And many of these drivers don’t understand why a portion of the money should be dedicated to bicycle infrastructure that they won’t use. They argue that bicyclists should pay fees and taxes of their own to pay for infrastructure improvements. But bicyclists, many of whom also own cars, say that a bike tax would end up making them pay twice for damage they aren’t even doing. In defense, they cite a commonly accepted formula for vehicle-caused road damage in which damage is proportional to the fourth power of axle weight. According to this formula, they claim, the average sedan is responsible for about 160,000 times the damage of bikes.

As the primary modes of travel in Portland evolve, the city needs to be both financially and philosophically prepared to cope with change. The transportation system is used every day by hundreds of thousands of motorists, bicyclists, and pedestrians who all have a right to the road. Portland is on the verge of a new transportation frontier, and changes to infrastructure are coming incrementally. Until then, commuters will need to take a deep breath and make room for one another on the roads.

“We’re light-years better than most, if not every other American city,” says Rep. Bailey, “but that’s a pretty low bar.”

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