



momentum

(**smart** living by bike)

6th Annual
**GEAR
GUIDE**

THE
**HEALING
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45

THE HEALING POWER OF THE BICYCLE



Within the powers of this great machine is the ability to help people heal. A bicycle ride can be truly therapeutic, and we look at several stories where cycling made the difference.

+ PLUS

37 ARE BICYCLE HELMETS HOLDING US BACK?

Shaun Lopez-Murphy goes in-depth with the laws, statistics, and behaviours surrounding the bike helmet and its place in city cycling.



57 6TH ANNUAL GEAR GUIDE

This season's hottest bikes, bags, locks, cycle apparel, & more.

75 E-BIKES: WHAT TO KNOW WHEN GOING ELECTRIC

PLUS E-bike Buyers' Guide.

contents

MOMENTUM

34



PHOTO BY NELSON MOUËLLIC

departments

8 **editor's note**
FROM THE EDITOR-IN-CHIEF

80 **bikeStyle**
BECKY KATZ

10 bells+whistles

- 10 CYCLEPRENEURS
- 12 HOW TO
- 14 DESIGNING CITIES
- 17 SUBURBAN CYCLING
- 20 NEW ORLEANS, LA
- 23 FOLDING BIKE ADVENTURES
- 26 CYCLING AT ALL AGES

31 families on bikes

31 YOUTH ADVOCACY

45 wellness

45 THE HEALING POWER OF THE BICYCLE

style

34 FROM WORK TO PLAY

57 goodybasket

- 57 6TH ANNUAL GEAR GUIDE
- 70 MANUFACTURING IN TAIWAN
- 75 E-BIKES: GOING ELECTRIC



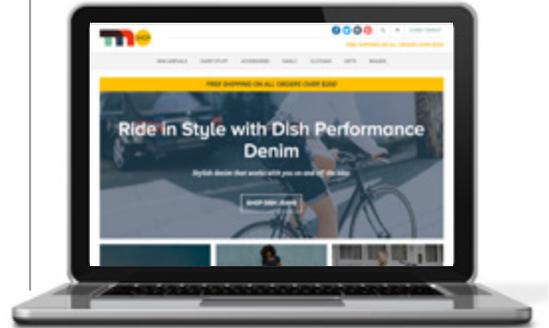
THE COVER

Our cover model is **DANIELA DUVA**, a fitness trainer and enthusiastic

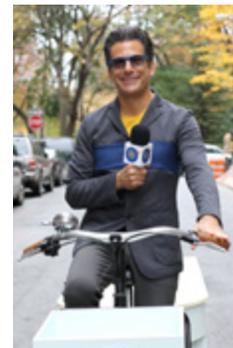
cargo bike convert. She was photographed in Vancouver, BC by David Niddrie. Read Daniela's story, part of our Wellness feature, on p. 52.

on the web

Ride in Style



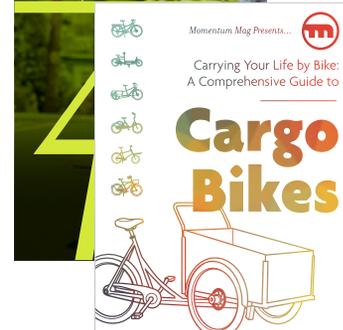
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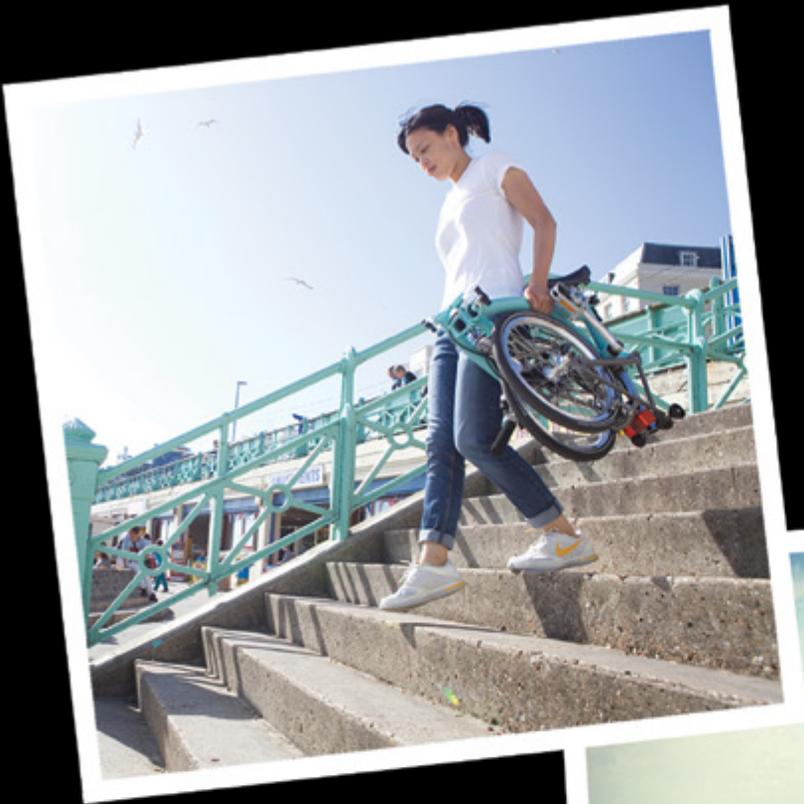


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- Bicycling Magazine



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Shaun Lopez-Murphy is an organic pig farmer when out-of-doors and a bicycle and pedestrian planner when at his desk. He and his husband run Mulefoot Farm, and Shaun works for Toole Design Group, based out of Washington, D.C. When not herding pigs, he loves restoring Mulefoot Farm's 1900-era farmstead, learning traditional homesteading skills, and bicycling Wisconsin's beautiful network of rail trails. Shaun's feature article on bicycle helmets begins on p. 37.

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Julie Verlinden is a freelance photographer, specializing in lifestyle, wedding, stage and travel photography. Born and raised in Belgium, but recently moved by love and now living in New Orleans, LA. Driven by an everlasting curiosity, she prefers to not interfere in circumstances or light, and create honest, documentary style images. Julie's photos accompany our New Orleans City Guide on p. 20. For more of her work look up 'Julie Verlinden Photography' on Facebook.



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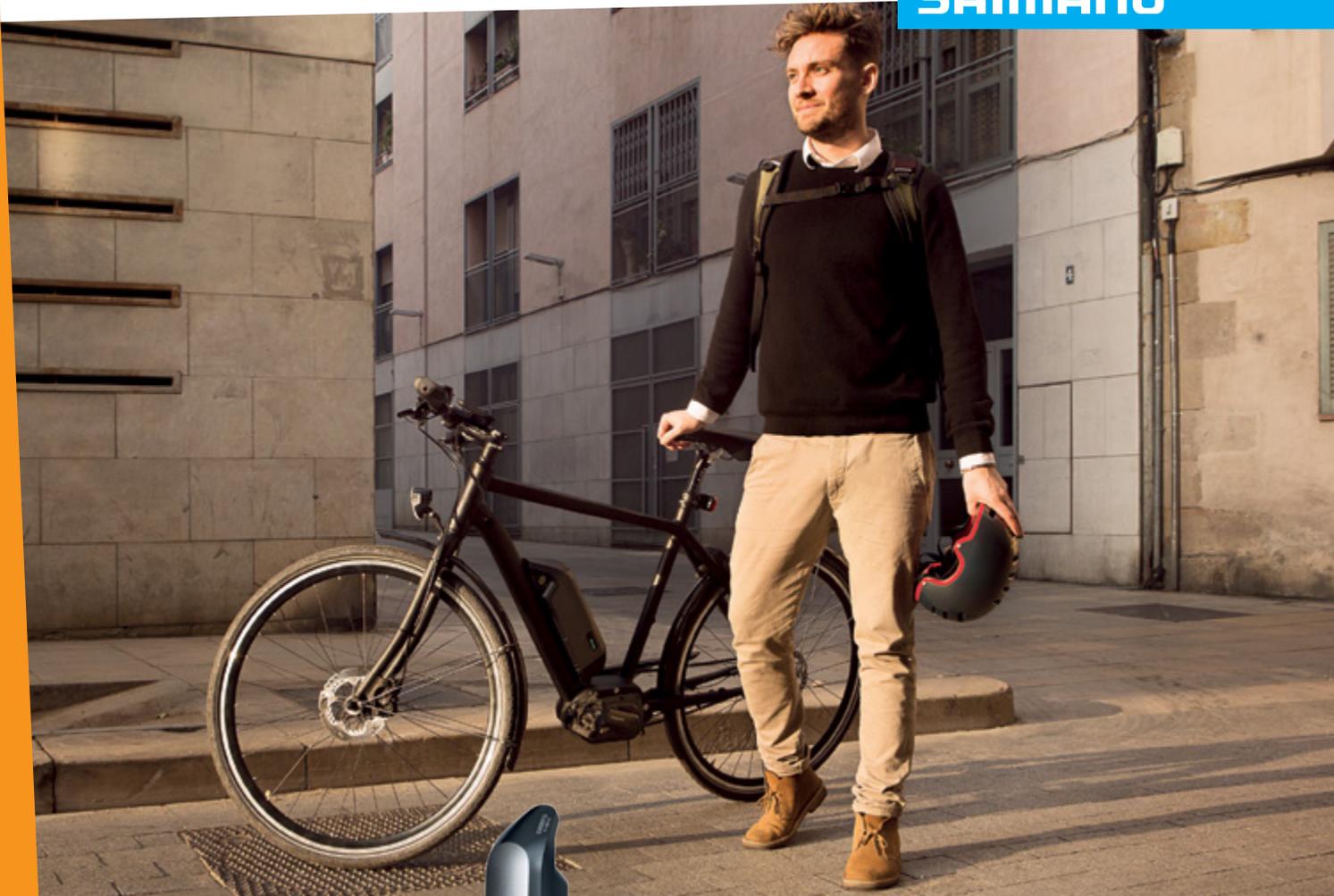
Jack Hawkins is a freelance writer and touring cyclist, originally from England but now residing in New Brunswick, Canada. Beginning with his own blog and a small cycling publication based in Sackville, NB, Jack has since gone from telling stories of his own travels by bicycle, to telling tales of other's extraordinary adventures, both in and out of the saddle. Read Jack's inspiring story about Derek Boocock on p. 46.

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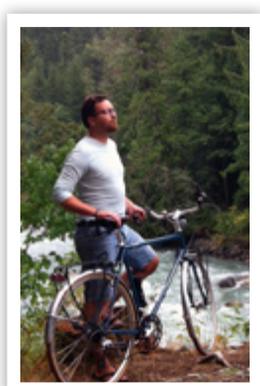
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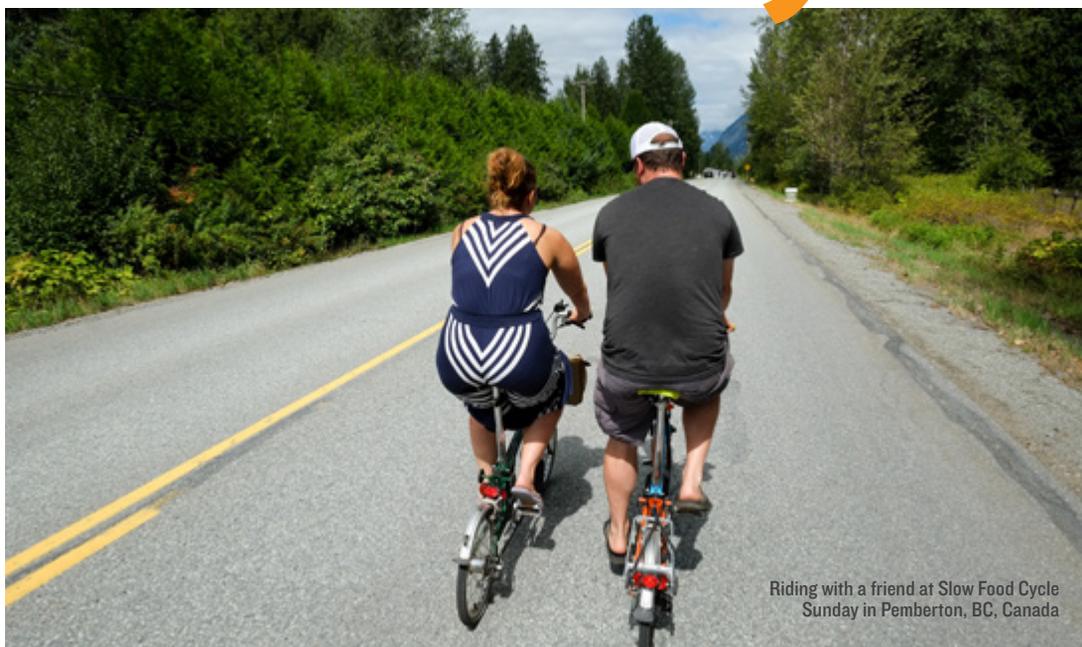
ROLLIN' WITH GRATITUDE

WRITER: DAVID NIDDRIE

After many years behind the scenes in the art department here at *Momentum Mag*, I am proud to have taken the reins for the editorial content in our spring issue. Inside, we feature many different voices, speaking to the multitude of ways the bicycle has become part of our lives. I had the great pleasure of conversing with cyclists of all generations and from many different backgrounds as we put this issue together.

One of the best parts of this job is working with our fabulous writers, illustrators, and photographers, many of whom have been contributing amazing work for years. We have been fortunate to collaborate with passionate, dedicated creators – all with a common goal of sharing how fun and empowering cycling in the city can be. A huge thank you to everyone who has contributed to *Momentum Mag* over the years, your words and images have made an impact.

Enjoy our spring issue and happy riding!



Riding with a friend at Slow Food Cycle Sunday in Pemberton, BC, Canada

PHOTO BY DAVID NIDDRIE

Bicycling is fun, freeing, empowering, great for your health, and a fabulous way of getting around. You already know this, that's likely why you're reading this magazine.

But for many people, the myriad benefits of bicycling aren't so obvious. So we'd like to encourage you to share your love of cycling with others, particularly with those who don't currently ride and probably haven't since childhood.

While reading through the stories in this issue, particularly those which appear in our Wellness Feature: *The Healing Power of the Bicycle* (starting on p. 45), I began feeling emotional and extremely inspired. The people featured in this issue each have a unique and incredible story to tell with one common theme: their lives have been drastically improved because they ride bicycles.

So how did they get started? How did you get started? I was reintroduced to cycling in my mid twenties when I blindly took a job helping to organize a Bike to Work Week program. Not wanting to be seen as a hypocrite for not riding, I jumped back on my junky box store bike from high school and hit the pavement. Then the epiphany happened - biking is so much fun! Later that spring, our Bike to Work Week event took place and I was able to experience sheer joy all over again, witnessing firsthand other people's 'aha' moments as they too rode their bikes for the first time in ages.

Now that I have been regularly riding my bike for nearly a decade, I forget how hard it was to discover

riding in the first place. But it's important for existing cyclists to remember what prevents many people from riding - they have yet to be introduced or encouraged to try it in a way they're comfortable with.

One of my greatest pleasures in riding again has been sharing my joy of cycling with others because it's so contagious! Once people try it, they love it and will most likely continue to cycle on their own. Four years ago I gave my mom her first e-bike to help her overcome the steep hill between her home and work, and she has commuted by bike ever since (read about e-bikes on p. 75). Two years ago I gave my fabulous boot camp instructor and friend a cargo bike and was so thrilled to see her adapt to a bicycle lifestyle and love it (read Daniela's story on p. 52). She has inspired me so much that I wanted to do the same for her in return. And last year I put my boyfriend – who had previously been too afraid to try riding in the city – on a bike again, and now he rides everywhere (read about our summer road trip on p. 23).

Given our fairly dismal cycling rates in Canada and the US, it's time for us existing riders to take action and share our love of cycling with others. Even if you can encourage one more person to try riding a bike, that can be one life positively changed forever. Let's spread the positivity and get more people on bikes!

MIA KOHOUT, editor-in-chief

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Cyclepreneurs

Cool New Bike Businesses Cycling to Success

WRITER: **ALLAN ISHAC**
PHOTOGRAPHER: **PLATE 3 PHOTOGRAPHY**



If ever two words were crying out to become a bike-based business, “wash cycle” would top the list. Gabriel Mandujano saw this potential when he created Wash Cycle Laundry in Philadelphia, where he has leveraged the common phrase into an uncommon, pedal-powered, business success. We caught up with Gabriel between loads and asked him what it’s been like to haul more than three million pounds of laundry by bike in just five years.

First, kudos on the name. I imagine the double entendre is a real attention-getter?

It’s definitely working for us. About 40 percent of new clients see our delivery bikes, remember our name, and contact us. It’s our only customer acquisition effort on the consumer side right now.

So why does a guy with an MBA from Wharton open a bike-based laundry business?

The challenge probably. I was hoping to prove two things: that an entry-level service job could become a stepping stone to a productive career – particularly for vulnerable adults. And that bikes could be a commercially viable alternative to trucks in the inner city.

Did you prove it?

It’s ever evolving, but since making our start in 2010, Wash Cycle has hired extensively from the welfare-to-work populations and the prisoner re-entry system. Our six month retention rate is 83 percent. That’s very high. So we’re having a positive social impact, certainly. And since Philly is densely populated and flat, with our main hotel, hospital, and restaurant clients so closely packed, a pedal-powered operation makes total business sense.

Hauling tons of laundry by bike every week, you’d think that a truck would be necessary. But you’re demonstrating otherwise.

On so many levels, cargo bikes work better. Truck delivery in cities is very expensive. Parking tickets, gas, traffic delays ... they all add up. Bike delivery solves most inner city delivery problems and our start-up costs were very low.



Gabriel Mandujano

What does a typical day look like at Wash Cycle?

We get started around 6am at the industrial laundry facility and the bikes are loaded and ready to hit their routes at 9am. Another delivery shift overlaps at 4 and goes till 8pm. Each of our eight bikes makes three to four runs each day.

Is there anything special about your bikes?

They’re electric assist – that’s absolutely necessary when you’re hauling hundreds of pounds at once. But our bikes are evolving as the cargo bike industry does. We still haven’t found an e-assist kit that we consider commercial grade – able to reliably pull hundreds of pounds for 40 or 50 miles a day.

How did you land high-profile clients like the Philadelphia Eagles and University of Pennsylvania?

A lot of companies and organizations have sustainability procurement goals today so our environmental and social missions definitely open doors and get us visibility. But in the end it comes down to quality, reliability, and price. On those variables we are also competitive.



Sounds like you’re ready to scale up to other cities.

We’re already in Washington, DC, and Austin, Texas, with other major cities lining up. We’re just waiting to land a few major commercial clients in each of those cities and then we’ll be rolling.

What’s on your wish list for 2016?

Business processes that are focused on fleet maintenance for a bike-based operation. That doesn’t exist yet.

Spoken like a true Wharton graduate.

You asked.

WASHCYCLELAUNDRY.COM

Allan Ishac writes the Cyclepreneurs column and also created cyclepreneurs.com, the only pedal-powered business website, as well as That Bike Show with Simon Spokes (thatbikeshow.com), a web series celebrating all things cycling.

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Have a bike-based business you think we should know about? Email us at allan@momentummag.com

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Start a Bike to Work Program



PHOTO BY LUCKY BUSINESS / SHUTTERSTOCK

WRITER: **GALEN CROUT**

As a reader of *Momentum Mag*, you're probably a regular bike commuter and possibly a bicycle advocate, too. You ride because it's fast, serene, and keeps you fit. Or because cycling is a sustainable way to get around in your community. Or because bikes are beautiful, energy-efficient machines. The list of reasons is diverse and all the justifications should be persuasive. Still, odds are that at your office, daily bike commuters are a minority. You'd probably like to change that.

So how do you convert the unconverted? Conventional, anecdotal, and statistical wisdom all favor biking to work but often the most persuasive evidence is trying it.

One of the best ways to incentivize non-riders to get on a bike is with a Bike to Work (BTW) program. It's an easy sell for employers and Human Resources

managers because it boosts the cache of organizations, leads to fewer sick days, and significantly boosts focus and happiness. BTW can be surprisingly easy to implement. Either establish a pool of common bikes for riders to share or subsidize individual bike ownership. Both systems have their strengths and weaknesses.

Bike Pool Program

A bike pool is the easiest BTW program for an organization to implement, and one of the best ways to incentivize non-cyclists to ride. All it requires is an up-front investment in a small collection of bikes – preferably low maintenance models with internal gearing – and geometry that scales well to a range of rider sizes. Establish your bike pool at the beginning of the calendar year and encourage riding with bonuses and incentives for participation. Track miles and ride frequency in

an honor-system Google Doc and organize monthly group rides.

Bike Subsidies

Another BTW approach is to buy or subsidize bikes for each employee. At the beginning of spring, riders commit to a certain frequency (daily, weekly, monthly) of commutes. High frequency riders get bigger bike subsidies if they fulfill their commuting goals for the year. Track riders over the next twelve months with an honor-system spreadsheet. If they meet their riding commitment, they receive their full subsidy as a year-end-bonus. A bike subsidy program takes more planning and tracking to implement properly, but the payoff is a robust program that scales more efficiently.

Common Goods

Whatever system you choose, there are some fundamental amenities that all BTW programs should

invest in. Define a dedicated and secure bike storage space, like a garage, warehouse, or storeroom. If your employees choose folding bikes for BTW, let them store their bikes under their desks. Dedicate a shower for riders, with a change-room and personal locker area. Finally, invest in a basic maintenance and repair station. This could be as limited as a bike pump, multi-tool, and bin of replacement tubes, or a full setup with a truing stand and bike repair rack.

Biking to work is easy. So is creating a Bike to Work program. Go out and build one. Your co-workers and boss will thank you.

Galen Crout is the Communications Manager for Tern Bicycles. He's a longtime bike advocate, daily commuter and cycle tourist. Visit the Tern website for more sustainable transportation inspiration.



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Designing Cities:

Bicycle-Dependent Urban Expansion

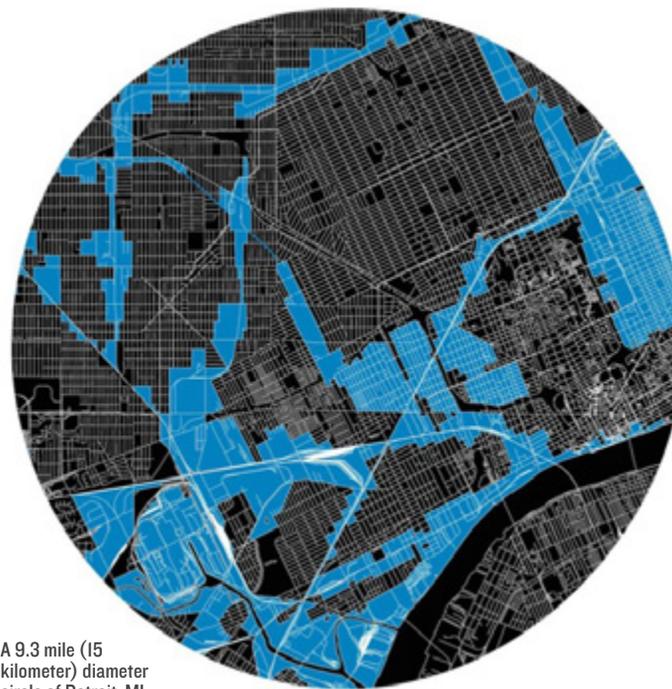
WRITER: DR. STEVEN FLEMING

There's a lot of excitement around urban cycling these days. According to the 2015 Menino Survey of Mayors in the US, 70 percent of them would take lane space from driving and parking and reallocate it for bicycling. The last time anything like this happened – space between buildings in the centre of town got reallocated – it was to give vehicles more space and a few years later we got urban sprawl. Back then, the reallocation of street space was a sign that something much bigger was afoot.

People were ready for a bold new experiment in spatial production. They were ready to live on what had been farmland, pay fortunes for transportation, start shopping in malls, get rid of their raincoats, ...etc. A buzz first evidenced by the width of the carriageway created a reorganization of everything from school boundaries to the size of our pantries.

So far, the majority think the buzz around bicycling is leading nowhere. (1) It's a minority mode. (2) Infrastructure spending should go toward everything else. (3) Urban cycling is unlikely to give rise to a unique brand of urbanism – not when its patrons seem happy in housing from the era of the railway or streetcar. And yet, this is familiar. Before the Second World War, motoring enthusiasts felt excluded in the same three ways.

What really differentiates the proto-car-centric period from the proto-bike-centric period we're living in now is that in the 1940s and 50s cities only had one way to grow: outward, on greenfields. Instead, population growth now



A 9.3 mile (15 kilometer) diameter circle of Detroit, MI

has been able to be absorbed by city centres. Depopulated workers' housing and manufacturing districts from the Industrial Age have been ripe for gentrification. Who by? Hipsters, ageing hipsters, urbanists, creatives, yuppies ... all labels for people who cycle.

But what next? Gentrification has happened. The Meat Packing District in New York, NY shows how the game ends: Movie stars and foreign investors have bought it all up and only live there part of the year. In cities where the industrial cores are much smaller, high income folk have taken over the inter-war suburbs. The only place left for the bicycling demographics to move are suburbs from the 1950s and later when housing started reaching into the

hills and over horizons.

With the exception of fitness nuts – bless their sweat-wicking socks – few people will cycle if their suburb is hilly or sprawling. Adding e-bikes to the equation can bring a few more on board. Still, we're hardly redeeming the suburbs.

The question is where do we go to from here with our cities? Do we leave the big ones and move to regional centres? Create new centres in the suburbs, linked via subways? Resign ourselves to confinement within our small, urban village?

All are poor options and none properly factor in bicycling.

Did you know that a 9.3 mile (15 kilometer) diameter city, if it were as dense as Manhattan, would have a population of 6 million

people? And did you know that if it were designed around cycling – the way, say, Houston was designed around driving, or how Venice was designed around boats – and if no vehicle were allowed in that city that impeded the smooth flow of bikes, that the average commute time would be faster than in any other city that size? This was one finding from a design research project I ran. I'm now in the process of disseminating these and other findings to my colleagues and bike transportation enthusiasts.

It's pie in the sky stuff. With that research project, in a university context, we had time to design spiralling apartment buildings and ground planes that dip to help riders speed up and rise so they can slow down without braking. Sound crazy? Consider this then, that architects and engineers in the 1920s were imagining cloverleaf intersections, buildings you could drive into and park your car in, and cities spreading out into the countryside. All of these were unimaginable to everyday people but exciting nonetheless. To participate, they would just need one of these automobile thingamajiggies that radicals of the time were driving to town.

Today, we are those radicals. Whether with our rain-beading trousers or cargo bikes packed with designer-garbed children, we are the firebrands of our cities – not in a way that is faddish but in a profound way. We're reducing car lanes and parking.

The question is: Can we sustain the momentum? Trends need fresh angles just as fires need logs once the kindling is burning. It would be good if one day cycle-chic, protected

bike lanes and everything else the cycling renaissance has added to the urban landscape, were looked back on as the kindling that came before the big log. What will that log be? What could be our answer to suburban sprawl, the thing that cemented car culture by making the car more than just something people were keen on, but something they could not live without?

It's not widely known but most of our cities have empty land crying out for a new vision. In all of the cities my office has mapped a 9.3 mile (15 kilometer) diameter circle (within which average trip distances would be around 5 miles [8 kilometers]) can be positioned in such a way as to capture a lot of former industrial sites strung along disused rail corridors or former industrial waterfronts. Currently, it's earmarked for glass condominiums over lots of garaging. Right now though it's cheap. And it's flat! It needs to be claimed with a development type that will incentivize cycling.

Here's where I add that the Netherlands has little that we're able to copy. Most of the country is

car dependent. The medieval town centres where driving is useless are the places with the 60 to 70 percent bike modal shares. But they are tough places to live, with rotten bike parking, single-aspect apartments all looking into each other, steep stairs, and building stock that is expensive to service.

Among architects working on housing solutions for the world's disenfranchised and poor, there is renewed interest in experimental housing types of the 1950s, 60s, and 70s. Some were disasters so were destroyed. Others have become hip addresses and the inspiration for trendy apartments in Denmark and the Netherlands (bicycling gold standards). Their re-evaluation of post-war brutalist architecture is, almost by accident, leading some architects to stumble upon planning arrangements that really can incentivize cycling.

For example, a classic apartment block from 1961, Park Hill in Sheffield (now heritage listed and trendy as hell), has access galleries that lead onto the ground. You can cycle straight out without using a lift. Rare copies of Le Corbusier's book



The demolition of a Pruitt-Igoe building in St. Louis, Missouri April 1972. It was a controversial, and failed, project of urban renewal.

PHOTO COURTESY OF US DEPT OF HOUSING

“Vers une architecture” show the same thing on the cover: a cyclist on an aerial street. The modern counterpart is the multiple award winning 8 House by BIG in Copenhagen, finished in 2010, with an aerial street – a promenade and a cycle track which reaches up to the 10th floor.

It is understandable for people to hold prejudices against apartment living if they are accustomed to freestanding houses. It is reasonable too that bicycling, for most, is totally selfish; what should it matter to any of us if there are families in outer suburbs for whom cycling might only work for dad's work trip?

It matters to us when our cities can't fulfill their perennial function: connecting all walks of life to exchange goods and labor. The city is a collective enterprise.

If I'm right about cyclists occupying a similar position of influence to the one occupied by motorizing enthusiasts before cars got their space, then urban space should be especially concerning to us. Our role in renewing and gentrifying central districts and lobbying for cycle tracks are our warm-ups pre-match, before we turn our attention to brownfield redevelopment.

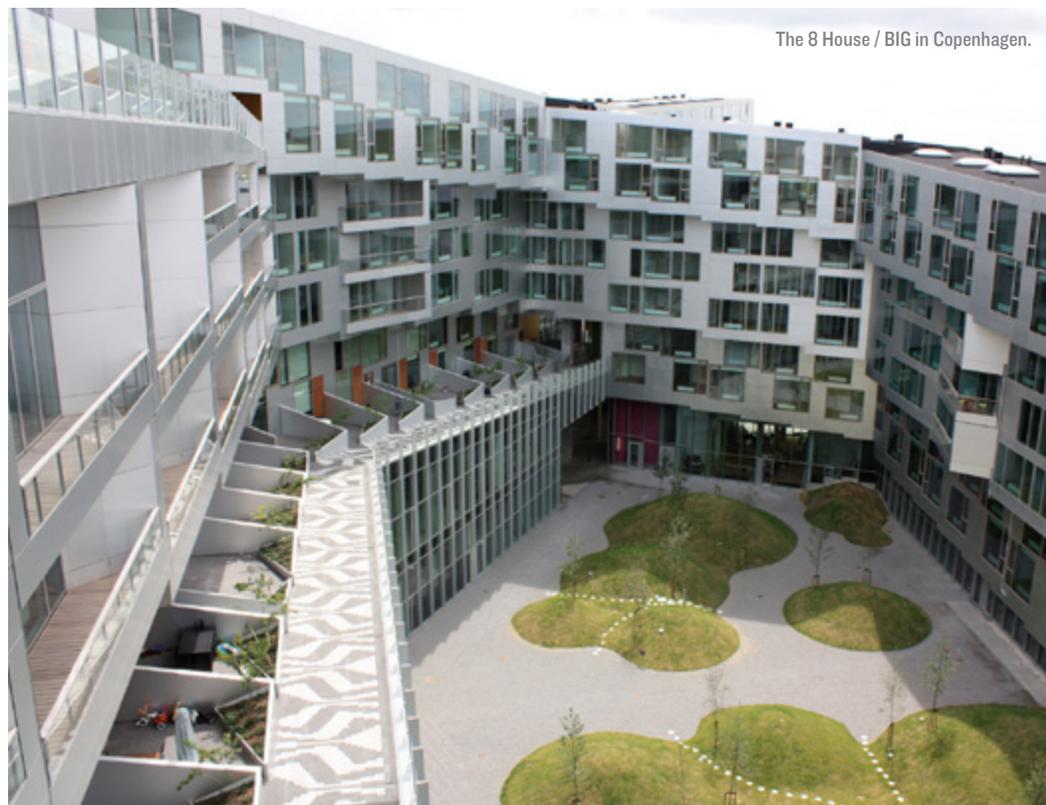
There are two American cities where bicyclists are already generating demand for what can only be called bicycle-oriented development. In Atlanta, a looping pedestrian/bike trail called The BeltLine, is catalyzing redevelopment projects on the former industrial sites it cuts through.

A better example is the Minneapolis Midtown Greenway. When there was talk of light rail running along it, land either side was rezoned for high density living but the light rail never came. Did that diminish demand for apartments? Not in the slightest. Buyers are attracted by the short travel times to the city and elsewhere – not by light rail or car but by bike. Developers soon figured out that a ramp to the greenway would be an essential sales feature.

My thought would be to take this market-driven phenomenon, evident to a degree in all the world's post-industrial cities, and put it in the big ring – that's bike speak for changing into high gear.

Dr. Steven Fleming heads the architectural and educational endeavours of Cyclespace, Amsterdam. @BehoovingMoving

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The 8 House / BIG in Copenhagen.

PHOTO BY DR. STEVEN FLEMING

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Smart Planning **Boosts Livability** in **the Burbs**

WRITER: **HILARY ANGUS**

Americans spend a lot of time in their cars. The average American drives 29.2 miles (47 kilometers) a day, for around 46 minutes a day. That's a grand total of 12 days each year spent sitting behind the wheel of a car. That's 36 full, 8-hour workdays or that vacation you can never seem to find the time to take. It's the time you can never find to exercise, or play that instrument you've wanted to learn but don't have the time to practice. In short, it is too much time spent sitting in a metal box.

Unfortunately, for too many people, freeing themselves from the burden of car-dependence isn't an option. Work is too far away, the shops are too far from work, and the roads in between aren't safe to walk or bike on. While we can chime on all we want about individual choices to walk or bike, at the end of the day, the right infrastructure needs to exist first.

With the San Francisco/ Silicon Valley region experiencing record in-migration in recent years, there is more pressure than ever on the road systems. As residents grapple with increasing congestion, the ridership on Caltrain (a commuter rail line) has more than doubled in the last year, with a nine percent increase in the past year alone. While the rail line is great for getting in and out of the city, it doesn't solve the problem of last-mile transportation. According to Caltrain, the number of commuters bringing bicycles on board more than tripled in the last 10 years: from 1,860 bike boardings in 2005 to 6,207 in 2015.

One California community is shaking things up in the car-dependent state by taking an active



An aerial view of Bay Meadows.

approach to transportation in order to enable and encourage its residents to get out of their cars and get outside.

Bay Meadows is an 83-acre real estate development in San Mateo, CA, midway between San Francisco and Silicon Valley, and it's changing the game on how space can impact the quality of our lives. Built on the site of an old horse racing track that was an airfield before that, it's a great example of a greyfield development. Billed as a transit-oriented development (TOD), Bay Meadows includes a mixture of residential, office, retail, and other amenities all located within a half-mile (0.8 kilometer) of quality, public transportation.

Developer Wilson Meany wanted to make functional, multi-



Events like Movies in the Meadow bring the community together outdoors.

modal transportation a focal point of the neighborhood's design. In addition to its location along the Caltrain commuter rail line, Bay Meadows features a network of bike paths and 20 percent of its area left as open space for use by bicyclists and pedestrians.

"In the early planning of Bay Meadows, we worked from a premise that there would be increased demand for more urban-like environments where people have choices for getting around," said Janice Thatcher, partner with Wilson Meany at Stockbridge

Capital. “To create a transit-oriented development that actually functions optimally, with people on the streets and sidewalks and in cafes (adding life and energy to the neighborhood), we thought it was critical, in addition to access to Caltrain, to make walking and biking a part of our social fabric.”

The community also gives each new resident a free PUBLIC bike, a perk that one Bay Meadows resident, Shara Watkins, credits with her return to cycling. “Prior to living in Bay Meadows, we lived in downtown San Mateo. My husband would bike out to Coyote Point from there for morning

exercise, but I never had a bike and didn't have much desire,” Watkins explained. Upon moving to Bay Meadows and receiving her free bicycle, Watkins began incorporating cycling into her regular routine. She now bikes to work once or twice a week, takes leisurely rides out to Coyote Point with her husband on weekends, and uses the bike to cart her groceries home from Whole Foods, which she noted is much more convenient than driving to the shop and finding parking.

Bay Meadows is as an example of how smart city planning can solve the problem of transportation

at every level in an increasingly populated world. Forty percent of residents report riding Caltrain daily, 85 percent walk or bike to shop or dine nearby on a regular basis, and 86 percent count walkability and bike-friendliness among their top attributes for life in the community.

Thatcher explained, “We're implementing specific urban planning techniques - such as locating garages in alleys for safer sidewalks with fewer curb cuts and integrating an abundance of bike racks and adding pocket parks and landscaping throughout. These small design attributes together

foster behaviors such as walking, bicycling, and social interaction. Those behaviors, in turn, lay the groundwork for more significant mode shifts that might not have otherwise occurred: taking public transit, ride-sharing, biking, and walking, which we all know are good for public health and for the environment.”

Bay Meadows serves as a benchmark for how smart urban design can influence mode shift at a broader level. It follows the “if you build it, they will come” philosophy, which has been seen time and time again to ring true with everything from bike lanes to park benches. If the infrastructure exists and people feel safe to ride and walk, they will get out of their cars and experience their community in healthy and positive ways.

“We are always running into friends and neighbors while we are out on a bike ride or walking to the garden. It's much harder to get that same sense of community when everyone goes from their car to their garages,” Watkins said. “The last time I had a bike was sophomore year in college, so about 13 years ago. Now, I can't imagine life without it.”

Hilary Angus is the Online Editor at Momentum Mag, where she writes about urbanism and the intersection of bicycling and social justice.

BAYMEADOWS.COM



Greenspace, parks and modern design in the public space at Bay Meadows.

PHOTO BY RICHARD SEAGRAVES



Riding bikes at Paddock Park in Bay Meadows.

PHOTO COURTESY OF BAY MEADOWS

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New Orleans, LA

WRITER: **HILARY ANGUS** PHOTOGRAPHER: **JULIE VERLINDEN**

CITY SPOTLIGHT

New Orleans is known for many things. It is the birthplace of jazz, home of Cajun and Creole music and cuisine, purveyor of the oyster po'boy, and host to the most famous Mardi Gras party north of the Panama Canal. Recently, the Big Easy has been carving out a reputation as a bike-friendly destination. With a downtown area approximating only 35 square miles (91 km²) and nary a hill in sight, New Orleans is an ideal city for a strong bike culture. Because of the hard work of passionate residents and advocacy organizations such as Bike Easy, that possibility is quickly becoming a reality. The City has built over 100 miles (161 km) of bike lanes in the past 10 years, and social bike rides, bike parades, and bicycle valets at music festivals are becoming commonplace in the balmy Southern city.

HOW TO GET A BIKE

Gerkin's on St. Claude offers bike repairs and rentals, with friendly, knowledgeable staff who will gladly tell you great places to check out and how to get there. Buzz Nola Rentals & Tours has a large fleet of cruisers ready to rent and a few great tours as well if you're interested. A Musing Bikes is your bike rental spot for the Garden District, and both tour groups Crescent City Bike Tours and Confederacy of Cruisers offer rentals as well.



The infamous Bourbon St., a popular spot where tourists, locals, and musicians mingle in the historic French Quarter.

WHERE TO GO

Cruise down to historic Jackson Square in the French Quarter to see the street performers, then visit the old market and stop for a beignet and coffee at the infamous Café du Monde. Lock up and head to the riverfront to watch the ships pass on the old Mississippi River before pedaling out for an afternoon ride into the Garden District, home to the best-preserved collection of opulent, 1800s mansions in the southern US. For a breath of fresh air, ride up to City Park, a 1300-acre oasis in the middle of the city. Pack a picnic in your panniers and bask in the shade of 100-year-old oak trees. For a bit of local history, take St. Claude into the Lower Ninth Ward to visit The House of Dance and

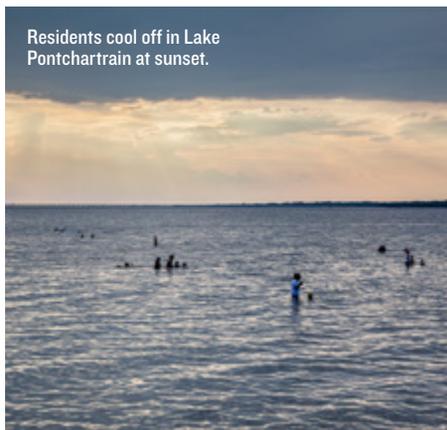
Kumasi the Dance Band shakes things up at The Maison, a popular restaurant, bar and venue on Frenchman St.



The Mark Weliky Trio plays their regular Tuesday night gig at Bacchanal Wine & Spirits, a backyard bistro in the Bywater neighborhood.



Residents cool off in Lake Pontchartrain at sunset.



Feathers, a by-appointment backyard museum honoring the Mardi Gras Indians and the complex, festive history of New Orleans. Bike Easy has an up-to-date printed map of bike routes and paths, available directly from them and a number of bike shops around the city.

WHERE TO STAY

The Ambassador Hotel on Tchoupitoulas Street has secure bike storage and bicycle-friendly staff who can point you in the right direction for rides around town. The HH Whitney House also provides bike storage and helps arrange rentals and tours. The Garden District's Southern Comfort Bed and Breakfast has free bicycles for guests. For the backpacker crowd, the legendary India House Hostel at 124 South Lopez Street arranges bike tours for guests and has bike-friendly staff.

WHAT TO DO

There is absolutely no shortage of things to do in New Orleans. From Halloween to Mardi Gras to Jazzfest to French Quarter Fest, there is almost always some cause for celebration in Crescent City. But first let's talk about food; you're going to need energy for all that dancing. Deanie's Seafood in the French Quarter is a

popular spot for Louisiana classics like crawfish and gumbo. Elizabeth's fries up a mean oyster with blue cheese sauce and has decadent, boozy brunches to cure any hangover. Casamento's does oysters any way you like them, while the 100-year-old Parkway Bakery & Tavern is famous for its many delicious po'boys. Mother's is a homestyle, southern greasy-spoon, serving up large platters of fried catfish, collard greens, and red beans and rice in portions big enough to fuel whatever ride you're going on. If none of that tempts you, you may just find the best fried chicken you've ever tried at the local gas station! Come evening, put a cold beer in your water bottle cage and cruise into the French Quarter to join the party. Bourbon Street is worth seeing, but the slightly less touristy Frenchmen Street is where the real party is. Lock up and stroll up and down Frenchmen, wandering in and out of the multiple venues such as The Maison, the Snug Harbor Jazz Bistro, Cafe Negril and The Spotted Cat Music Club. Live music is integral to New Orleans' culture, and shows are nightly, vibrant, and often by donation. If it gets too stuffy inside, simply pick up a cold beer or a hurricane at

a roadside bar and ride the narrow streets of the French Quarter, taking in the action and dancing to the horns and strings of street musicians. If all that partying tucks you out, you can take a breather with a social bike ride. Bike Easy organizes group rides, such as the Stallings Gentry Park ride every Monday evening. NOLA Social Rides is a group founded in 2010 for the sole purpose of getting people out together on bikes. They organize themed rides in different areas of the city throughout the year. Or you can go with a guide via any of the great bike tour options. Crescent City Bike Tours offers a River Tour and a Bayou Tour to learn about the influence of the waterways on New Orleans' development. Confederacy of Cruisers runs a cocktail tour for the booze-inclined traveler, while Ninth Ward Bike Tours offers visitors the opportunity to learn about the neighborhood most affected by Hurricane Katrina, and the amazing ways they've rebounded. Whether biking to the bar, to the park, to the parade or the party, or just cruising around the streets with new friends, there is always something incredible to see in New Orleans, and two wheels is the way to do it.

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A Summer *Adventure Diary*



On the Kettle Valley Rail Trail near Naramata, BC.

WRITER AND PHOTOGRAPHER: **MIA KOHOUT**

Summer road trips are the best!

Last summer my boyfriend and I planned an epic, two-week 1864 mile (3,000 kilometer) circular road trip (by car) that would take us from Vancouver through some of the most beautiful scenery of British Columbia and the Alberta Rocky Mountains (The Rockies), a place I have wanted to return to since I had been there with my family when I was a teenager. But this road trip was different because I experienced a lot of it by bike.

The first mission was to figure out how we were going to take bikes on our trip. We knew we wanted to roll in an '89 Volkswagen Golf Cabriolet convertible but had no idea that this is one of the only

cars that a bike rack doesn't fit on (because of the convertible) and has no hitch to attach a hitch rack. My plans of seeing the Naramata wine region by bicycle were not going to be spoiled by this major detail, so we borrowed two Brompton folding bikes, somehow managed to fit both bikes in the small trunk of the car, piled all of our camping gear around the bikes and in the back seat, and we were on our way. We were relieved and amazed at how small the Bromptons became when folded! These little folders were an amazing addition to the trip and ended up being the ideal way to explore the parks and campsites along the way.



Start Here

NIGHT 1

We set up camp along the Thompson River near Wells Gray Provincial Park and got to know the borrowed Bromptons. After practicing a few times to get the fold and unfold just right, we explored the park by bicycle. I brought these bikes to go on longer day trips and adventures but just bombing around the park and campsite was so much fun!



Moraine Lake, Lake Louise



Kinney Lake

DAY 2

We continued our drive and turned east towards Mount Robson Provincial Park, home to the highest peak in the Canadian Rockies. We stopped at the park and took the Bromptons down a 3 mile (5 kilometer) dirt path to the epic, turquoise Kinney Lake. I was pleasantly surprised at how well the little wheels on the folding bikes fared on a dirt path.



Mount Robson

DAY 13+14

We stopped in Whistler and used the Bromptons for the final time to explore the paved Valley Bike Trail of the Whistler Valley. And then we folded the bikes one last time and headed home.

This was my first road trip with bicycles, but it definitely won't be my last. What surprised me most about traveling with a bike was not the fun I had on the planned bike adventures, like the Slow Food Cycle, but the unexpected: riding carefree around campgrounds, through parks, and off the beaten path. With any great adventure, it's always the unexpected that proves to be the most enjoyable; it was made a thousand times better thanks to our bicycles.



Slow Food Cycle

We left the blazing heat of the Okanagan Valley to hit the Duffey Lake Road (a stunning mountainous drive from the remote town of Lillooet to Pemberton) and made our way to the Pemberton Valley. We met up with friends for the final adventure, the Pemberton Slow Food Cycle Sunday. We unpacked our Bromptons and embarked on a self-guided, cycle tour of the gorgeous and gloriously flat Pemberton Valley, where we joined another 4,000 people (many of them families) to sample the local and fresh farm flavors.

DAY 11+12



Naramata

DAY 3

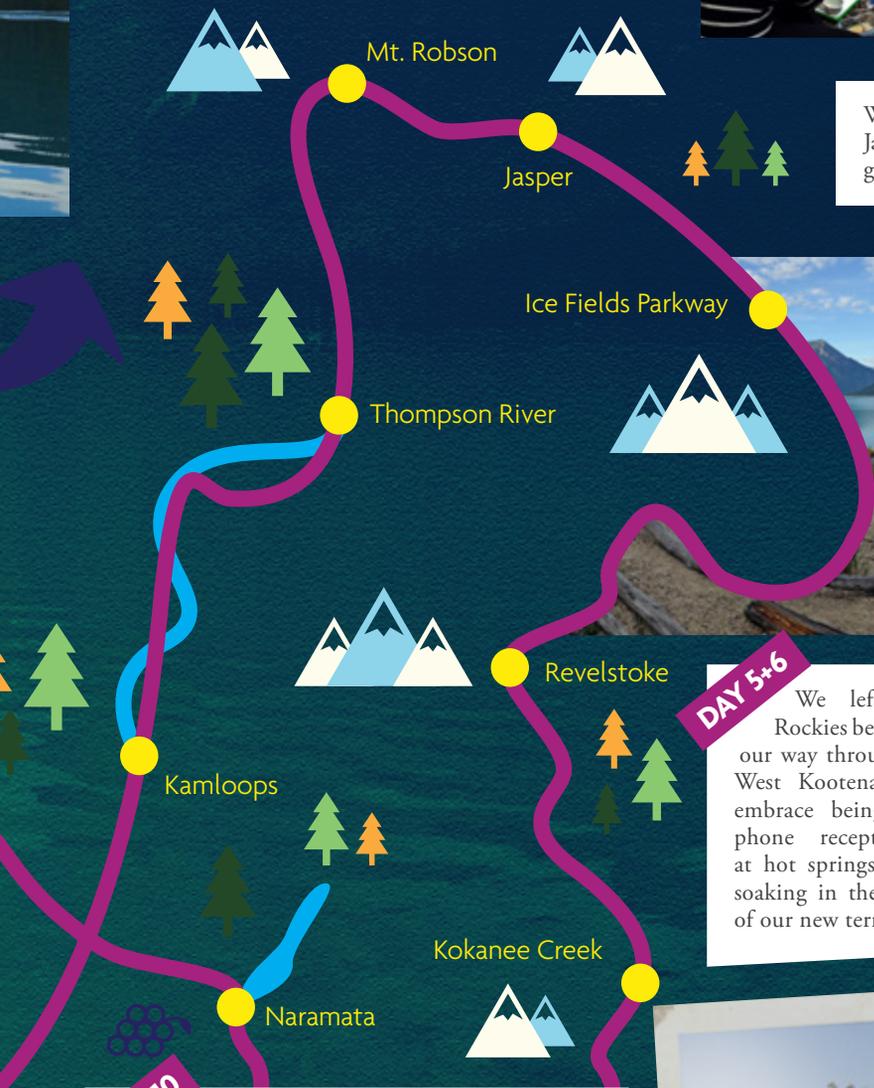
We explored Jasper National Park - gorgeous! But later that evening I realized I had lost our cooler plug back in the town. Thinking I knew where we left it, we hopped on our Bromptons for the 3 mile (5 kilometer) ride into town and not only did we find the cooler plug but we stumbled upon a herd of 11 caribou that didn't get surprised or run away because we were able to approach them silently on two wheels each. What a treat!



Emerald Lake, Yoho National Park

DAY 4

We drove the stunning, glacier-lined Icefields Parkway between Jasper and Lake Louise. There's no cell phone reception: just glaciers, mountains, waterfalls, and the open road.



Shelter Bay, West Kootenays

DAY 5+6

We left the chilly Rockies behind and made our way through the remote West Kootenays. Again we embrace being free of cell phone reception, stopping at hot springs and lakes and soaking in the remote beauty of our new terrain.



DAY 7+8

We made ourselves comfortable at a campground on Kootenay Lake. We parked the car for a couple of days to give ourselves a break from driving. Instead, we used our amazing folders to visit friends along the lake and off-road down narrow dirt paths only accessible by foot or by bicycle. We felt like we had uncovered a secret that I wish I had uncovered sooner; I want to take a bicycle with me on every road trip from now on.



Joie Farm Winery

DAY 9+10

We explored Naramata, in the Okanagan Valley, where there are over 40 wineries within a 12 mile (20 kilometer) stretch of road and a beautiful lake at the bottom that became our refuge from the 104 degrees Fahrenheit (40 Celsius) heat. The main reason we wanted to take bikes on our trip was to go wine touring by bike. Well, we made it to two wineries before realizing that this was not going to work. Not only did I want to take back souvenir bottles, but also most of the wineries were at the top of steep hills and in the heat it was just too much! But before we ditched our bikes we rode along the Kettle Valley Rail Trail, a 15 mile (24 kilometer) trail that winds its way through the Okanagan-Boundary region that has been resurfaced for multi-purpose use. Absolutely breathtaking!



Karen Jenkins, photographed in Randolph, NJ.

It's Like Riding a Bike — Even After All Those Years

WRITER: **KAREN JENKINS** PHOTOGRAPHER: **BRIAN BRANCH PRICE**

Whatever your age, grab your bicycle and ride! If you are 60 or older, and do not ride a bicycle, let me convince you to ride.

Bicycle ridership among those 60 years and older is growing faster than any other age group according to data collected by the US Department of Transportation. Between 1995 and 2009, the rise in cycling among people ages 60-79 accounted for 37 percent of the total net nationwide increase in bike trips. Canada, countries in Europe, Australia, and Japan report a similar trend.

Fifteen years ago, my brother surprised me with a heavy, three-speed, step-through bicycle. I was 45 and hadn't ridden a bicycle since childhood. The gift sat unused for seven years until serendipity intervened and pushed me down an unfamiliar path. Now I ride my bicycle nearly every day and I am the Chair of the Board of Directors of the League of American Bicyclists, which at 135 years, is the oldest bicycle advocacy organization in the world. Every day, I smile broadly and laugh loudly as I ask myself, "How, at my age, did this happen?"

Getting Started - Find a Community of Bike Riders

First, don't be afraid of riding a bike. Find a nearby program that teaches adults to ride and the skills to ride in traffic. In the US, a good source of information is the League's website (bikeleague.org). Type your state and you will find a wealth of information about the Bicycle Friendly America (BFA) program.

Listed will be bike shops, clubs, classes, events, and bike instructors in communities throughout your state. Don't overlook your local and state advocacy organizations, which at the grassroots level, are working



to make their communities safer for cyclists and pedestrians of all ages and abilities. I am confident you will meet knowledgeable and friendly people eager to see you riding a bicycle safely and with joy.

Get a Bicycle

Decide how much you can afford to spend and don't forget to budget for accessories like a helmet, lights, and a lock. If you are fortunate to live in a city with a bike share program, rent one before deciding to buy. There may be a bicycle recycle program in your city where you can purchase a bike for very little money.

For a new bike, go to your local bike shop and have fun looking while asking lots of questions. Most important is to test ride all the bikes that interest you. A good bike shop will help you find an

appropriate bike for your budget, the correct size and style for your needs, and make final adjustments for maximum comfort.

Carefully Consider Your Physical Needs

As we get older, our agility decreases, no matter how physically fit we are. Many manufacturers now offer bicycles that are specific for women, seniors, and those with physical limitations. If you are learning to ride or have not ridden in a while, a road (racing) bike may not be the best choice. City bikes are made for comfort and transportation, and with their upright positioning are very manageable to ride. Consider a tricycle if you find balancing on two wheels a challenge.

If lifting your leg over a bicycle frame proves to be challenging then

look for a step-through bike which can be handy for all genders. I am now looking for a bicycle with wider tires and a deep step-through.

Finding Easy and Accessible Places to Ride

Riding your bicycle should provide hours of healthy, stress-free, physical activity outdoors that will allow you to enjoy the scenery and the company of friends. Take time to find places to ride that are easy and where you feel safe from traffic. Look online for bike maps of your area and ask your local bike shop for suggestions. Organizations that offer Bike Education classes may offer easy group rides, usually free of charge. Be on the lookout for community bike rides, many of which close the roads to motorized traffic.



Karen demonstrates how to fix it yourself with her Trek step-through bike at Marty's Reliable Bicycle in Randolph, NJ.

What to Wear

Wear whatever clothing you have that is comfortable when moving and feels good. There is no need to purchase special clothing. But you should be aware that wide leg pants can get caught in your bike chain, especially if there is no guard. Use reflective ankle straps to clinch around the bottom of your pant leg. Wear shoes that protect your feet and avoid flip-flops. Natural fibres like wool are excellent to moderate heat while “tech wick” shirts wash and dry quickly.

Learning to Maintain Your Bike

A bicycle is a sturdy vehicle with all the parts easily visible and fixable. At a minimum, I encourage you to learn to clean your bike and change a flat tire. Through bike shops, Park Tool offers a basic one-day bicycle repair course that is well worth your time and money. Ask your bike shop or look up “Park Tool School” to find classes near you. The course taught me the value of keeping a clean and well-maintained bicycle and to bring it to the shop for conditioning and repairs beyond my capability. Most importantly, the day-long course gave me confidence to get on my bike and not worry about being stranded. Adding a tire repair kit and a multi-tool to your bag will cover most road-side repairs.

Staying Physically Fit

At the time I started riding a bicycle, I did not know it would be the best investment I would make to maintain my health as I grow older. The benefits of regularly riding a bike include weight loss and preventing serious diseases such as stroke and heart attacks. Riding a bicycle is low impact, an important consideration for keeping active if you have arthritis in your lower joints.

I now take my bike almost every time I drive to visit a museum, go to a meeting, or visit friends. With my bike, I no longer worry how far I have to park from my destination. Often, I will park several miles away and ride my bike. Because I have arthritis in one knee, I am no longer able to walk as far as I would like, but I can ride my bike for miles.

I have looked at my community in ways I never noticed in a car. Most surprising was the physical strength and tenacity I discovered which I did not know I possessed.

Riding a bicycle is for everyone no matter their age!

Karen Jenkins is the Chair of the Board of Directors for the League of American Bicyclists and a League Cycling Instructor. She rides every day in her hometown of East Brunswick, NJ and loves to take the long way home under sunny skies.

BIKELEAGUE.ORG

“At the time I started riding a bicycle, I did not know it would be the best investment I would make to maintain my health as I grow older.”





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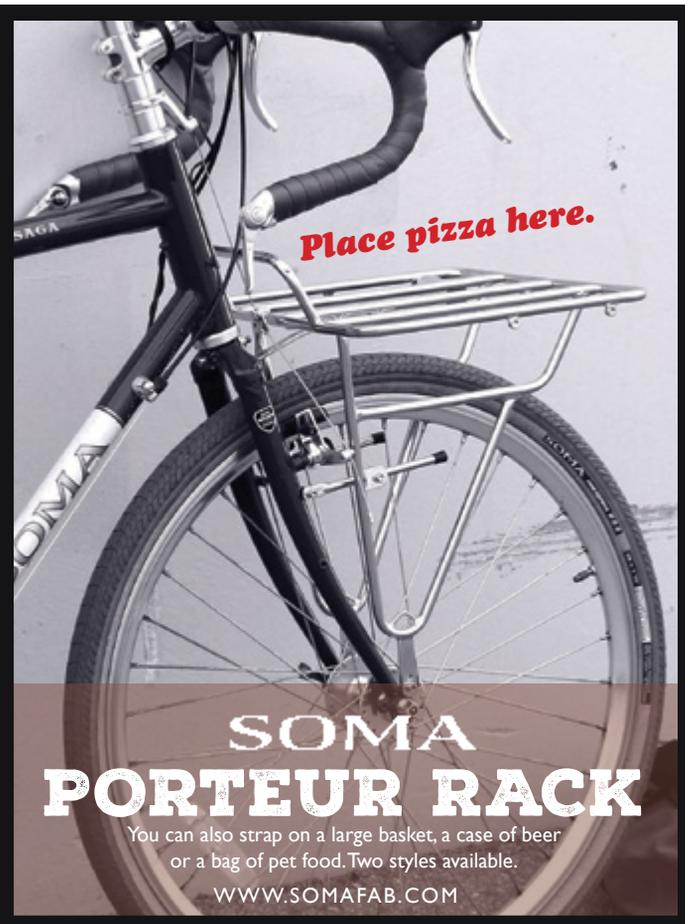
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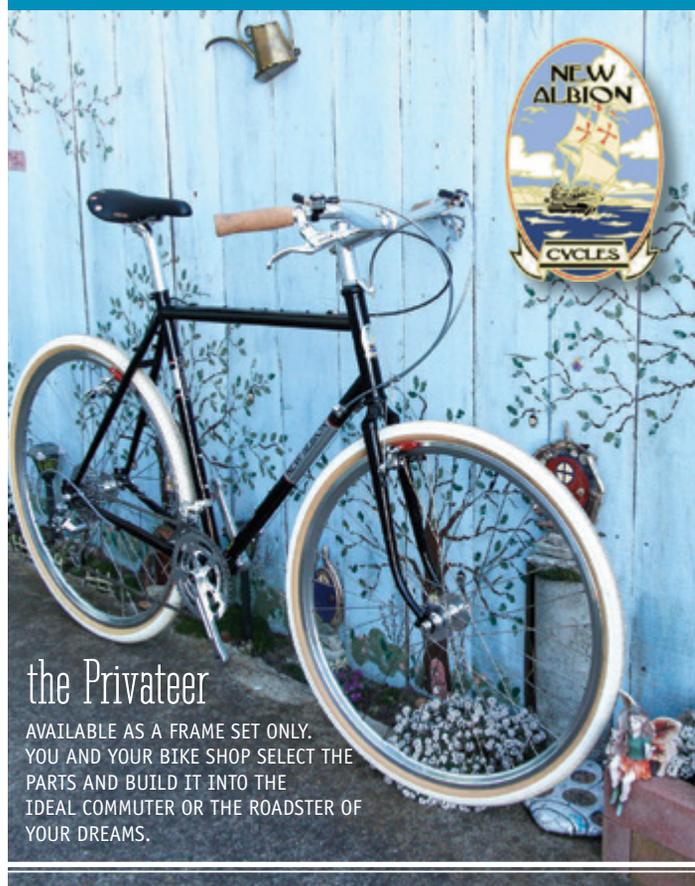
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From L-R: Alitzel Velasco, Carlos del Pilar, Lynnete Guzman, Maribel Mateo, Tony Gatica riding through a residential street and heading towards Edinger Ave.

Youth Advocacy

Building Community Leadership in Santa Ana

WRITER: **LYNNETE GUZMAN** PHOTOGRAPHER: **ALLAN CRAWFORD/PEDALLOVE.ORG**



Maribel Mateo

More than 50 cyclists are pedaling together down Pacific Avenue in Central Santa Ana. I turn around and see Maribel Mateo, 18, and Tony Gatica, 16, siblings, give me the go ahead that everything up to this point is going well. “Roooooll-ing!” I say, yelling over the Cumbia music blasting from a speaker carried by one of the cyclists on the ride.

Maribel and Tony are young people of color and core leaders of Bike It! Santa Ana, a youth program of KidWorks, a non-profit that restores at-risk neighborhoods.

They ride Santa Ana streets regularly. Like Maribel and Tony’s family, many Santa Ana residents do not have access to a car. Others, like me, choose to avoid driving and bike as much as possible. We work together to make streets safer for pedestrians and bicyclists by bringing people together, getting the City to use urban space to its fullest potential, and therefore making the city a healthier place.

The lack of safe bike lanes in Santa Ana has been an ongoing public health concern. Santa Ana is made up of predominately low-

income, Latino residents who have limited access to open space. There are high rates of people biking, and unfortunately, high rates of bicycle collisions. People bike out of necessity in the city despite its many unsafe streets. Until our policymakers prioritize safe bike infrastructure for all residents, our fight continues.

As a community organizer, I work alongside a group of about eight middle school and high school students to facilitate their policy campaign for safe, protected, bike lanes. I always challenge them to take opportunities that will improve their leadership skills, to question everything that is socially unjust, and to take action when they know something is not right. They challenge my own leadership skills when they look to me for support, when they ask questions I do not know the answers to, and when they come to me for personal advice. We have grown to trust each other from this work, but I have also come to call them my friends.

The knowledge they’ve shared with me never fails to amaze me. At one of my first meetings with them, they presented the different types of classified bike lanes, told me which city council member represents their district, and showed me a large map of the city that included handwritten notes and designs of the different bike lanes they wanted to see in their community. “We learned that there is not even a sidewalk in some areas, and we became more aware of the things we needed to do as advocates,” said Mateo, one of the first Bike It! members who helped start the campaign five years ago when she was still in high school.

Protected Bike Lane in Santa Ana

One of our biggest accomplishments was submitting the Edinger Ave Protected Bike Lane project grant to the state’s Active Transportation Program Cycle 2. Last October, the grant was fully funded at \$2.3 million for the implementation of a 1.7 mile bike lane and educational programs for three schools along the corridor. This project will provide connectivity to eight public schools, two public parks, and many small local businesses for over 1000 residents per population block.

The work on the Edinger Ave Protected Bike Lane project

The team stops for a talk about the campaign's next steps after the success of the approved Edinger Ave Protected Bike Lane grant. They are at Centennial Park in Santa Ana, one of two parks that the Edinger Ave Protected Bike Lane will provide connectivity for.



Lynnete Guzman

started in early 2014 when we partnered with Orange County Health Care Agency and Santa Ana Active Streets to collect quantitative and qualitative data for a comprehensive Bikeability Assessment of Santa Ana. The youth knew that conducting research would help promote their advocacy efforts and convince policymakers that this public health issue was important.

“The reason I was motivated to be a part of this work was because of the end product — getting a bike lane in my neighborhood. What I want to see is the bike lane being used and enjoyed by people, without feeling like they will be hit by a car,” said Alitzel Velasco, 14, youth representative of Bike It! Santa Ana.

The youth developed a community survey to collect data on general experiences of people biking in Santa Ana, including their demographics and commute route. They created a map with our results using Geographical Information Systems mapping software and they made a video from the footage we took of our rides using a GoPro camera.

From the results of the Bikeability Assessment, the youth identified three bike lanes that would best serve Central Santa Ana.

The youth presented their findings to city staff, stakeholders, and community members. Impressed by the quality of research and analysis, the city invited the youth to submit a state grant to fund one of their proposed bike lanes. This also meant that the youth still needed to gather more data, engage more community members, and actually learn how to write a grant. “It was hard work, but I felt I was making the best use of my time doing something productive that means a lot to me and my community,” said Velasco.

One of the major reasons the Edinger Ave Protected Bike Lane project was chosen is the number of families who walk through that area to get to stores, work, and school. “We chose to seek funding for this project because it connects more schools than any other proposed bike lane, and people already bike through there,” Mateo said.

Youth Life Challenges

Although the success of the campaign has been rewarding, the journey to get there was a challenge. Sometimes I would not see a youth for a while because they were helping their family juggle different responsibilities such as helping translate for their parents, taking care of their younger siblings, or

making dinner. As I learned more about the things that kept them away, I learned I needed to be flexible and make an effort to work around the barriers they faced.

A year ago, Maribel and Tony’s father was hit by a car as he was biking to work. He biked 13 miles one-way, six days a week to his job as a cook. The collision left him in pain for a few weeks and he could not stand or walk comfortably. Most people would have gone to the doctor and taken a few days off. He could not afford to do that as the sole financial provider for a family of six. Also, he did not have health insurance.

“When this happened, I was thinking of getting another part-time job to help out my family,” Mateo said. “Knowing that the work I was doing would not only benefit my community but the people very close to me is what kept me going.”

When a youth runs into personal trouble that prevents them from helping in our work, I make sure that Bike It! Santa Ana keeps moving forward. We continue working, using the skills of the people in the room. By doing this, I am able to engage more youth and have time to work with them one-on-one. Whether it is fixing a flat tire, inputting data, or

brainstorming project ideas, in the end everyone contributes.

Every moment I spent with these youth were learning experiences enabling me to grow as a community leader. As they opened up to me about their passions and struggles, I knew I was becoming their friend. We shared new experiences traveling the nation, meeting inspiring people, and telling inside jokes. I smile proudly when I see these young people presenting at city council or read about them in the local newspaper. I feel empowered knowing I had a positive impact in helping them become Santa Ana’s future leaders.

This next year will look very different for each of us as we set new goals for ourselves. Tony and Alitzel will continue their leadership involvement while managing their time doing youth organizing, homework, and sports. Maribel is focused on getting her bachelor’s degree in Civil Engineering. Therefore, the campaign’s advocacy work will depend largely on the next set of youth’s interests and passions.

Lynnete Guzman was the Community Engagement Coordinator with Kid Works: Restoring At Risk Neighborhoods, One Life at a Time.

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FROM WORK TO PLAY

It's Friday. The work week is over. You've sent that last email, closed your laptop, packed your business attire into your pannier and changed into something more casual for the evening adventures ahead. Where to go? Who to see? Anything is possible. Grab your bike and get going.

Chris Baird rides a Linus Libertine II bicycle equipped with a Two Wheel Gear Classic 2.0 Garment Pannier to carry his suit after work.

PHOTOGRAPHER: **NELSON MOUËLLIC**

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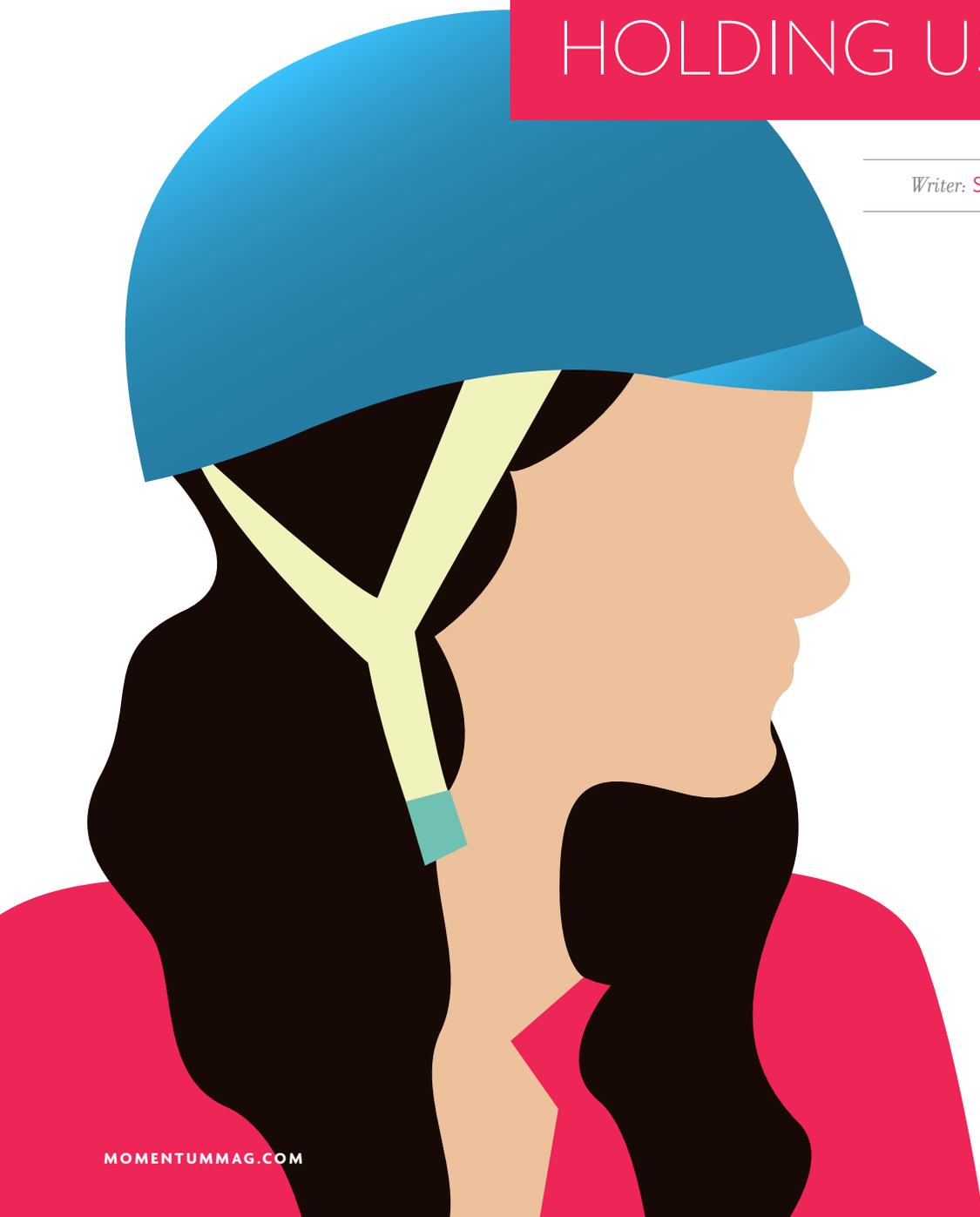


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Are BICYCLE HELMETS

HOLDING US BACK?

Writer: SHAUN LOPEZ-MURPHY





Three years ago when I was the Bicycle Coordinator in Minneapolis, MN, I became involved in a controversy over a bicycle helmet – or lack thereof. After a trip to Europe, where I had ridden with the non-helmeted masses in three of the safest bicycling nations on Earth – Denmark, Germany, and the Netherlands – I had declined to top my noggin.

I didn't realize it but I had become one of the first U.S. public officials to question bicycle helmets openly, telling the local newspaper in an interview, "I just want [bicycling] to be seen as something that a normal person can do ... you don't need special gear. You just get on a bike and you just go."¹

Locals immediately criticized me. The pro-helmet cry was passionate and full of concern over traumatic brain injuries, which is not unusual when bicycle helmet policy is debated. Soon after, I was told to start wearing head protection while bicycling on the job.

Even though I was no longer able to talk about helmets without the risk of public outcry, the debate was far from over. Some people came out of the woodwork to support my position, including a high school student who published an opinion piece that included research showing the promotion of helmets was leading to an increase in the fear of bicycling.² A leader of a mountain biking club for kids also supported the position. He shared his experience of being forced to resign as club leader after he refused to change his view that helmets cause people to stop bicycling for city transportation trips.³

That story hit home. Although I was not forced to resign, I refused to change my view and as a result, I largely curbed my penchant for bicycling in the city.

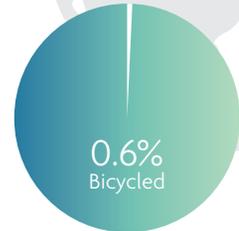
The State of Bicycling & Helmets in North America

Although we often tout the increase in bicycle commuting that we've seen over the last two decades, the reality is that the rate of bicycling in the US and Canada remains very low. In 2014, bicyclists comprised only 0.6 percent of all commuters in America, and only 1.3 percent in Canada according to a 2011 study.⁴ As North American bicyclists, this makes us barely noticeable to motorists.

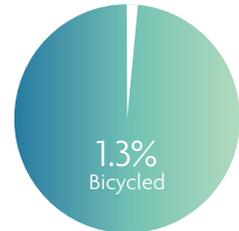
But progress is taking place. Officials and advocates are making smart investments to increase bicycling rates in North American cities: more bike paths, protected bike lanes, traffic calming, and educational training. According to the League of American Bicyclists, those cities that are leading the charge with bicycle-friendly changes are experiencing an increase in urban ridership.³ Cities like Portland and Minneapolis are great examples, with bicycle commuters respectively comprising 7.2 percent and 4.6 percent of residents traveling to work in 2014.

When it comes to bicycle safety however, progress slows when the center of attention becomes the bicycle helmet. Much like whether or not a motorist in an accident was wearing a seatbelt, one of the first questions we ask when a bicyclist is involved in a crash is, "Were they wearing a helmet?" The media and police reflect the public's pro-helmet sentiment by implying that its role in any major crash is highly significant.

Most health care professionals tip their hat to the helmet as well. In a recent National Public Radio piece titled *As More Adults Pedal, Their Biking Injuries and Deaths Spike Too*,⁶ the leading piece of safety advice given to bicyclists by the doctor and researcher was, "Wear a helmet."

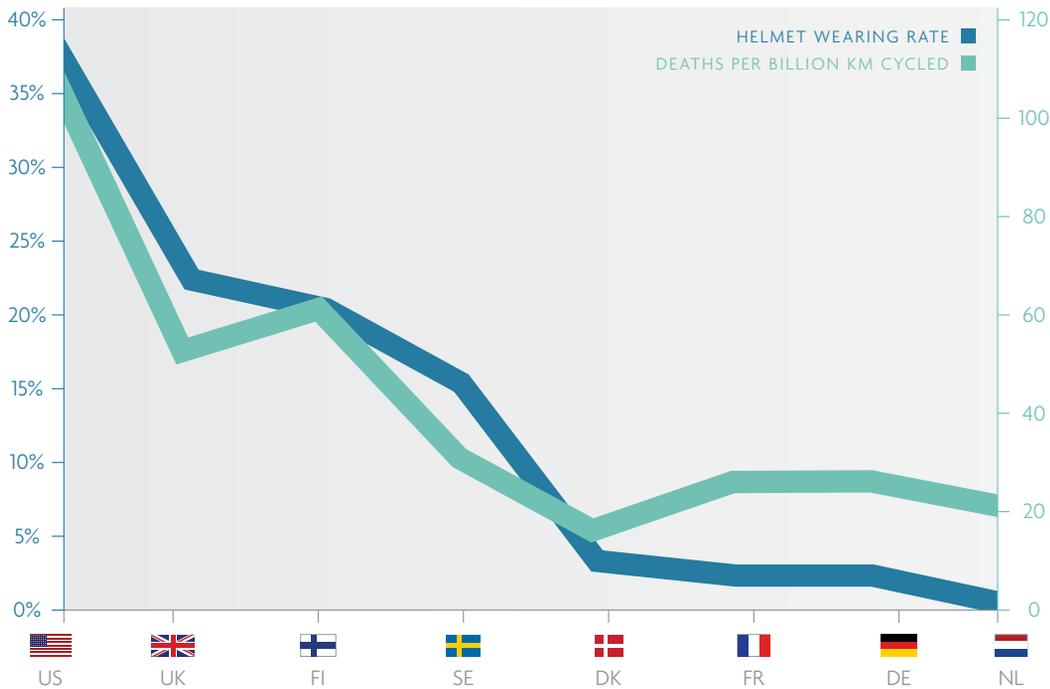


How Americans Commuted to Work in 2014



How Canadians Commuted to Work in 2011

Helmet Use's Association with Fatality Rates by Country



The countries with the lowest bicycle fatality rates also have the lowest helmet use rates. This suggests that bicycle helmets are not necessarily responsible for better safety records. Some researchers point instead to carefully engineered bicycle infrastructure which leads to higher rates of bicycle ridership in a population. Source: cyclehelmets.org/1079.html

So What Does the Research Say?

There are studies of every shape and size about bicycle helmets and fair warning: your head will soon spin if you dive in on the Internet.

Its complicated history notably began in the late 1980s, when helmet use was uncommon in the general population. A 1989 study⁸ by epidemiologists Diane C. Thompson and Dr. Robert Thompson examined the helmet-wearing habits of Seattle bicyclists who were in crashes and concluded that bicycle helmets reduced their chances of head injury by 85 percent, if the bicyclists were wearing a helmet – a far-reaching claim given what we know today. Just keep reading!

In order to reach this conclusion, the Thompsons compared the low, helmet-wearing habits of head-injured bicyclists with the high, helmet-wearing habits of bicyclists who had sustained other bodily injuries. Because of the discrepancy in helmet wearing rates, with the bodily-injured group wearing helmets at a much higher rate

than the head-injured group, the researchers concluded that helmets were greatly reducing head injuries. (see Figure 1)

But Dr. Dorothy Robinson, a leading bicycle helmet researcher in Australia at the University of New England, criticized their conclusion because of the comparison group used.

“The whole idea of a [comparison] group is that it should represent the general population,” she wrote to me in an email. If the study had used the low, helmet-wearing rate of the general, child bicycling population seen in Seattle at the time, there would have been very weak evidence showing that helmets reduced head injuries.⁹ (see Figure 2)

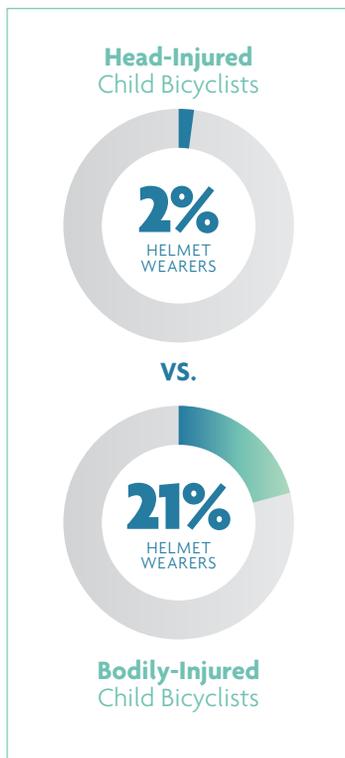
Why is it unfair for the comparison group to be bodily-injured bicyclists? Dr. Robinson theorized that bodily-injured bicyclists got into crashes more often, because they were wearing helmets. More on what could be behind that later!

In the decades since (even while using bodily-injured comparison

groups), no researcher has been able to replicate the 85 percent head-injury reduction rate of the Thompsons study. A 2011 Norwegian meta-analysis by Rune Elvik showed that the average reduction in head-injured bicyclists in all prior bicycle helmet research was 30 percent. This study included the oftentimes overlooked negative effect of helmets on neck injuries, which four studies have now analyzed.¹⁰

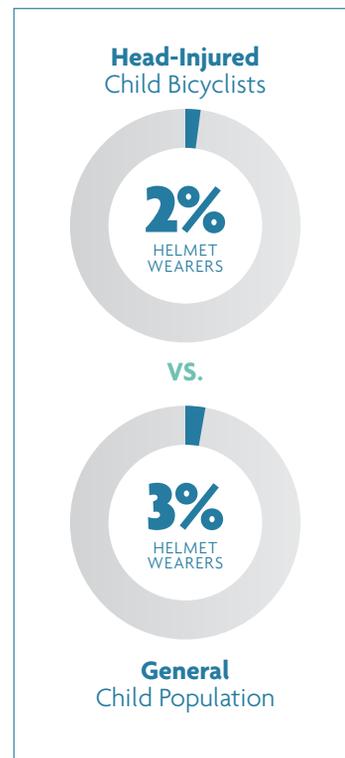
In 2013, the Washington [DC] Area Bicycling Association petitioned the US Federal Highway Administration to remove from its website the oft-repeated statistic, “Helmets reduce head injuries by 85 percent,” since the claim rooted in the ’89 study was providing false security to bicyclists and distracting from real safety measures.

The transportation agency accepted the request.¹¹ But after conducting a few Google searches, it was apparent to me that the 85 percent figure still persists elsewhere disguised as uncontroverted fact.



« FIGURE 1
The Thompsons found that bodily-injured child bicyclists were much more likely to wear helmets than head-injured child bicyclists, so they concluded that helmets reduced head injuries in children.

FIGURE 2 »
Dr. Robinson critiqued the Thompsons study, pointing out that head-injured, child bicyclists wore helmets at approximately the same rate as the general, child population in Seattle, during the study period.



The Controversy Over Helmet Laws

Before the Seattle study became outdated, health care and safety officials were arguing for helmet laws and governments around the world were responding. Australia and New Zealand passed mandatory helmet laws in the 1990s. At first they were touted as a success because bicycle injuries and fatalities dropped.

But researchers led by Dr. Robinson¹² discovered that pedestrian and motorist injuries and fatalities were also dropping and that the decline of all traffic mishaps were coinciding with other more far-reaching road safety improvements, such as efforts to reduce drunk driving and speeding.

Moreover, Dr. Robinson was concerned by a drop in cycling that occurred after the helmet laws went into effect – a drop which alarmingly resulted in a higher rate of bicycle crashes per person. In effect, the reduction in drunk driving and speeding was one step forward for all modes of transportation but helmet laws were two steps back for bicyclists.

Today, proposed mandatory bicycle helmet laws in the US are nearly always dead on arrival and no state has yet passed legislation for adults. This is due to opposition from bicycle advocates who take the position that helmets should not be required due to reduced bicycling levels seen in mandatory helmet-law countries. As you'll see later, reduced bicycle riding is harmful for many reasons.

Recently in Canada, where half of the country's ten provinces currently require adult bicyclists to wear a helmet, researchers led by Dr. Kay Teschke at the University of British Columbia conducted a ground breaking study that examined the effect of bicycle helmet laws. It incorporated surveys of bicyclists asking how often they ride, in addition

to their helmet-wearing habits.

Researchers then compared this information to medical data and found that helmet laws had no effect on a bicyclist's chance of ending up in the hospital with a head injury. Whether a person lived in a mandatory helmet province with an average 67 percent helmet-wearing rate or in a no-law province with 39 percent of bicyclists wearing helmets, the chances any bicyclist would end up with a head injury were no different.¹³

"Years ago, I would have never thought that a helmet law wouldn't make a difference," Dr. Teschke told me over the phone. "But over time, I have seen that putting on the helmet causes something mysterious to happen."

“Helmets seem to cause us to do something that cancels out their benefits, and we’re not sure what that is.”

"The data [in studies such as those by the Thompsons] absolutely shows that helmets reduce the chance of head injury for bicyclists who have arrived at a hospital. But the mystery now is, why doesn't the helmet give you a lower chance of arriving at a hospital with a head injury accident in the first place? The helmet seems to cause us to do something that cancels out their benefits, and we're not sure what that is."

Most of us born before 1980 didn't wear a bicycle helmet as a child. The modern helmet, a piece of foam covered with a plastic shell, increased in popularity in the 1990s.



Unlike the **American seat belt debate** which began in earnest in the 1970s and largely faded from public view in the 1990s (after 49 of the 50 states adopted seat belt laws⁷), the bicycle helmet debate rages on.

The bicycle helmet debate is quite dissimilar to the **motorcycle helmet debate**, which while largely dominated by anti-helmet libertarians, is backed by research that overwhelmingly shows the effectiveness of motorcycle helmets.



So Why Are Helmets Not More Effective?

It seems obvious if you hit your head on an object, a helmet will cushion the blow. So then why does it appear that wearing helmets has not given us a societal level benefit? For this, we need to take a journey into the world of sports helmets.

Enter Greg Ip, a Wall Street Journal commentator who wrote the book, "Foolproof – Why Safety Can Be Dangerous and How Danger Makes Us Safe". He covers many counterintuitive ideas about safety devices, including the football helmet.

The football helmet wasn't introduced until 1939, more than half a century after football was invented. In the 1960s, when

helmets were coming into greater use, Ip writes, "Football related deaths declined but the number of quadriplegics and broken necks went up."

He continues, "The helmet has changed players' behavior by allowing them to hit each other with their heads and when that happens the neck and spine form a single axis and the force of the blow is fully loaded onto the spinal column."

The game of hockey saw similar unintended consequences, after helmets became mandatory in the National Hockey League in 1979.

But in the sport of rugby, where hard helmets are not allowed, the

rate of injury and death is lower than football. This is very likely because rugby players have never adopted the hitting energy and velocity of football players.¹⁴

"Depending upon the activity, a helmet may allow you to take more risk," Mr. Ip told me in an interview.

So then let's more closely examine the activity of bicycling. We know that it is different from football and other contact sports in a variety of ways; for one, people bicycle on streets and trails.

Three basic theories by researchers point out how bicycle helmets affect our behavior:

1 The first theory is of misplaced concern. Head injuries make up a relatively small number of the total injuries to bicyclists, and on top of that, the likelihood of hospitalization due to a bicycling mishap is quite low. In the 5-year Canadian analysis of helmet wearing by Dr. Teschke, the rate of injury was 633 per 100 million bicycle trips. Viewing this data in a pie chart relays how exceedingly rare it is to be seriously injured or killed on a bicycle. You can't even detect the piece of the pie that puts you in the hospital (at left).

But even if we take the position that 633 of 100 million trips is too high, only 25 percent of those hospitalizations involve an injury to the head or face.

Because the bicycle helmet is the main focus, citizens and public officials are largely distracted from addressing the bicycling injuries that are much more likely to happen – damage to the torso and extremities – which make up 82 percent of hospitalizations.

Simply put, all of this talk about bicycle helmets takes our eyes off the bigger crisis: injuries to everything south of the noggin.

2 The second theory is about speed. Researchers sometimes call this risk compensation.

A 2012 survey in Norway found that people who rode bicycles at higher speeds were more likely to be helmeted (as well as using other racing gear such as spandex, goggles, clip-in shoes, a superlight bicycle) and more likely to be involved in crashes. Slower bicyclists were not as accident-prone and because they perceived bicycling to be less risky, they were not as likely to wear helmets.¹⁵

This finding was backed up in 2013 by a video analysis study led by Mohamed Zaki. Researchers in Vancouver measured the speed of bicyclists at a roundabout, where helmeted bicyclists were found to be traveling approximately 50 percent faster than riders without helmets.¹⁶

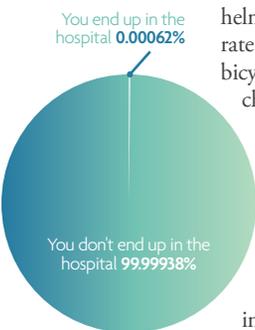
Even though speeders may have fewer head injuries in the hospital, compared to

the non-helmeted bicyclists who end up there as well, we must remember the theory of misplaced concern. They may be ending up in the hospital more often in the first place, dealing with injuries to the rest of their body, in part due to the psychological permission the helmet gives them to ride fast and more dangerously.

3 The third theory is about safety in numbers. Since there is evidence that bicycling drops when helmet usage is made compulsory, the total pool of bicyclists drops.

Peter Jacobsen, the most cited researcher regarding this theory, found in 2003 that motorists were less likely to collide with a bicyclist if there were more people riding bicycles – no matter the size of the city, the intersection, or the time of year.¹⁷ Since it's been shown that helmet laws are associated with a decrease in the number of bicyclists, the safety in numbers theory suggests that when there are fewer bicyclists on the road, motorists are more likely to collide with them.

You go on a bicycle ride in Canada, and...

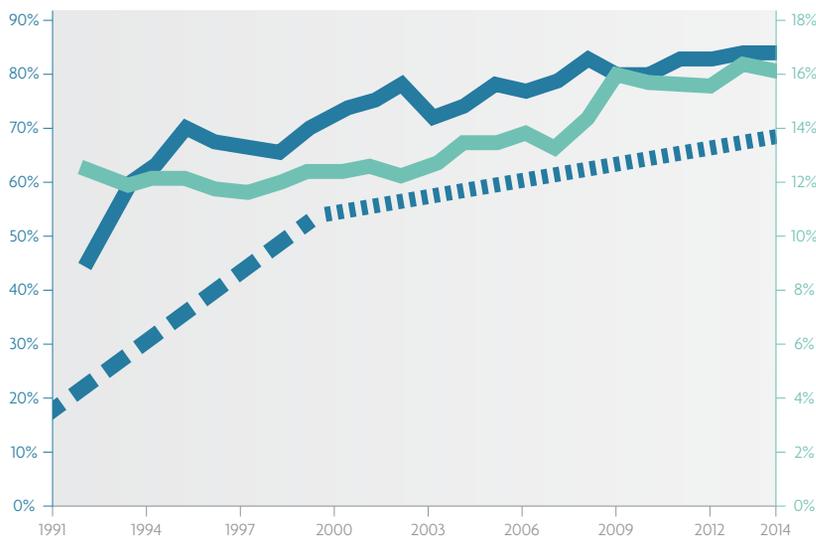


Documented American Bicycle Helmet Use (Source: US Consumer Product Safety Commission)

Unknown American Bicycle Helmet Use (Author Speculates a Slower, but Rising Trend)

Portland, OR Bicycle Helmet Use (Source: City of Portland)

Percentage of Head Injuries Compared to All Bicycle Injuries* (Source: US Consumer Product Safety Commission's National Electronic Injury Surveillance System)



American Helmet Use Compared to the % of Head Injuries in Bicyclists*

As the use of bicycle helmets has been rising in cities such as Portland, the percentage of head injuries that make up all bicycle mishaps has also been rising in the US. This surprising and perplexing association suggests that helmets are likely altering our behavior in unintended ways. However, more conclusive research is needed.

*Excludes injuries to mountain bikers, although the % increase in head injuries becomes more exacerbated when mountain bikers are included

Where Do We Go From Here?

Readers know that riding a bicycle is fun. I can tell you where my first \$60 in the piggy bank went when I was 6 years old. It purchased a discounted, red, banana seat Huffy and I rode that bicycle up and down our driveway and into town until my knees couldn't take it anymore!

When adults who haven't ridden a bicycle since childhood experience it again, they feel a renewed sense of excitement, freedom, and adoration for the bicycle.

We all know that daily activities carry the risk of injury: driving a car, walking down a flight of stairs ... but there is scant evidence showing that bicycle riding is any more dangerous than those things.¹⁸ Bicycling is about as safe as driving a car and walking down a sidewalk and is safer than running or playing basketball or volleyball. What sort of message would it send if we had laws or campaigns promoting helmet use in those other daily activities?

We all know that one of the biggest barriers to bicycling for many is the fear that it is not safe,¹⁹ a fear that is perpetuated by questionable research and emotionally charged pro-helmet language: to wit, the '89 Thompsons study concluded non-helmet wearers would risk "not being able to think or talk because your head has been pounded to jelly".

Rather than focusing on the dangers of injury, we need to be promoting the freedom of bicycling which gives people the ability to make short trips in cities and towns without having to deal with the headache of parking, traffic jams, and expensive mechanic bills.

Bicycling is also about that mental health boost that we all need on a daily basis. Pumping your legs to get a bicycle moving, gliding down a slope, and feeling the wind on your face is better than any prescription.

We should also be doing everything we can to get more people bicycling: the risk

of injury is far outweighed by the health benefits every person gets when they ride and in higher numbers, fewer people get killed! Life span has long been known to increase substantially when people ride bicycles.²⁰ Plus there are numerous community and environmental benefits when more people are bicycling on the road.

Most of us couldn't be forced to bicycle at the edge of a busy highway or urban arterial street without some form of protection. When the topic of bicycle safety does burden conversation, we should be arguing for bike paths, protected bike lanes, and traffic calming – not focusing on the bicycle helmet.

Teschke argues, "I wouldn't send my daughter into a bad situation. Any mother or health care professional should be begging for separate space, because that is what our study found actually lowers the chances of injuries. This helmet thing is a huge, huge diversion of very smart people's time and energy."

As I was interviewing the Thompsons, they reminded me of what makes helmets so attractive. One of them said, "Helmets are an easy solution to make things safer."

But now that we are decades into the research, we are learning that the easy solution isn't always that effective. While carefully engineered bike infrastructure and traffic calming may be more difficult to accomplish, they will do more to improve our long-term well-being than a helmet ever can.

There's a lesson we can take from the ever-improving aviation industry, which Greg Ip writes about in his book. Airlines are very careful not to talk about safety problems, due to the damage this can cause for their bottom line. But when a safety problem does occur, Ip says, "the law requires the (American) National Transportation Safety Board to investigate the accident."

This attention to detail results in constant safety improvements and thorough

investigations are bolstered by anonymous reporting opportunities. The Aviation Safety Reporting System allows air traffic controllers, pilots, and flight attendants to submit near misses and then publishes their lessons online for everyone to see.

Our goal too, should be improved safety for bicyclists. But we shouldn't be distracted by one visible device that takes our eyes off of the big picture.

As Ip said in a recent radio interview, "Don't overuse the tools that we have. Allow a little bit of background risk to take place so that the tools we have remain powerful for the times we really need them."²¹

“Bicycling is about as safe as driving a car and walking down a sidewalk and is safer than running, playing basketball or volleyball.”

He continues, "There is a saying in the safety research industry: Sometimes you want to be a little bit scared ... so you're always aware of what's out there, and that awareness will create an attitude of more precautionary behavior."

Next time you ride a bicycle, whether you choose to wear a helmet or not, remember that the bicycle gives each of us the ability to explore our world. We should all be ambassadors for the bicycle and be mostly unafraid to ride it, just as we are.

Shaun Lopez-Murphy lives with his husband on their farm in Wisconsin's Driftless Region, where bicycles come in handy when the cows get out. He is a transportation planner with Toole Design Group. Follow Shaun on Twitter @shaunmurphy

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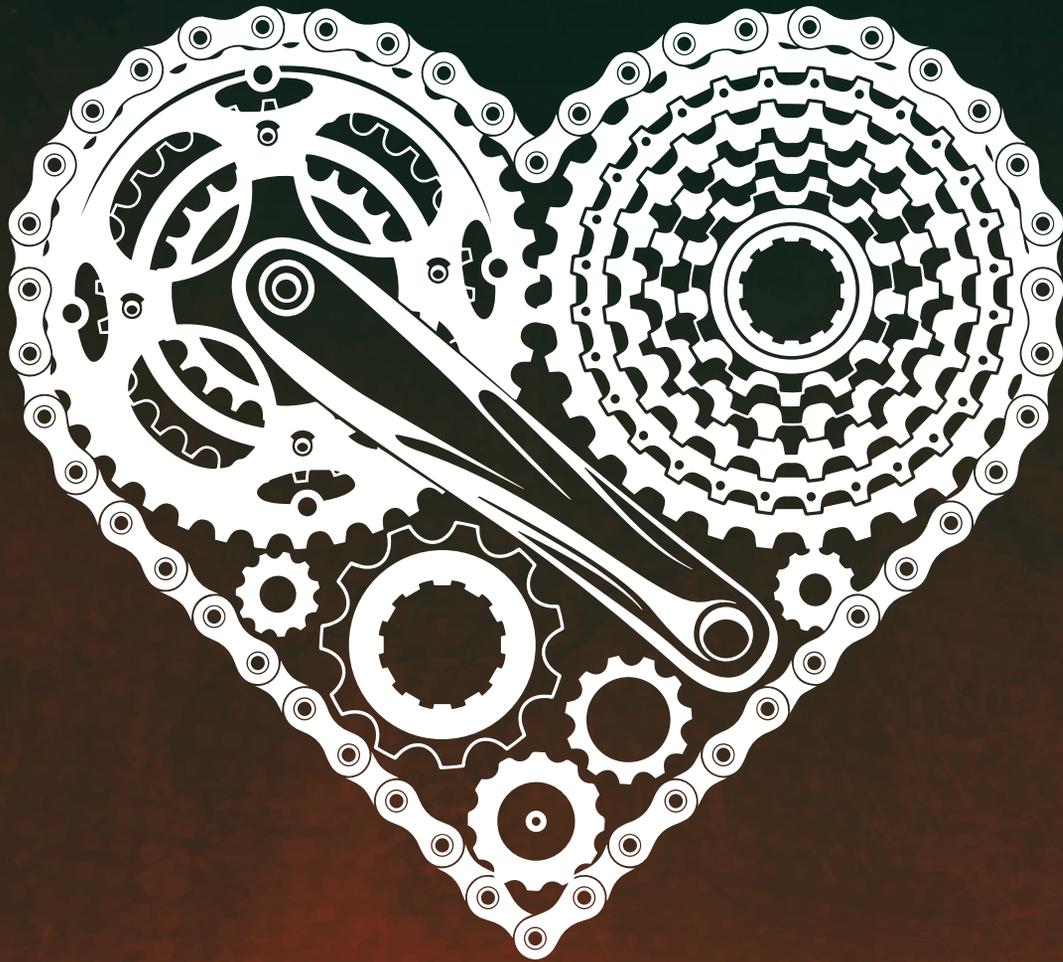
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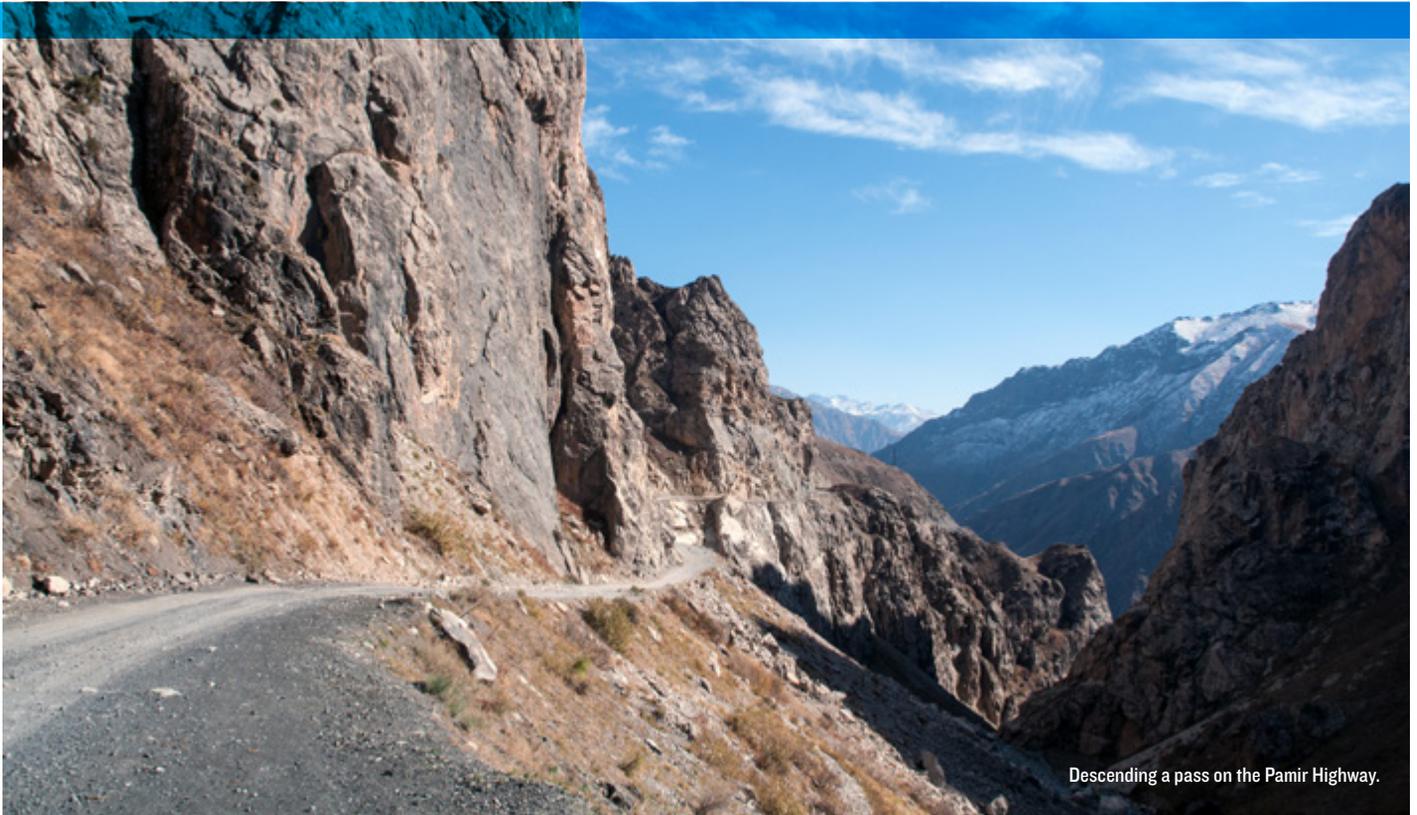
The Healing Power **Of The Bicycle**

- 46** ➤ A Story of Hope & Courage by Bike
- 48** ➤ National Bike Challenge Gets New York Couple Rolling
- 51** ➤ Forged by Fire Foundation
- 51** ➤ Streets Are For Everyone
- 51** ➤ Cycletherapy
- 52** ➤ The Perfect Fit With a Cargo Bike
- 55** ➤ Finding Strength: Living With Leukemia

We know riding a bicycle can be a powerful thing. We've seen how it can transform communities, provide health and economic benefit to people of all ages, and become a catalyst for change. For many, the bicycle symbolizes freedom – a tool we can use to transport ourselves just about anywhere, under our own power. In so many ways, the bicycle empowers us to nurture a better way of life, and beyond that – it's a joy to go for a ride!

Within the powers of this great machine is the ability to help people heal. Some use the bicycle as a way to deal with the grief of losing someone close, others to work through turbulent times and reach new goals. Whether overcoming a personal problem – be it mental, spiritual or physical – by hopping on the saddle or joining others for a shared experience, a bicycle ride is good for you in so many ways.

On the following pages, we look at a number of inspiring stories surrounding this topic. We are strong believers in the healing power of the bicycle and encourage you to consider what else the humble bike can do for you, and for your loved ones.



Descending a pass on the Pamir Highway.

A Story of Hope & Courage By Bike

WRITER: **JACK HAWKINS** PHOTOS COURTESY OF: **DEREK BOOCCOCK**

Derek Boocock, 59, from England, is no stranger to adversity; he's faced it his entire life. He's a round-the-world cyclist and in remission from cancer.

Derek's story begins in the small town of Huddersfield, West Yorkshire. At the age of 15, Derek rode his bicycle to get to and from friends' houses, school, and just about everywhere else. At 21, Derek joined the British Army and took up mountaineering, eventually leading his regimental climbing team to the summit of Europe's highest mountain, Mont Blanc.

Throughout his twenties, Derek went from bicycling as transportation to competitive racing. Operating at the extreme edge of the sport, he competed in many Polaris Challenges in the UK and in the Swiss one-day race, the Grand

Raid Cristalp – which crosses the Alps from Verbier to Grimentz.

Derek's successes in cycling took a sledgehammer blow when he was diagnosed with prostate cancer in 2005, leaving Derek with little choice but to step away from competition. However, he didn't relinquish cycling entirely. "I became a cycle trainer and coach, both in the UK and leading groups in the Alps/Pyrenees for events such as the Marmot and Etape du Tour," he recalled.

In 2007, Derek's wife of over twenty years, Caroline, was diagnosed with breast cancer. Caroline fought her breast cancer hard, "like a tiger", according to Derek. Though when the cancer returned in 2009 following remission, it was stage four – terminal. Caroline was given between twelve and eighteen months to live so the couple made a bucket list of ten things they'd do together before Caroline would pass away.

They did the top three things on Caroline's list: she was baptized, the couple renewed their wedding vows, and finally, holidayed in Scotland.

"It was her favourite place in the whole world," Derek recounted. Caroline passed away just nine weeks following her new prognosis. This sent Derek into a deep, dark depression.

For more than two years, a dark cloud hung over Derek. Then in October 2012, Derek's life began again, anew - when his prostate cancer was discovered to have spread and declared terminal. Upon hearing the news, Derek made a life-changing decision. He would ride his bicycle around the world, until he was no longer able to.

It took three weeks for Derek to sell or give away everything he owned, buy a Surly Long Haul Trucker touring bike, panniers and all the other equipment necessary, and set off, in November 2012 for what he thought would be the last ride of his life.

As with every long-distance bicycle tour, there are challenges aplenty and, given Derek's medical condition, these challenges were compounded. Derek crossed Northern Europe with relative ease, before heading for Africa. Then he hit his first major hurdle: a mugging in Senegal left him badly beaten and without a passport. Though the thieves stole little, no passport meant that Derek had to fly home to get a new one - taking time and a large chunk of his funds.



After returning to Africa, new passport in tow, Derek continued his journey onto the Middle East and Southeast Asia. In Tajikistan, on the Pamir Highway, Derek faced yet another setback: a collision with a 4x4 vehicle. The crash left Derek's bike obliterated and himself in worse shape - several broken ribs, lacerations to his hands, and temporarily blind in one eye. Thankfully, Tajik medical staff were able to care for Derek while his wounds healed and Surly replaced his bicycle. With the help of friends from all over the world, Derek, once healed, was back on the road again.

And so Derek continued on into Southeast Asia, riding to Vietnam. While in Hanoi, he became a minor celebrity. He gave talks and appeared on the English-language TV show Talk Vietnam. Derek's most treasured memory of Hanoi is that of Liem, a young cancer patient he met who lost his leg to bone cancer. Liem died of cancer in August 2015.

"Having lost his left leg, the disease had spread to his lungs and his prognosis looked grim, yet despite all this, Liem Chu Duc had a zest for life I have rarely seen before - he put my own efforts to speak out about fighting cancer and inspire others to shame. His work with youngsters blighted by this terrible disease was truly astounding and a stark reminder of the difference between my homeland and his. Had he been born in the UK, would he have lost the leg?" Derek said, in a blog post on September 11, 2015.

Derek's ride continued to Canada, travelling from West to East. Along the way, he experienced incredible hospitality; one man paid for his motel room during a particularly rainy ride. He was even interviewed by CBC Radio in Manitoba. But then the wondrous

ride through the world's second-largest country came to a grinding halt. Derek's accident happened descending a hill near Rimouski, Quebec on August 15, 2014.

No stranger to long hills, Derek was travelling at a speed of 80km/h, when "with what sounded like a gun going off", his front tire exploded. Derek careered down the hill; the tarmac scraped inches of skin off his torso, arms, and legs.

He recalled the immediate aftermath: "I knew it was serious as my left arm was in an impossible position - dislocated. I also had severe facial injuries. I have never experienced pain like this (and I have previously broken my hip!) and I think I passed out. I lay at the side of the road trying to signal vehicles with my good arm but it seemed like ages before someone finally stopped. The ambulance crew could not give me anything for the pain and I remember feeling I just wish I had been killed outright. I felt this way afterwards too for quite a long time."

Derek was taken to hospital where he underwent treatment on his badly dislocated shoulder and a significant head injury. Unfortunately for Derek, pre-existing conditions meant that he was ineligible for Canadian health care coverage. He knew he would have to fly home to England for more extensive treatment.

But that would happen in the coming weeks. First, due to the involvement of the media in Derek's story in the aftermath of his accident, Derek reluctantly became something of a celebrity with the help of his friend, Jean Madore. A local bike shop in Rimouski - Vélo Plein Air - also fixed up Derek's badly damaged Surly for free. "Their kindness helped stop me from completely falling apart. I owe them so much more than my insufficient gratitude."

Derek had several remarkable things happen, seemingly all at once. While in Canada, Derek had met a woman named Hilke and, after a while, the pair had fallen in love. In England, much to the astonishment of his doctors, Derek was free of lung cancer and his prostate cancer, while still present, was no longer life-threatening. Along with Derek's newfound romance and medical prognosis, there would be yet one more incredible discovery: Hilke was pregnant.

Derek and Hilke's daughter Natascha Grace was born on September 7, 2015, seemingly bringing the last decade of Derek's life full-circle: from love and hope to pain and loss and back again.

Jack Hawkins is a freelance writer and touring cyclist from New Brunswick, Canada. When he's not writing up a story, he's usually on his bike and you can follow along at jackonabike.ca

DEREKSBIKETRIP.COM



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Early in their NBC journey, Jack and Corinne show off the Team Wlody decal on the Gil Hodges Memorial Bridge between Brooklyn and Queens.

National Bike Challenge Gets New York Couple Rolling

WRITER: **LAURA MCCAMY** PHOTOS COURTESY OF: **THE WLODYS**

Jack and Corinne Wlody didn't own their own bikes when they joined New York City's bike share program Citi Bike in 2013. Within two years, they had joined the National Bike Challenge and each logged enough miles to cross the United States and keep going.

After not riding bikes since they were kids and never riding together, the couple, who run a fitness coaching business together, became members of Citi Bike in 2013 and started taking their clients out for rides. "We've taken a lot of our clients on Citi Bike adventures," Corinne said.

In 2014, they began a deep commitment by volunteering with Bike New York, teaching kids and adults the basics of bicycling. "We enjoy teaching people how to ride because we love it so

much. We love introducing them to this passion of ours," Corinne said.

In 2015, they bought their own bicycles so they could join in the 5 Boro Bike Tour, a fundraiser to support Bike New York. They trained for six weeks to prepare for the 40-mile car-free ride that takes cyclists through all five New York boroughs.

The 5 Boro ride inspired them to up their cycling game. "We want to inspire people so they can accomplish anything," said Jack. "You just need a goal, a plan to execute that goal, and then to pursue it relentlessly." This is what they teach their clients. They saw bicycling as a way to lead by example and challenge themselves.

The National Bike Challenge (NBC) provided the perfect opportunity for

the Wlodys to put some miles on their new bikes. From May through September, riders log their miles and earn points for the number of days and the distance they ride. In 2015, more than 92,000 riders participated, racking up almost 38 million miles – the equivalent of more than 1,500 trips around the equator.

The Wlodys joined the NBC in mid-May and jumped in with gusto. "We upped our goal as we went along. Before you knew it, we were riding 60 to 70 miles a day," Corinne recalled.

The pair began spending four or five hours in the saddle every day. When asked where they rode, Jack said, "Everywhere and anywhere."

"We got to discover parts of New York that we wouldn't have seen if we hadn't been on bikes," Corinne added. They started doing errands by bike and riding to their volunteer commitments. For longer trips, they took the subway and hopped on a Citi Bike at the other end.

Their favorite place to ride was Floyd Bennett Field, an old military airport in Brooklyn that is now a



national park. They loved riding for miles along deserted runways; Jack noted that they did their first century (100 mile ride) at that airport.

Jack, 49, has been a trainer for 21 years, working with clients to overcome disabilities, lose weight, or meet personal fitness goals. Corinne joined the business after they met 14 years ago. That background came in handy in ramping up to meet the physical demands of riding long distances every day.

"We used to visualize our rides, map out our rides beforehand and it helped us achieve some of our goals," Jack said.

"I was surprised how seamlessly it fit into my life," said Corinne, who is 56 years old and a two-time breast cancer survivor. She found that her age was not a barrier and she liked pushing her physical limits. "When you challenge yourself, you live fully," she said.

Corinne found that cycling – and even just imagining herself on a bike – reduced her stress level. This helped her when her mother passed away during the NBC. As soon as she returned from the funeral, she got back on her bicycle. She found biking therapeutic; she calls it "cycling through grief." Corinne added, "You can choose to be stuck or you can choose to move forward. We choose cycling forward."

The Wlody's were the only NBC riders from their Howard Beach neighborhood. This added to their motivation, said Corinne: "We felt a responsibility to represent our town." In the end, Howard Beach (in Queens) came in fifth out of the New York City neighborhoods in the NBC, beating out communities with more riders.

Jack and Corinne placed third and



Regulars at their local bike shop - ADT Bike and Skate Shop in Queens - the couple show off all of the rubber they went through while riding their combined total of 11,131 miles.

Above: "One of our favorite days during the NBC," Corinne says. "It's always important to think of others! We dedicated the first 12 miles of our 81 mile day, to raise money for a friend suffering from a rare condition called Mitochondrial Disease. With the help of our friends (l-r, are Louis F. Lotito, Thomas Mecadante, Al Smaldone, Michael Wlody, and Ken Podziba) we raised a total of \$2000.00!"



“ You can choose to be stuck or you can choose to move forward. We choose cycling forward. ”

fourth, respectively, out of the 1,117 National Bike Challenge participants in their area, riding a combined total of 11,131 miles in 96 days. They achieved this in part by a push during the last week, when they rode over 700 miles each, pulling a century each day for five consecutive days.

The couple liked the structure and the community they found in the NBC. "It elevates your feeling about cycling," said Corinne. "There's a place for you to go to share what you're doing."

Since the NBC wrapped up at the end of September, the Wlody's continue to incorporate bicycling into their lives, continuing to bike through the New York winter.

The Wlody's have a new perspective from the bike seat. "We've experienced a lot of things through all those miles.

We see the deficit of awareness in the motorists," Corinne said. Jack added, "New York just needs to work on their infrastructure a little better. We have plans for that, stay tuned."

They plan to return to the National Bike Challenge in 2016 with the goal of surpassing their 2015 totals. In the meantime, they will keep biking, "anywhere we can go," Corinne said. "Sometimes you don't want to have a destination. You want to get on the bike and keep going." The Wlody's experience proves that it's never too late to fall in love with bicycling.

Laura McCamy writes and rides in fabulous Oakland, California, where she's happy to report that new bike lanes are popping up every day. @lmcwords

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PHOTO COURTESY OF BBV GRAN FONDO



Kevin Korenthal rides the Big Bear MTN Gran Fondo.

Forged by Fire Foundation

WRITER: **HILARY ANGUS**

Kevin Korenthal was out cycling when he was struck head-on by a teenage driver. Suffering numerous traumatic injuries including the eventual amputation of his leg below the knee, his life was knocked dramatically off balance. Not one to sit back and feel sorry for himself, Korenthal threw himself into his recovery with a positive attitude, not only re-learning to walk, but eventually getting right back on his bicycle.

Throughout his healing, he noticed a trend in his own and others' rehabilitation that led to a successful recovery, and his observations inspired him to found the Forged by Fire Foundation (FbFF). FbFF offers support to individuals and families affected by traumatic injury or debilitating disease, connecting them with the philosophies and resources necessary to have the fullest recovery possible, and enjoy an active lifestyle going forward. They promote activities such as cycling, which with the use of recumbents can be adapted to suit varying abilities, as a means to introduce or reintroduce activity into people's lives, post-injury.

The Forged by Fire Foundation also partners with Finish the Ride and Streets Are For Everyone to promote safe streets in California and beyond.

FORGEDBYFIREFOUNDATION.ORG

PHOTO COURTESY OF SAFE



Damian Kevitt, centre, with friends at a 2015 Finish the Ride event.

Streets are for Everyone

WRITER: **HILARY ANGUS**

Hit-and-runs weren't something Damian Kevitt gave much thought to. Like most people, he was occupied by the myriad of other issues demanding attention in a day, and traffic injuries simply fell outside of the realm of what he usually thought about. Then one day, he was rather abruptly forced to consider the issue. "It became a very intimate problem as soon as

I was cruising down the freeway underneath a car at fifty miles an hour," he recalls.

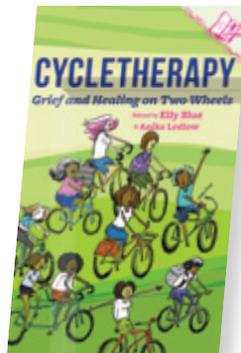
Barely surviving the incident and losing his leg in the process, Kevitt was determined to get back on his bike. As he recovered, he launched an event called Finish the Ride to draw attention to traffic injuries, and the event drew such widespread support that

Kevitt was encouraged to keep going. He soon founded Streets Are For Everyone (SAFE), a non-profit organization to draw attention to the epidemic of traffic crashes in hopes of instigating real change at the policy level. Starting out in Los Angeles, SAFE has since grown to a nationwide, volunteer-based organization. They run events, awareness campaigns, and grassroots initiatives aimed at making streets safe places for all people in all modes.

Though Kevitt admits the change is slow, it is happening. Through the work of SAFE and other similar organizations, cities around the country are adopting Vision Zero policies and politicians are listening to the growing multitude of voices calling for safe streets. This spring, SAFE hosted the third annual Finish the Ride in Los Angeles, but the event is no longer just for cyclists, it's open to all human-powered modes who are hoping to walk, run, and roll towards people-friendly streets.

Visit their website to learn more about SAFE, Finish the Ride and the movement for safer streets.

STREETSARE4EVERYONE.ORG



Cycletherapy

WRITER: **DAVID NIDDRIE**

Portland, OR-based editors Elly Blue and Anika Ledlow began a project a couple years ago, gathering stories which looked at healing, grieving, and cycling – and

the relationship between the three. What was once to be a stand-alone zine evolved into its own collected volume when it became clear to them the emotion and experience revealed in these stories was a hugely important topic, and one with a strong human element woven throughout.

Inside this compact paperback, you will find personal essays aplenty, diary entries, zine reviews and even a short story. There are so many different access points to dig into and the chapters in this edition are sure to resonate with many. Healing and grief takes on so many different forms, and for different reasons – spiritual, emotional and indeed, physical. Everyday bicycle rides gain new meaning when intention is brought to the forefront.

As Blue writes in her intro, "Much of what people write about bicycling, specifically, is colored by a sense of vulnerability, of risk, of the sort of joy you rarely experience when the stakes are low." Arguing the time is now for deeper conversations tackling personal issues with shared, human experience, this book provides some tools and assurances, in an unguarded and highly personal manner.

Cycletherapy – Grief and Healing on Two Wheels comes out this spring on Elly Blue Publishing, an imprint of Microcosm. This is the first book in the new Journal of Bicycle Feminism series, a collection of publications about women and cycling released annually.

MICROCOSMPUBLISHING.COM



Daniela Duva rides 'Mildred' - her Yuba Boda Boda cargo bike.

Finding the Perfect Fit With A Cargo Bike

WRITER: DANIELA DUVA PHOTOGRAPHER: DAVID NIDDRIE



Daniela checks the crops at an East Van community garden.

It's been more than a year now since I've had my Mildred (my Yuba Boda Boda cargo bike). It's opened up a whole new world for me. A world of bike lanes, cycling gear, and new adventures! It's also my new favorite exercise and nothing makes me happier than a brisk ride around the seawall, while I enjoy all my city of Vancouver, BC has to offer.

Besides all of the fun stuff, my two large panniers can hold more than \$100 of groceries so no need for that second car after all! I realized I don't need a car since I discovered the Central Valley Greenway (a car-free, walking and cycling route connecting Vancouver with Burnaby and New Westminster - cities to the east). It takes me right to the wholesale supermarkets, UBC's East Vancouver campus, a mall in nearby Burnaby, or wherever I need to go. It's just so quick and convenient by bike.

It's handy for work, too. I ride the Yuba to my boot camp classes after loading it up with all the equipment needed for class. Before Mildred, I would take the bus or walk but having my Yuba saves me a lot of travel time. As a bonus, my quads have never been stronger from all those hills. Oh how I love the burn!

Although it's only been about 18 months, I feel like I've had her forever

and I can't believe I never rode much at all before this. As a child, I had an old bike with a banana seat I shared with my brothers and after that nothing until I was 41. Then, someone gave me an old mountain bike which I started using when our car broke down and I found I loved it! The seat was hard and it made lots of noises which made my boot camp class laugh but I thought it was better than nothing. Then I met Mildred and the rest is history.

My son has decided to ride his own bike now but he still catches the occasional ride on the back, just for fun! If you've never cycled, I highly recommend trying it. Test a few bikes to make sure they are comfortable and when you find that right one, grab the handlebars and go! Your life will never be the same.

Daniela Duva is the owner of Survivor Fitness with seven locations in British Columbia, Canada. She is a BCRPA Master Group Fitness Instructor and Certified Nutritionist. She currently trains in East Van bringing many of the Momentum Mag staff to her boot camp classes, even at 6am. Daniela says, "Many thanks to Mia without whom I would never have been introduced to the world of cycling!"

SURVIVORFITNESS.COM

DANIELA'S FIT TIPS:

» **DON'T WAIT FOR GREAT WEATHER.** Accept the fact that it's not always warm and sunny – just grab your poncho or mitts and GO!

» **IF YOU HAVE TIME TO READ THIS ARTICLE** or check in on Facebook, you have time to exercise.

» **RIDE YOUR BIKE TO WORK** then do a 10-15 min walk on each work break.

» **WALK, JOG, AND DO PUSHUPS** or dips at the park instead of just sitting there while the kids play.

» **YOU DON'T NEED TO JOIN A GYM OR CLASS** – just move!

» **GET USED TO PACKING YOUR FOOD TO WORK**, takeout can pack in excess calories and salt.

» **INSTEAD OF FIVE DOLLARS A DAY ON COFFEE**, save up for a bike! You can buy a great bike in three months.

» **WHATEVER YOUR EXCUSE IS**, it's just a mental block to stop you from doing anything. Health is wealth!

» **TAKE CARE OF YOURSELF** or pay the consequences later.

(Yes, I'm mean but someone needs to say these things!)

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Rachael and Chris Kinson

Finding Strength:

A Father and Daughter's Two-wheeled Story About Living with Leukemia

WRITERS: **CHRIS AND MELISSA BRUNTLETT** PHOTOGRAPHER: **CHRISTOPH PREVOST**

In the spring of 2015, we had the privilege of documenting the stories of those who live and bike in Arlington, VA, the city across the Potomac from Washington, DC, in a film series for the Arlington Department of Transportation. Through the casting process, we were introduced to two remarkable people whose story we knew had to be shared.

Chris and Rachael Kinson are a father and daughter with their own story of recovery. Rachael's parents are separated so Chris makes quality time with Rachael a priority over quantity, with weekends spent doing many of her favorite things. From cooking together, to playing video games, and riding bicycles, he makes the most of every moment. However, four years ago, cherishing that time took on a deeper meaning.

In 2012, Rachael was diagnosed with Leukemia, news that would rock the foundation of

any parent. It was young Rachael's optimism that would become the basis for how they would tackle this large road bump.

Chris remembers the appreciation he developed for his daughter's maturity through the process. "For her to take on as much as she was taking on, without showing any signs of exhaustion or sadness, it became an even bigger role for me to keep a strong bond."

Maintaining that connection was, in fact, the reason they started riding bikes. During the chemotherapy, the doctors recommended Rachael take up an activity to keep her from growing despondent. Finding an activity that would excite a six year old, while not compromising her already diminished immune system, was a challenge.

"Biking for us was a no-brainer because it involved just the two of us," explains Chris. Together, they set out to find bikes and

start riding. Not being very connected to the bike culture in Arlington prior to this, Chris was happy to find how welcoming the community was. Especially when it came to the first step of finding the perfect bike for Rachael.

When they entered The Old Bike Shop, one of Arlington's long-standing community bike shops, the owner welcomed them. Instead of being nervous about approaching the young girl with no hair and a facemask, he showed genuine interest in their story, listening to Rachael's needs, and finding a solution that would make both father and daughter happy.

Cycling with her father is now one of Rachael's preferred weekend activities and often involves a trip to one of their favorite parks. The bond they built riding bikes throughout her treatment became one of their greatest strengths. As Chris recalls,

"We became this team that just shrugged the entire thing off."

When we met Rachael, there were no signs, physically or emotionally, that she was in remission from Leukemia. She was a bright, happy, cheeky, nine year old girl – much like our own daughter. We were in awe of the joy both Chris and Rachael exuded and the incredible bond the two shared.

One of Chris' final reflections on the experience best described our own feelings after meeting these two wonderful people.

"When I saw that she was able to overcome this, it made everything accomplishable. It's changed my perspective on everything."

Chris and Melissa Bruntlett are the co-founders of Modacity, a multi-service communications and marketing firm focused on inspiring healthier, happier, simpler forms of urban mobility through words, photography and film.

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\$299.99 USD | \$349.99 CAD

Single Child Bicycle Trailer with large side windows, rear storage compartment, and is easy to fold. This trailer can be converted into a stroller & jogger. Kit sold separately. Powered by Cruiser.





WIKE MOONLITE

wike.ca | \$339 USD

Made in Canada quality, very light (20 lbs), room for taller kids, folds instantly, converts instantly to a walking cart, solid plastic floor for durability.



DEVINCI E-GRIFFIN

www.devinci.com

\$2,999 USD | \$3,299 CAD

The Griffin is Devinci's family-friendly e-bike powered by Shimano's intuitive STEPS system. Inspired by global bike share programs, they are hardwired to explore while using less energy in the process.



PASHLEY AURORA

pashley.co.uk | \$2,395 USD

Versatile and unique ladies bicycle, offering a dynamic ride. The stunning mixte style frame is constructed from legendary Reynolds 531 tubing that is lightweight and stiff, built completely by hand.



PORTLAND DESIGN WORKS THE OWL CAGE™

ridepdw.com | \$20 USD

The Owl Cage™ is made from a single sheet of lightweight 5052 alloy in the shape of an owl with wings curved to cradle your water bottle.

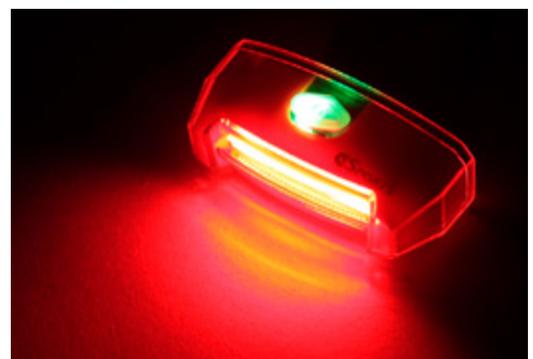


OPUS CITATO 3

opusbike.com

\$1,129.00 USD | \$1,199.00 CAD

Leave nothing behind. Urban Performance, with the accent on performance. Shimano hydraulic brakes, 2x10 drivetrain, cable channel downtube for clean looks.



C3SPORTS SOLAR FLARE TAILLIGHT - 60 LUMENS

c3sports.com | \$39.99 USD

Motion sensing taillight brake mode automatically changes from a strobe or steady mode to a full power solid 60 Lumen beam when stopped. Internal USB rechargeable battery, highly water resistant.



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PORTLAND DESIGN WORKS NINJA™ PUMP

ridepdw.com | \$35 USD

The Ninja™ Pump works as both a CO2 inflator and handpump and threads onto the tire valve for secure inflation. Compatible with both Schrader and Presta valves.



SIMCOE STEP THROUGH SIGNATURE

simcoebicycles.com

\$1,099.99 USD | \$1,399.99 CAD

This bike features a full chromoly frame, fenders, rear rack, full chaincase, a Brooks saddle, and an internal rear hub. Its CitySmart geometry makes it a graceful city bike.



TERN BICYCLES LINK D71

ternbicycles.com | \$950 USD

Our best frame and handlepost hinges, 7-speed internal geared Shimano hub, Andros 2 stem, Schwalbe Big Apple tires with Kevlar puncture protection, fenders and rack included.



STROMER ST2S

stromerbike.com

\$9,490 USD

ST2S is powered by the SYNO drive motor and a 983 watt-hour battery. The Supernova lighting is elegantly integrated into the design. It is fitted with Shimano XTR Di2 shifting.



FEEDBACK SPORTS SPORT-MECHANIC WORK STAND

feedbacksports.com

\$169.99 USD

The Sport-Mechanic Bike Work Stand maximizes portability and functionality. This wash and work stand folds into a compact unit for easy bike maintenance at home or on the go.



DETOURS TOOCAN 2.0 PANNIER

detours.us | \$120 USD

A sturdy tote bag that can ride, too. Wide zip opening and ultra-organized interior swallows a day's supplies. Flat, recycled base is unfazed by dirt. Comes with rain cover.





CHESINI SVELTA
beaglebicycles.com
 \$1,500 USD | \$2,150 CAD

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MIRRYCLE
INCREDIBELL
TOWER
mirrycle.com | \$8 USD

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RIDEWEAR
SEAFOAM & RUBY SERIES
ridewear.co | \$30 USD

Hand crafted from reclaimed carbon fiber bike frames, these earrings are lightweight and unique in design. Bicycles make life better, so why not ride them and wear them.



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CO. R-7905 BIKE
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reliance-foundry.com
 \$368 USD | \$410 CAD

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Created as that perfect all-purpose, all-year-round bike with a derailleur or hub gears. Modern geometry and performance with the enviable Pashley aesthetic to create a truly refined bicycle.



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INCREDIBELL CROWN
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HANDLEBAR DUFFEL
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SIMCOE STEP THROUGH CLASSIC 8 SPEED
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 \$699.99 USD | \$899.99 CAD 

The ST Classic bike features a mixed-chromoly frame, fenders, rear rack and a full chaincase. Its CitySmart geometry makes it a graceful bike in an urban environment.



SCOSCHE
HANDLEIT PRO
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handleIT pro™ securely mounts your iPhone, iPod, Android or other Smartphone. Phone simply zips into the weather-resistant enclosing while still retaining full touch screen operation.



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conti-online.com
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SIMCOE ROADSTER
SIGNATURE 7 SPEED
simcoebicycles.com
 \$1,099.99 USD | \$1,399.99 CAD

This bike features a full chromoly frame, fenders, rear rack, full chaincase, a Brooks saddle, and an internal rear hub. Its CitySmart geometry makes it a graceful city bike.





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- URBAN & CITY
VERSIONS

ortliebusa.com | \$150 USD

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WALLERANG M.01

wallerang.com \$3,690 USD | \$4,955.67 CAD

Redefining everyday travel, the Wallerang is a versatile award winning smart-bike equipped with Di2 electronic shifting, up to 80 mile range, and modular rack system providing a seamless riding experience.



NUTCASE

STREET HELMET

nutcasehelmets.com

\$69.99 USD | \$79.99 CAD

The Nutcase Street Helmet says "personality" with loads of fun, creative graphics to choose from. Includes Fidlock anti-pinch, magnetic buckle, removable spin-dial fit system, 360-degree reflectivity, and removable visor.



WIKE BUDDY

wike.ca | \$290 USD



Durable aluminium and polyethylene sheet construction, high quality 20" alloy wheels, push button axles, optional top.



CHESINI SCAPOLA

www.beaglebicycles.com

\$1,650 USD | \$2,300 CAD

Handmade in Italy, wooden grips, Brooks saddle, belt driven with a 5 speed internal hub.

spring 2016 gear guide



LUVELO BIKE BELLS

luvelobikes.com \$22 USD | \$22 CAD

Make your bike sing with our sweet sounding, Dutch-style bicycle bells. More styles and colors available. Love your bike!



CHESINI TORPEDO GOLD

www.beaglebicycles.com
\$1,400 USD | \$2,000 CAD

Handmade in Italy, leather grips, inverse brake levers, Brooks saddle, 5 speed internal hub, and a handlebar clock.

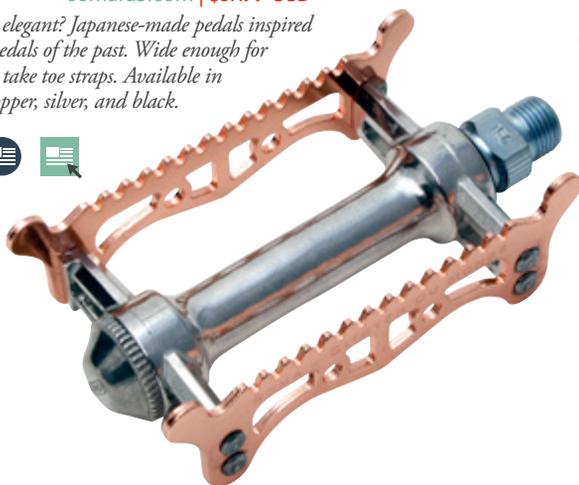


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CITOYEN DU MONDE PEDAL

somafab.com | \$37.99 USD

Can pedals be elegant? Japanese-made pedals inspired by French pedals of the past. Wide enough for boots. Will take toe straps. Available in copper, silver, and black.



BUCA BOOT

bucaboot.com | \$225 USD

The first and only bike-mounted storage system that provides the flexibility of an open basket with the storage security of a car trunk. Secure, weatherproof, beautiful.



DETOURS GLOVEBOX

detours.us | \$32 USD

Handlebar bag, navigation assistant, and travel wallet all in one. Interior loops and card slots keep essentials organized. Top window fits larger smartphones. Detachable wrist strap makes off-bike carry easy.



SIMCOE ROADSTER CLASSIC 3 SPEED

simcoebicycles.com

\$729.99 USD | \$849.99 CAD

The Roadster Classic bike features a mixed-chromoly frame, fenders, rear rack, full chaincase and an internal rear hub. Its CitySmart geometry makes it a graceful bike in an urban environment.



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Taiwan: The Cycling Island

WRITER + PHOTOGRAPHER: DAVID NIDDRIE

Made in Taiwan. These words have become ubiquitous in the bicycle industry. Taiwan, a small, island nation off the southeastern coast of China, where so many parts of the bicycles North Americans ride are manufactured, has been known since the 1970s as “The Bicycle Kingdom”. Everything from frames, chains, and pedals to grips, lights, and cycle computers are made in factories mostly clustered in Taichung City on the western coast.

While China now produces an abundance of bikes and parts too, Taiwan has mostly left behind the low-end market to focus on mid-level and high-end cycling products. Homegrown brands are known for innovation and expertise in manufacturing. On a recent media tour of 10 production facilities and an introduction to a dozen more Taiwanese brands, it was clear that cycling is a major part of the economy and has been for some time.

Giant, the world’s largest bike company, was established in 1972 with the Giant brand unveiled in 1981. Since that time, Giant has become a global leader in bike production, both under their own brands – Giant, Liv, and Momentum – and for a growing number of high-end clients. They were the first company to mass-produce carbon fibre for bikes in 1985 and their Taichung factory is where some ‘competing’ brands’ carbon fibre products are made. It was very interesting to see the mix of brands all being built under one huge roof, often side by side on the assembly line. Above you, bike frames move around in a maze of conveyor tracks, heading from one department to the next. Employees work quickly as the bikes roll by in a seemingly endless fashion, with hoses, ducts, and cables visible in every direction. In 2014, Giant reported \$2-billion USD in corporate revenue, with 6.6-million



An employee works on a bike frame at the Giant factory in Taichung.



A small part of the shipping area at Giant, where complete bikes are prepared for international destinations.

bicycles sold (compare that to 3,800 in 1972). The company now has nine factories, including six in China and one in Japan, with products available in 80 countries at 10,000 retailers. Giant was the first stop on our tour; it set the scale dramatically.

The Kenda Tire headquarters, just south of Taichung, looked old school from the outside and inside was no different. Founded in 1962, Kenda began as a bike tires and tubes factory, eventually expanding to produce all kinds of tires, except for aircraft. This factory is all industrial clang and the smell of rubber was pervasive. They make tires for Giant, Trek,

Specialized, SCOTT, Merida... Like many of the factories we visited, companies are in close contact with their competitors in production. Now with six factories in the region (including China and Vietnam), Kenda produces hundreds of thousands of tires a day. They employ more than 10,000 people and plan to open three more factories in 2017. Again, the scale is mind-boggling when you realize how much North American bike stuff comes from this part of the world.

Later that week, we visited King Roof (vehicle racks), Marwi (a huge producer of bike parts, including a good chunk of the world's pedals),

and KMC Chain (a chain company claiming a 78 percent global market share). According to KMC, if you measure all the chain made since their founding in 1977 it would stretch more than 2.5 million miles (four million kilometers)! We also visited the factories of Taya Chain, Kind Shock Hi-Tech (KS of hydraulic drop-post fame), and Hubsmith to further illuminate the Taiwan bike connection.

One of the highlights was Velo Enterprise, makers of Velo saddles, grips, and tapes founded in 1979 by Stella Yu. This company produces 15 million saddles and 20 million grips annually with four factories in Taiwan and China. Yu still heads up the company and her fiery, passionate presentation revealed how she was able to make it in this male-dominated industry. She told us how she got tough quickly in the traditional business setting while keeping her vision intact along the way. She explained the inspiration for color and design comes from feng shui and that Velo makes saddles for each year in Chinese astrology. Yu shared her spiritual side by taking our entire group out to her favorite Buddhist

temple that evening while playing the part of tour guide (naturally, to the Dajia Zhen Lan Temple which is dedicated to the female goddess, Mazu). Her latest focus is on e-bike saddles (with a built-in handle for lifting the bike) and her passion projects – saddles for push bikes and children. Acknowledging most of their product is made from chemicals, Velo claims strict compliance with international standards and Yu specifically works toward minimizing exposure to toxins in their children's line.

Our last visit was to Lezyne, an American company now in their ninth year making products at their own facility, surrounded by rice fields and farms on the outskirts of Taichung. This was one of the most modern and worker-friendly locations on the tour. Instead of being hot and humid, Lezyne's facility was cooled by air-conditioning units imported to maintain comfort in production. It was significantly quieter, too, as a full-time machine shop this is not. Lezyne sources most of their parts from vetted suppliers, then tests the raw parts piece by piece before assembly. Once functioning, parts



Workers at Kenda Tire test every tube by inflating and grouping, later returning to discard those with leaks.



Classic bicycle pedals, like those found on millions of bikes around the world, are manufactured at Marwi.



Courtyard in the middle of the Kenda Tire factory.

and products are tested and, after packaging, randomly tested again. The level of quality control was beyond anything else on the tour. Every aspect of their new GPS line – coding, electrical, design, marketing, and more – is done in house. It's clear Lezyne owns its brand and image in all departments. For deeper consistency, and perhaps a quirky indulgence, the Taiwan office is a replica of their San Luis Obispo, CA headquarters, seemingly down to the bowl of Smarties in the kitchen.

CYCLING IN TAIWAN

Apart from the vast, industrial network for bike production in Taiwan, what's it actually like to ride there?

The influence of bicycle manufacturing on the country is becoming clearer at the street level. Giant helped launch the YouBike bike share program that began in Taipei and now includes 10 other cities like Taichung farther down the coast. YouBike more than doubled its national, annual ridership from the previous year to 30 million trips in 2014. Infrastructure is being built, too. Now it's possible to ride around

much of the country on connected bike paths and right of ways. A ride around Sun Moon Lake, Taiwan's largest lake, features long stretches of separated pathways.

On the streets of Taichung, the motorized scooter still rules the road; transit and private automobiles fill in the rest. The bike share was being used regularly on the Sunday of the popular Taichung Jazz Festival while I was there. Other than that, it wasn't very common to see groups of riders, just the odd folding-style bike (20-inch wheels are popular) mixed in with all the scooters.

The Tour de Taiwan, Giant's Ride Like King event, and the Taiwan Cycling Festival in the autumn bring interest to the sport side of cycling. Velo-city Global Conference 2016 kicked off an intense two weeks of cycling events in Taipei this February. The five-day program focusing on city cycling was followed immediately by the Taipei International Cycling Show (the largest in Asia) and the 2016 Tour de Taiwan, part of the Union Cycliste Internationale Asia Tour.

Whether or not the people of Taiwan embrace transportation



YouBike, Taiwan's public bike share system, had 30 million trips in 2014.

cycling as enthusiastically as sport cycling remains to be seen. The factories are there, and the brands are maturing, and it appears the political will to increase ridership is following. With Velo-city injecting fresh ideas and energy into the realm of city bicycling, the growth of bike share, and an expanding network of cycling paths in Taipei and elsewhere, this small island has a lot to build upon.

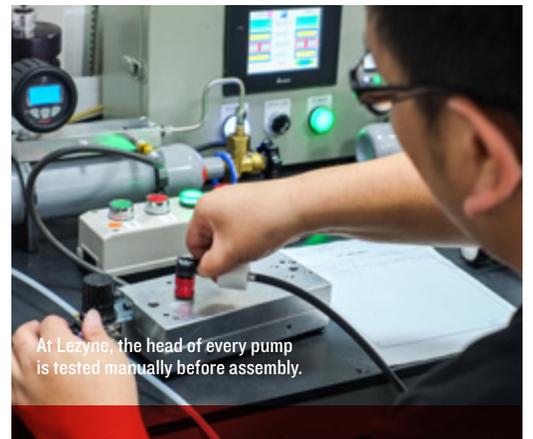
As Anthony Lo, Chairman of the Taiwan Bicycle Association and Giant Global Group CEO, said at our press conference, "Taiwan

has become not only the centre of manufacturing and R&D, it has become a cycling island." A strong commitment to create city-cycling friendly cities will help Taiwan ensure this new nickname sticks and accurately describes their place in the global bicycling scene.

David Niddrie spent a week in Taiwan visiting factories, eating veggie hot pot and gaining further insight into the bicycle industry. For a trip report and slideshow on riding around Sun Moon Lake, visit momentummag.com. Momentum Mag gratefully acknowledges the support of Taiwan External Trade Development Council (TAITRA) for this trip.



Stella Yu, founder of Velo Enterprise.



At Lezyne, the head of every pump is tested manually before assembly.



Huge lengths of chain run throughout the factory during manufacturing at Taya Chain.



Employees assemble saddles at Velo Enterprise.

CITY CYCLING MADE SIMPLE

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“This book is like the act of riding a bike itself: easy, efficient, and fun. Essential reading for anyone contemplating cycling in a city — and for anyone already doing it.” — David Miller, Toronto mayor (2003–2010) and avid environmentalist

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NIKWAX
WATERPROOFING

What You Need to Know About

E-BIKES

WRITER: GWENDAL CASTELLAN



PHOTO BY DAVID NIDDRIE

Cruise e-bike powered by Bosch.

Electric bicycles are not new to the pages of *Momentum Mag*. Over the last few years we have reviewed several e-bike models and watched with interest as the technology has evolved to become ever more elegant and easy to use.

E-bikes still use human energy to move forward. They are beautiful, human-electric hybrid propulsion systems that augment the power of the user to get around, climb hills previously inaccessible, or just ride faster with less perspiration. E-bikes are durable, reliable, and convenient. They offer solutions for different users and the potential to transform urban transportation.

Why should I consider getting an e-bike?

An e-bike is suitable for a number of scenarios: particularly long commutes, regularly hauling heavy loads, living in a hilly region, aging and otherwise not able to bike regularly, or for anyone who wants to get around faster.

The e-bike has become a robust technology that can provide reliable service for years. Do keep in mind though that it is a more complex system than a regular bicycle; there are a few more components that could break down. Make sure you have access locally to a shop with experience servicing e-bikes.

Different types of e-bikes

Hub Motor E-Bikes - Hub motor e-bikes fit the motor inside the wheel, taking the place of the regular hub. There are two different kinds of electric hub motors: direct drive and geared hub motors.

Direct drive motors have no moving parts, making them very quiet. They are always engaged and can therefore have regenerative braking, which returns some energy to the battery.

Geared hub-motors are smaller and lighter and tend to have greater torque. They have a free-wheel so there is no resistance when the motor is not being used. This means there's no regenerative braking. Geared hub motors also have moving parts so when they are engaged there is a noticeably louder hum than an equivalent direct drive motor.

Mid-Drive E-Bikes - A mid-drive system incorporates an electric motor on, or next to, the bottom bracket. The advantage is it uses the existing drive chain of the bicycle. This means that if the rider changes gears appropriately the motor can turn closer to its ideal rotations per minute (RPM), whatever the bike speed, and be more efficient. Because mid-drive e-bikes provide power through the chain drive, they may see faster wear than a hub motor e-bike.



Stopping at a café with a Cube Elly e-bike equipped with the Bosch system.

PHOTO COURTESY OF BOSCH EBIKE SYSTEMS

Retrofitting bicycles into e-bikes

It can be fairly simple to retrofit an existing bicycle to e-assist. This is usually done with a hub drive. A wheel is replaced with one that has a hub motor, then wiring is run to the battery, which is mounted on a rack or where a water bottle cage usually goes. You then choose whether you'd like a pedal sensor or a throttle to control the amount of motor assistance.

What's the difference between throttle assist and pedal assist?

Most e-bikes are controlled by a pedal assist sensor that measures the rotation of the pedals and applies a gradual, even force from the motor to assist the rider. This is generally a very smooth

system as the rider does not need to use any controls. In most pedal-assist e-bikes there is an option to choose the level of assist, giving the rider the ability to tailor the ride to their needs.

Some e-bikes run on throttles, which can take the form of a handlebar twist or thumb lever that will move the bike without pedalling. In theory this allows the rider to be more sparing with the use of the assist to extend their range. In reality, the natural tendency is to be a little heavy on the throttle, resulting in decreased efficiency. E-bikes controlled by a throttle are not necessarily permitted in all jurisdictions. Check to make sure they are allowed in your area before buying one (see wikipedia.org/wiki/Electric_bicycle_laws).



The E3 Path Plus is the first IZIP e-bike equipped with the Shimano STePS System.

PHOTO COURTESY OF IZIP EBIKES

Some e-bike models combine pedal-assist and throttle, allowing the rider to choose which mode they need at different times.

What makes a good electric bicycle?

Like anything else, an e-bike that's built well will be a better ride. Look for an e-bike with high quality components that feels comfortable to ride. Try many different models to find one that fits your size and is evenly balanced. Many older models were unevenly distributed with the weight mostly at the back, a problem solved by newer mid-drives. Test how easy it is to stop and start, change gears, and adjust your power. Better components will cost more and result in a smoother ride. You can make due with an entry-level model and still reap the benefits of e-assist but it will usually require a few sacrifices in ease of use, comfort, and/or durability.

What do I need to know about power and range?

Manufacturers often give estimates of the range for their models. It is important to realize that many factors affect the range you experience. The weight of the rider, the amount of effort the rider puts in, the hilliness of the terrain, tire inflation, and cargo weight are examples. There is no standard for designating the estimated range of an e-bike but developing an understanding of the motor and the batteries will allow you to compare bicycles with some insight.

Motors are rated according to their power draw in watts (W). Typically e-bicycles have motors with a range of 250 watts to 1200 watts or more. The larger the motor, the more energy it draws from the battery and the more power it delivers.

A note on batteries: Lithium-ion batteries do

slowly degrade over time. Eventually that hill that seemed flattened by the e-bike will rise again. You can expect 2-3 years of good service life from your battery. They are one of the most expensive parts; keep this in mind when making your purchase; ask about availability of replacement batteries.

To charge your e-bike, you can remove the battery and bring it inside – especially in cold climates – for charging using a standard household outlet. It may be easier to leave the battery on and park next to an outlet, if your bike is stored in an enclosed, dry and warm space. Modern batteries can be charged up to at least 80 percent, if not more, within an hour. If your battery is nearing the end of its life, bring the charger with you on longer rides.

The benefits of e-bikes

E-bikes have the potential to make bicycling accessible for millions of people unable to ride a regular bicycle for a variety of reasons. They add enormous value to cargo bikes which can replace family cars. Imagine being able to haul several children around without concern for hills, wind, or distance. Commercially, electric-assist enables cargo tricycles to replace trucks for courier services and last-mile delivery in many cities.

By giving more people the energy to go car-free, electric bicycles contribute to a healthier population, reduced congestion, and a cleaner atmosphere. Most importantly, e-bikes are fun. Test one out and you'll understand the meaning of the "electric smile."

Gwendal Castellán has been riding an electric-assist cargo bike since 2009 to carry his two children and occasionally other less talkative cargo. During the day, you can find him looking for energy efficiency opportunities for tourism businesses in Vancouver. He is passionate about developing livable, human-centred, resilient cities. @GwendalC

POWER ACRONYMS 101

Voltage (V): The measure of the potential power of the battery. A higher voltage battery will provide more power. Typical voltages for batteries are 24V, 36V, and 48V.

Ampere (Amp) hours (Ah): The measure of the battery's energy capacity measured in how many amps the battery can deliver per hour. Typically this ranges from 8 to 20 Ah.

Watt hours (Wh): The measure of the battery's stored energy. It can be calculated by multiplying the battery's amp hours by the voltage ($Ah \times V = Wh$). For example a 36 volt battery with 11 amp hours would have 396 watt hours.



The Copenhagen Wheel is a retrofit option for regular bicycles and was conceived and developed by the SENSEable City Lab with technical support from MIT. On the popular TV series *Weeds*, you may have seen the character Andy Botwin pedalling one. It was first unveiled as a concept in 2009 and the company is now taking production pre-orders. The innovative idea with this bicycle retrofit solution is that it includes all the components (motor, battery, motor controller) in the hub. It will also include smartphone integration that allows the wheel to be locked and unlocked via an app.



PHOTO BY PONTUS MALMBERG

City/Commuter E-Bikes

BRAND	MODELS	MOTOR	FIND IT AT
A2B	Ferber, Galvani	H	wearea2b.com
BESV	CF1	H	besv.com
Big Cat	Long Beach Cruiser	H	bigcatbikes.com
Biomega	OKO	H	biomega.com
Blix	Komfort+	H	blixbike.com
BMW	Cruise	MD	bmw.com
Bulls	Sturmvogel E Evo	MD	bullsebikes.com
Cube	Elly Cruise, Elly Ride	MD	cube.eu
Devinci	E-Griffith	MD	devinci.com
Easy Motion	EasyGo, EVO	H	bhbikes.com
Elby	Elby	H	elbybike.com
Electra	Townie Go i8	MD	electrabike.com
e-Joe	Anggun 3.0	H	ejobike.com
eProdigy	Banff, Logan, Jasper	MD	eprodigybikes.com
Evelo	Luna, Orion	MD	evelo.com
Evo	ST1, MD2	H	evobicycle.com
eVox	eVox City	MD	evoxbikes.com
Faraday	Cortland, Porteur	H	faradaybikes.com
Felt	VERZA-e30, SPORT-e95	MD	feltbicycles.com
Fifield	Chatham, Caladesi, Bonfire, Seaside	H	fifieldebikes.com
Focus	Adventura	MD	focus-bikes.com
Gazelle	Arroyo, Cityzen, Orange, Ultimate, Chamonix, Balance	MD, H	gazellebikes.com
Grace Easy	Urban, Urbanic, Easy	H	grace-bikes.com
IZip	E3 Vibe+, E3 Zuma, E3 Path+, E3 Dash	MD	izipusa.com
Juiced Riders	ODK, Cross Current	H	juicedbikes.com
Kalkhoff	Sahel, Include, Aggatu, Tasman	MD	kalkhoff-bikes.com
Magnum	UI5, MI5	H	magnumbikes.com
Ohm	Urban XU700	H	ohmcycles.com
Pedego	City Commuter, Boomerang Plus, Interceptor	H	pedegoelectricbikes.com
Polaris	RAIL EV511	H	polarisebikes.com
Public	D8, M8	H	publicbikes.com
Raleigh	Sprint, Misceo, Route, Detour, Sprint	MD	raleighusa.com
Stromer	ST1, ST2	H	stromerbike.com
Tempo	Carmel, Santa Barbara, La Jolla	MD	tempobicycles.com
Trek	XM700+, Lift+	MD	trekbikes.com
Vanmoof	Vanmoof Electrified	H	vanmoof.com
Wallerang	M.01	MD	wallerang.com

Folding E-Bikes

A2B	Kuo+	H	wearea2b.com
Amego	Fold	H	amegoev.com
Big Cat	Hampton Folding	H	bigcatbikes.com
Blix	Vika+	H	blixbike.com
Bussetti	Folding E 40	H	busetii.com
e-Joe	EPIK SE, EPIK Lite	H	ejobike.com
Fifield	Jetty	H	fifieldebikes.com
IZip	E3 COMPACT	H	izipusa.com
Magnum	Classic, Premium	H	magnumbikes.com
Mando Footloose	Mando Footloose	DW	mandofootloose.com
Pedego	Latch	H	pedegoelectricbikes.com

Cargo E-Bikes

Butchers and Bicycles	Butchers and Bicycles Mk1-E	MD	butchersandbicycles.com
Felt	Bruhauil	MD	feltbicycles.com
Gazelle	HeavyDutyNL C7 HF, Miss Grace C7 HF	H	gazellebikes.com
IZip	E3 Metro	H	izipusa.com
Juiced Riders	ODK U500	H	juicedbikes.com
Pedego	Stretch	H	pedegoelectricbikes.com
Rad Power	Rad Wagon	H	radpowerbikes.com
Urban Arrow	Family, Shorty, Cargo	MD	urbanarrow.com
Virtue	Pedalist	MD	pedalisticycles.com
Xtracycle	Edgerunner Electric	MD	xtracycle.com
Yuba	Spicy Curry, el Mundo, el Boda Boda	MD, H	yubaride.com

Retrofit Conversion Kits

BionX		H	ridebionx.com
Crystalyte		H	crystalyte.com
Evelo	Omni Wheel	H	evelo.com
eZee		H	ezeebike.com
FlyKly	Smart Wheel	H	flykly.com
Nine Continent		H	ebikes.ca
Super Pedestrian	Copenhagen Wheel	H	superpedestrian.com
Stokemonkey		MD	clevercycles.com



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bikeStyle

Becky Katz

CITY: ATLANTA, GA

OCCUPATION: CHIEF BICYCLE OFFICER, CITY OF ATLANTA

PHOTO BY CAMERON ADAMS

What is your *BikeStyle*?

New Yorker in the South.

What are your favorite clothes to bike in?

I am mostly a commuter bicyclist. I only purchase clothing that is comfortable to bike to work in. Dresses with lace edge, bike shorts, black jeans with a little stretch, black boots with heels that my pedals can perfectly wedge into, and big earrings that stick out from under my helmet.

Where are we most likely to spot your bike?

In October I became the City of Atlanta's first Chief Bicycle Officer. With Mayor Reed and his administration, I am working to make Atlanta better by bicycle. So you will most likely spot my bike in front of City Hall or in front of Morelli's, my favorite ice cream shop in Atlanta.

What do you like most about riding?

I love how connected I feel with Atlanta when riding my bike. I get to see the sites, smell the smells, and interact with the city around me.

What is your dream bike for everyday cycling?

I love my Kona Honky Tonk! Also I'm looking forward to riding the City of Atlanta's bike share bikes featuring Social Bicycles - which have step-over frames and upright handlebars.

What did you eat for breakfast?

Black coffee.

What music have you been listening to most?

Currently Jamie Woon's Mirrorwriting album has been playing on repeat.

Basket or panniers?

That's easy - my beautiful, useful, durable, and floral Basil panniers.



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