

BMTS Article Digest

February – March 2020

BMTS Pedestrian & Bicycle Advisory Committee Members:

The following is a compilation of articles that may be of interest to BMTS Pedestrian & Bicycle Advisory Committee members. This and past digests can also be accessed in the Pedestrian & Bicycle Advisory Committee page of www.bmtsonline.com.

Scott

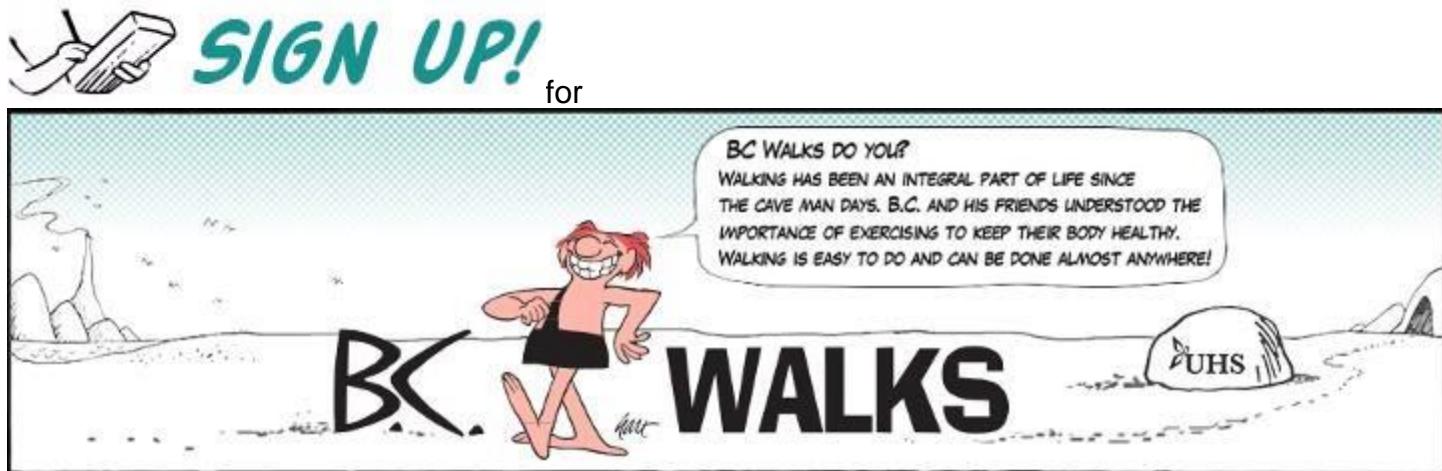


CenterLines

Take a look at the National Center for Bicycling & Walking's newsletter, **CenterLines**. You can also arrange to have it emailed directly to you.

See <http://www.bikewalk.org/newsletter.php>

CenterLines is the bi-weekly electronic news bulletin of the National Center for Bicycling & Walking. **CenterLines** is our way of quickly delivering news and information you can use to create more walkable and bicycle-friendly communities.



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Wednesday, 12 February 2020

Memorial unveiled 50 years after bridge death

Anthony Borrelli

Binghamton Press & Sun-Bulletin USA TODAY NETWORK

Fifty years after Binghamton Parks employee Donald Burton's death, a plunge through the Exchange Street bridge into a frigid Susquehanna River while clearing the sidewalk of snow and ice, his family got to see his memorial.

The memorial was unveiled Tuesday near the bridge entrance from Conklin Avenue on Binghamton's South Side, in a small ceremony attended by Donald Burton's family — including his son, who was just 20 months old when his father died on Feb. 11, 1970 — and some two dozen city Parks and Recreation Department workers.

"It's forever," remarked Donald Burton Jr., an Endicott resident who said he still misses his father, even though they never got the chance to know each other. "The community should know about it. Everybody should know about local history, and this is local history."

The death of Donald Burton Sr., a 40-year-old father of five, preceded a costly overhaul of bridge safety around the City of Binghamton after the accident.

Burton had been driving a two-ton sweeping machine along the sidewalk of the Exchange Street bridge around 9:30 a.m. that day, when a section of the concrete pavement gave way.

He went into the river, along with the sweeping machine.

Police at the time said nobody directly witnessed the accident, but fellow city workers had last seen Burton driving south in the enclosed tractor on the bridge's east side shortly before the accident.

A few minutes later, one of Burton's co-workers noticed a gaping hole in the pavement.

Emergency responders converged on the bridge and a Broome County Sheriff's Office SCUBA team searched the river, which was about 10 feet deep, according to Press & Sun-Bulletin archives.

Shortly after 12:30 p.m. that day, a wrecker managed to raise the sweeper vehicle and Burton's body from the water.

After the accident, the bridge was closed while it underwent extensive repairs, as part of a \$1.2 million program at the time to repair the City of Binghamton's then-deteriorating bridges.

Binghamton Mayor Richard David said Tuesday that planning began last year for Burton's memorial, which sits near the site of a monument for three Binghamton firefighters who drowned in the river at Rockbottom Dam, just five years after Burton's death.

"Time goes by, and the community doesn't necessarily know or remember," David said Tuesday. "It's important to have a permanent memorial space and future generations to know the sacrifices these employees made. For the family, and the city, it's important to reflect on this tragedy."

Follow Anthony Borrelli on Twitter @PSBABorrelli.



Binghamton Mayor Richard David unveils a memorial for Parks Department employee Donald Burton Sr., who died Feb. 11, 1970, while clearing the Exchange Street bridge of snow and ice. The memorial marked 50 years since his death.

ANTHONY BORRELLI/BINGHAMTON PRESS & SUN-BULLETIN



A plaque commemorating the 50th anniversary of the death of Donald E. Burton Sr.

PROVIDED/BINGHAMTON MAYOR'S OFFICE

Friday, 14 February 2020

Planners: Number 5 project a problem

Recommendation is not binding on the city

Jeff Platsky

Binghamton Press & Sun-Bulletin USA TODAY NETWORK

The Broome County Planning Department offered a laundry list of concerns — traffic snarls and neighborhood aesthetics among them — with the proposed gas station/convenience store on the Number 5 parking lot.

Though the recommendation for project denial by the county is not binding on the City of Binghamton, it does present another obstacle for the developer to overcome.

"The proposed gas station/convenience store would be incompatible with the existing adjoining development and would adversely change the appearance of the neighborhood," the planning department wrote in a 16page submission to the city planning commission.

Brett Pritchard, project developer, said at Monday's planning commission meeting that he is attempting to address issues raised in a page-long list of project plan shortcomings.

If the developer falls short on tackling the issues the county raised, the seven-member city planning commission would need five votes, a supermajority, rather than four votes to approve the plan.

The developer, according to his traffic studies, said the development would add 60 more cars per hour to the general area around the development.

However, the county planning department, with input from traffic experts, said the development would burden an already busy intersection with additional volume, creating backups.

"The existing longer delays on Vestal Parkway (Route 434)/South Washington Street intersection will continue to degrade with additional traffic generated by the proposed development," said a survey by the Binghamton Metropolitan Study, a independent regional transportation planning agency.

Among other concerns raised by the county planning agency:

- Narrowness of Mary Street, a key entrance and exit to the development, as well as limited parking at the nearby South Side post office could create a serious accident hazard on the street.
- Failure to address the loss of parking at the South Side Commons resulting from trucks attempting to access the development.

■ The developer's failure to adhere to the "pedestrian-oriented streetscape" by planning no front setbacks or street-friendly amenities at the site.

Based on the design presented by Pritchard, the iconic Number 5 restaurant will be converted to retail, along with the former La Taz coffee shop, now vacant due to massive damage to the building from the 2011 flood. Still unnamed retail stores will also face South Washington Street.

A Mirabito gasoline filling station and a People's National Bank will be built east of the restaurant parking lot on a lot size of about 1.4 acres.

Access to the bank and convenience store/filling station would be from Vestal Avenue and Mary Street, with an exit only to South Washington Street.

The city planning commission is scheduled to take up the matter again at its scheduled March 9 meeting in Binghamton City Council chambers.

A CNU Journal

A family takes a ride on an electric bicycle. Photo courtesy of Urban Riders Cargo Bikes.

TRANSPORTATION

'Little Vehicles' and the streets that love them



Little Vehicles, including bikes, scooters, e-bikes, velomobiles, motorized skateboards, unicycles, and "hoverboards," have the potential to transform urban living. Safe infrastructure is needed to get the most of these new modes.

KIT KRANKEL MCCULLOUGH FEB. 4, 2020

It was hot. We were tired. After an afternoon of shopping on Austin's South Congress Avenue, we were ready to call a ride-hailing service to carry us on the short trip back to our hotel when we saw them: two bright red electric scooters winking at us from the side of the sidewalk. In what seemed like only a few minutes—very fun minutes, I might add—we were home.

Austin is literally buzzing with people whizzing around on scooters, and it's no wonder—they make so much sense. In Austin, it can be a little too far to walk, or it can be uncomfortable, primarily because of the heat, but for short trips, a car doesn't make sense either—it can be difficult to drive because of traffic congestion and the hassle of parking. In the US, nearly half of all car trips are less

than three miles, and twenty percent of car trips are under one mile. We end up luggering around two-ton SUVs designed for long haul high-speed journeys on even the shortest urban trips, with average speeds under 20 mph.

For these kinds of trips, we need an alternative to the car. Traditionally that alternative has been the bicycle. Bicycles have many of the attributes of a personal vehicle: they are available when you want them, go where you want to go, and allow you to travel some distance. They also have some advantages over cars. They are easy to park—usually you can ride right up to your destination and park out front. And biking can be efficient: one analysis of several cities found that biking is the fastest means of travel during rush hour. Bikes afford mobility to populations who cannot access a car—they cost much, much less than a car, and they can be operated by children and teenagers too young to drive. They are clean and quiet, they do not pollute, and they pose far less danger to others than a car.

But bicycles have disadvantages as well. They require physical effort, especially on hills. They expose the rider to the weather. It can be difficult to carry cargo or passengers on a bike. Now, however, new kinds of bikes and other light vehicles seek to overcome these obstacles. Benjamin Schneider at *CityLab* calls these “Little Vehicles.” (The industry term is “micromobility,” but “Little Vehicles” is so much clearer and to the point.) Little Vehicles include not only bikes and scooters, but e-bikes, velomobiles, motorized skateboards, unicycles, “hoverboards,” and other small, battery-powered low-speed not-a-cars. Advances in battery-powered electric motors have the potential to make these modes a viable mode for more people. Electric motors mean less physical exertion is required than riding a traditional bike, or even walking. A diversity of vehicle designs, including cargo bikes, recumbents, bikes with protective shells, small or folding scooters and skateboards that can be carried, are fitting the needs of more people and more trips.



A variety of Little Vehicles parked in downtown Ann Arbor, Michigan. Photo courtesy of [Urban Riders Cargo Bikes](#).

Detroit now has Adaptive MoGo, the first adaptive bike-share fleet in the US, with seven different types of bikes, including cargo tricycles, recumbents, hand-powered tricycles, and tandems. Electric scooter shares are also branching out, and offering mopeds, recumbent bikes, and trikes as shareable options. Boaz Bikes, a small startup focused on safer scooting, is promoting seated scooters that come with helmets, side mirrors and turn signals. Bird has unveiled a larger seated can carry two people. Lime is developing an enclosed electric

vehicle that could carry one or two people, resembling an electric rickshaw or a deluxe golf cart. Veemo, in Canada, is already there, having piloted shared enclosed electric trikes at the University of British Columbia.

A number of manufacturers have come out with seated electric scooters that fold up to be carried or pushed like a wheelie backpack, allowing them to be taken onto a bus or train for that last mile home from the station. The portability of electric skateboards and unicycles make those vehicles popular as well. I saw many of these in use in hilly La Jolla, in southern California where skateboard culture was invented. In La Jolla, distances are often too far to walk, but bikes don't work well—streets don't have bike lanes and pedestrian paths are interrupted by stairs. With skateboards and unicycles, riders can power up the hills, hop off and carry their board when they encounter stairs, then tote it into the building when they've arrived at the office, without breaking a sweat. Some unicycles even fold up to look like briefcases.

Little Vehicles are addressing some of the practicality and comfort issues that have kept people from giving up their cars. In Ann Arbor, where I live, I regularly see parents ferrying children in electric cargo bikes. A step up are velomobiles—solar-powered, enclosed tricycle-carts. The inventor of the ELF velomobile, Rob Cotter, came up with his idea while working as a consultant for New York City's bikeshare program. He realized that as the city expanded its bike infrastructure there would be demand for a different kind of bike, one that could protect the rider from weather and carry cargo, without requiring too much physical exertion. In other words, a bicycle with all of the comfort and convenience of a car.

An enclosed velomobile among other vehicles in front of an electric bicycle shop in Ypsilanti, Michigan. Photo courtesy of [Urban Riders Cargo Bikes](#).

When I consider the potential of Little Vehicles, I think of my mother-in-law. With two bad knees, she can't walk very far, not even two blocks down the street from her house to the communal dining hall in her senior-living community. So, every evening she gets in her car to drive two blocks. For her, the car has



become a giant, two-ton, gas-powered wheelchair. As Baby Boomers age, more Americans will become like my mother-in-law. Without options, they too will resort to driving, or being driven, for every trip. Traditionally, we have had three choices of modes—walk, ride a standard bike, or drive a car. None of these really work for my mother-in-law. They don't work for a lot of people, at least not all of the time. Little Vehicles offer a range of options at a scale better suited to our urban

environments than the car, with a variety of vehicles tailored to different purposes and personal needs. Little Vehicles are the missing middle of transportation.

The popularity of scooters demonstrates the demand for more options to the car. According to Shaun Green, senior transportation engineer for Atlanta Beltline Inc., more than a third of scooter trips are replacing car trips in that city.¹ A survey by the Portland Bureau of Transportation² also found scooters are replacing automobile trips—one third of local respondents and nearly half of tourists and visitors said they would have taken a car if scooters had not been available. More importantly, scooters are encouraging travel by other modes. Many users are combining scooters with walking or riding transit, meaning the availability of scooters makes these modes more viable for them. More than two-thirds of the respondents in Portland said they'd never used a bike lane before riding a scooter. And even if just a small portion choose to go by some means other than a car it can have a big impact. Studies have shown that a small mode shift of four to five percent could cut congestion by as much as 25 percent.

Why cities should support Little Vehicles

Cities have many reasons to encourage this modal shift. Compared to cars, Little Vehicles are small, green, and light. Not only are they sustainably powered, their small scale means they use space more efficiently, both when in use and when they are parked (twenty scooters can fit into one car parking space.) LVs can have far greater throughput—the National Association of City Transportation Officials (NACTO) estimates that 7,500 bikes can pass through a single 10-foot wide lane in an hour, compared to between 600 and 1600 cars. Even delivery companies have come to appreciate the nimbleness of cargo bikes over the traditional box truck—in many cities FedEx and UPS are seeing faster package deliveries with e-cargo bikes. Little Vehicles create almost no emissions and noise pollution, and should they hit a pedestrian, they are far, far less likely to maim or kill that person.

But as useful as Little Vehicles are, so far scooters have generated a great deal of ire. Scooter users riding on the sidewalks imperil pedestrians. Motorists complain about having to watch out for scooter users riding in the streets. Cyclists complain about scooter users riding in the bike lanes. And everyone complains about abandoned scooters cluttering and blocking sidewalks.

The anger toward the scooters is understandable. In most cities, scooter users are suddenly competing with pedestrians and cyclists for the meager scraps of street space not dedicated for automobiles. But scooters take up vastly less road space overall than cars. Little Vehicles are far better scaled for urban streets. The solution is not to ban them, but to make room for them. With the advent of LVs like scooters, there is added pressure for cities to reprioritize non-automobile modes. Like bicycles before them, LVs are challenging the pedestrian sidewalk/automobile roadway dichotomy of the street. We need to create zones for these in-between modes. Little Vehicles are presenting us with an opportunity to rethink the street.



A variety of small vehicles share a bike lane in downtown San Francisco. Photo by Sergio Ruiz. Originally published in [Curbed](#).

Once again, the bicycle leads the way. It's no accident that the widespread adoption of bike share systems was accompanied by the introduction of protected bike lanes in many cities, encouraging new and more diverse kinds of riders. Protected bike lanes are also the safest place for e-scooters, as well as the many other new types

of LVs, many of which are legally classified as bicycles. Protected bike lanes have been shown to dramatically increase rates of cycling; rethinking them as micro-mobility lanes could hasten the adoption of LVs. Possibly no other infrastructure investment can do more to shift people out of their cars. Instead of thinking of these as "bike" lanes, we can welcome all types of small, light, electric or human-powered low-speed not-a-cars.

In Midtown Atlanta, city officials are turning car lanes into protected bike/scooter lanes after an extensive survey found support for prioritizing scooters over cars. San Francisco's designs for a car-free Market Street include wide protected bike lanes that can be used by LVs of all kinds. In California's Coachella Valley, the 50-mile CV Link connects cities in the valley with a multimodal pathway system designed to accommodate low-speed electric vehicles in addition to bicyclists and pedestrians.

Assembling streets for LVs

New Urbanists, of course, think of street design in terms of type, and LV facilities should be appropriate to its street assembly and context. The bicycle facilities that are recommended in the SmartCode Bicycling Module as well as in NACTO's Urban Bikeway Design Guide can serve all types of LVs. Such facilities include physically-separated bikeways as well as bicycle boulevards—low-speed low-volume streets where bicycles and other light-vehicles are prioritized. But with the growth in demand by a diversity of riders on all kinds of vehicles, there is added impetus to meet NACTO's All Ages & Abilities criteria for selecting and implementing these facilities. This would open up LVs to the safe use by everyone, including children on bicycles and scooters, seniors on e-trikes, and parents ferrying their families on cargo bikes.

A pedicab service in Ann Arbor, Michigan, called Boober, illustrates the social interaction you wouldn't have from inside a car. Photo by Meredith Bruckner | All About Ann Arbor



Creating dedicated space for LVs often means repurposing some of the asphalt currently given over to cars. Reducing the number of car lanes or their width has substantial benefits for the safety of all street users and can improve the efficiency of the street. Intersection design, including slower-speed geometry, queue boxes, and signal phasing, can prioritize and protect LVs and reduce conflicts with cars. Intersections designed for LVs are safer for all users of the street, including pedestrians.

Little Vehicles also offer the opportunity to repurpose the amount of space given over to parking. Much of the anger directed toward e-scooters has to do with when they are not in use and are left on sidewalks or other areas where they obstruct the public realm. Yet the great urban advantage of LVs is that they take far less space to store. Two dozen scooters can be parked in the space occupied by one car. Repurposing on-street car parking as LV parking is a much more efficient use of public street space.

Some cities have begun designating “scooter corrals” on city sidewalks, so the scooters are no longer entirely free-floating. A more permanent solution may be charging docks for scooters and electric bikes, such as the solar-powered stations by the startup Swiftmile, currently being tested in Austin. These docks make the use of scooters and bike shares more predictable: riders know where to find a charged scooter and where they can leave one. Perhaps more importantly, docking stations make the prioritization of Little Vehicles more visible in the urban landscape, signaling an investment in a safer, more efficient, greener city.

Little Vehicles allow us to think big. We can begin to consider some of the bolder moves to reclaim our cities we’re seeing in Europe, such as low-emission zones, shared streets, and pedestrianized streets and zones. The idea that we could severely restrict cars from our neighborhoods, as in Barcelona or the Marais in Paris, or from entire downtowns, as in Ponte Vedra, Spain, becomes more realizable when we have alternative personal vehicles. If cities provide safe infrastructure, more people will take to LVs. Little Vehicles can become safe, easy, and ubiquitous. With fewer cars, our cities will become greener, healthier and more livable.

At the same time, Little Vehicles can make the big city littler. Jan Gehl argues that one of the most important attributes of the cycling city is that people on bikes have faces. On a bike, an e-scooter or a skateboard, you experience the city more like a pedestrian than a passenger in a car. You are able to interact with the people around you, with opportunities for chance encounters, eye contact and other indirect social interactions that happen when you are outside a car. This human contact is the social glue that creates vital and livable cities. Little Vehicles can return us to the pleasures of city living.

¹Maria Saporta, “*A more urban Atlanta calls for shift to two-way streets and e-scooters.*” [Saporta Report](#), July 15, 2019. Retrieved July 18, 2019.

²Portland Bureau of Transportation, “[News release: PBOT releases results of E-scooter User Survey.](#)” October 22, 2018. Retrieved July 22, 2019.

Sunday, 16 February 2020

Texting While Walking Is Risky Business

Amy Norton

HEALTHDAY NEWS

The dangers of “distracted driving” are well-known, but texting while walking may also be a road hazard, a new research review finds.

Pedestrians who are busy texting are less likely to look both ways before crossing the street and have caused a growing number of “close calls” with cars, the review found. And while chatting on a cellphone or listening to music can be distracting, neither was as bad as texting.

Much of the evidence comes from simulation studies – where researchers observe people during virtual street crossings that pose no real danger. And it’s not clear how often distracted walking factors into traffic crashes, the Canadian researchers said.

“Controlled experiments do not necessarily reflect the real world,” said Alex Epstein, director of transportation safety at the nonprofit National Safety Council. He wasn’t part of the study, but reviewed the findings.

On the other hand, Epstein said, “it just stands to reason” that if pedestrians are distracted by their phones, that could compromise their safety.

“You need all of your faculties available to navigate the roads,” he said.

The study, published Feb. 3 in the journal Injury Prevention, comes at a time when pedestrian deaths are on the rise. In 2018, an estimated 6,283 pedestrians died in traffic crashes on U.S. roads, according to the U.S. National Highway Traffic Safety Administration (NHTSA).



The dangers of “distracted driving” are well-known, but texting while walking may also be a road hazard, a new research review finds. GETTY IMAGES

The reasons for the rise are unclear, Epstein said, but several factors are thought to be behind it: higher speed limits in many areas of the country; impaired driving, and distracted driving.

The dangers of distracted driving – whether from using cellphones, fiddling with the car’s navigation system, or talking with passengers – are well-documented. Texting

is considered the most worrisome distraction, according to the NHTSA. Sending or reading a text takes a driver’s eyes off the road for about 5 seconds, the agency says.

Because of that, texting while driving is now against the law in most U.S. states, according to the Governors Highway Safety Association. Many also prohibit drivers from using hand-held cellphones.

Much less is known about whether distracted pedestrians contribute to traffic crashes. For the new review, researchers led by Sarah Simmons at the University of Calgary were able to find 14 simulation studies.

Overall, those studies found, texting or browsing on a smartphone compromised people's virtual street-crossing skills. They were less likely to look both ways before crossing, and the distraction increased their risk of being "hit" or having a close call with a virtual vehicle.

In general, texting and browsing dulled pedestrians' skills more than talking on a cellphone or listening to music.

The Calgary team also found eight studies in which researchers observed pedestrians in the real world. Again, pedestrians who were busy with their phones were less likely to look around before or during street crossings.

"It's a mirror of the general issue of distraction," Epstein said. "We're more interested in our screens than in the reality around us."

Steve Marshall directs the Injury Prevention Research Center at the University of North Carolina at Chapel Hill.

"Undoubtedly, pedestrians are more distracted these days, and so are drivers," said Marshall, who was not involved in the study.

For pedestrians, the message is simple: "Please prioritize your safety over your device," Marshall said.

However, he stressed, "traffic safety is a communal responsibility." And the United States has a long way to go in making its streets safer for pedestrians, cyclists and vehicle passengers alike, Marshall said.

He pointed to Oslo, Norway, as an example of what's possible. The city – which is the size of Washington, D.C. – recently reported that no pedestrian or cyclist was killed on its roads in 2019.

Credit was given to several steps that Oslo has taken to boost traffic safety – including lower speed limits, replacing nearly all on-street parking with bike lanes and sidewalks, and closing major downtown streets to cars.

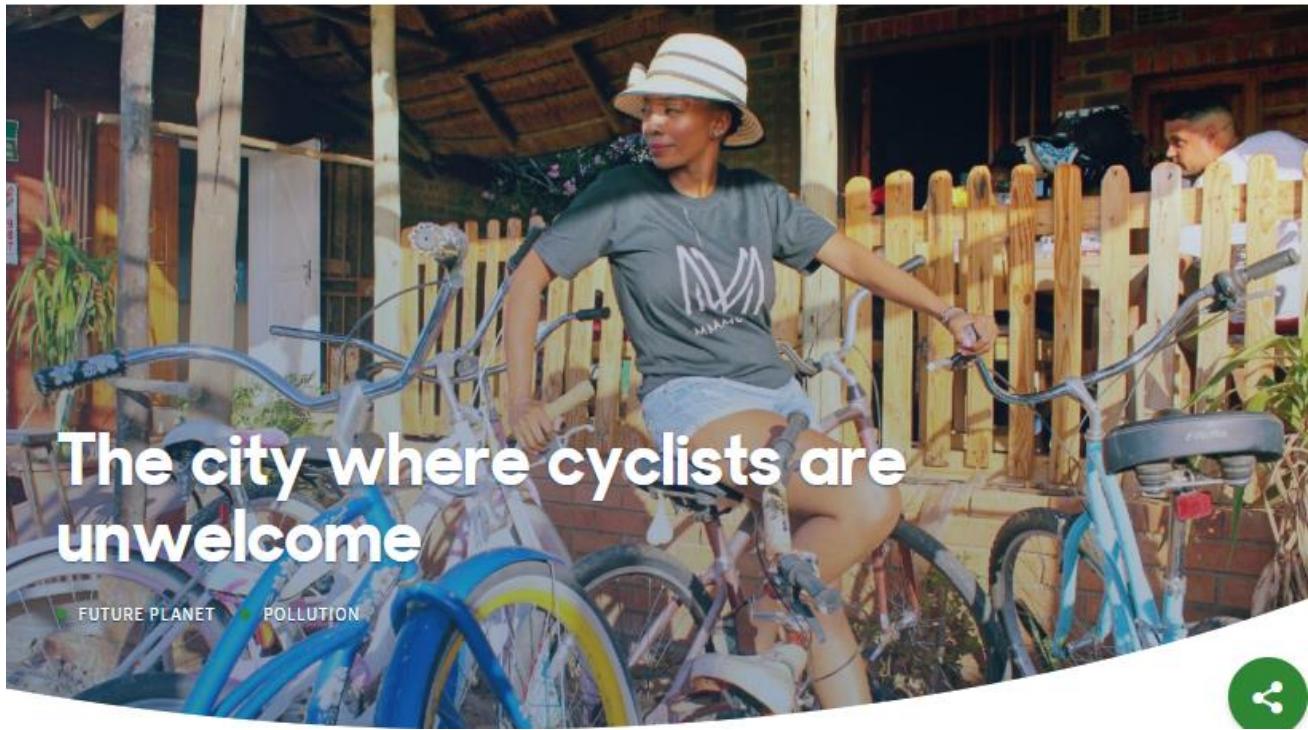


"The U.S. needs to create roads that are designed for the collective safety," Marshall said. Yet as it stands, he noted, many communities lack even basic sidewalks.

Marshall also pointed to the "No. 1 priority" for drivers: slow down.

"Slowing down gives you more time to react, and it can make the difference between injuring someone and killing someone," he said.

For pedestrians, the message is simple: "Please prioritize your safety over your device," Marshall said.



By Sharon Tshipa
5th February 2020

"I will hit you with this car," Mpaphi Ndubo remembers a driver of an open white truck screaming at him. Ndubo was cycling safely on the opposite side of the tarmac, but it was the kind of abuse he was used to. "You should not be on the road," the driver's passengers in the back had added to the onslaught.

It is just one example of the many threats that cyclists have to deal with on the streets of Gaborone, Botswana's capital city. Just because motor vehicle drivers pay road tax, they think they own the road, says Ndubo, a bicycle entrepreneur who has resolutely been cycling the streets of Gaborone for 22 years.

"Honestly, they have made streets seem more dangerous than lions," he says.

The hostile attitude of local drivers towards cyclists emanates from a deep-seated belief that cycling is for the poor. In modern Botswana, drivers have enjoyed the respect that comes with owning a car as opposed to a bicycle, which is now considered archaic.



Cycling is still considered a somewhat subversive day-to-day activity in Gaborone, where it is typically dismissed in favour of the prestige of a car (Credit: Sharon Tshipa)

But this preference for motor vehicles has brought problems with it. The number of cars **registered in Botswana has doubled over the past decade**. Two-thirds of these were listed in Gaborone, and the majority were second-hand imports. Many imported vehicles to the region **do not meet emissions standards in their countries of origin** and are not properly maintained or checked for their emissions.

"The state of air pollution in Gaborone is worrisome. The city is growing, and urban migration means more cars," says Wiston Modise, a physicist researching air pollution at the University of Botswana. "High traffic congestion can result in high levels of pollutants such as carbon monoxide, nitrogen oxides, lead and hydrocarbons that pose major threats to human health, especially in the morning and afternoons during peak hours. City dwellers could suffer from respiratory diseases."

The result is that the burgeoning number of low-efficiency cars contribute considerably to air pollution in Gaborone, which is regularly ranked among the worst for air quality in the world.

Mpaphi Ndubo has dealt with hostility against cyclists in Gaborone for 22 years (Credit: Sharon Tshipa)

For Mpaphi Ndubo, the answer was simple: encourage cycling in the city as an affordable, flexible and emissions-free method of transport. He wants Botswana to fall back in love with cycling.

Ndubo grew up a village called Masukwane in the north of Botswana, at a time when cycling was still held in high esteem. "When I was young my father bought a bicycle which my mother used to carry us children to the clinic," he recalls. His mother would carry the youngest on her back, while either Ndubo or his older brother occupied the back carrier or crossbar.



At another village in northern Botswana called Sinete the role of the bike in the country's past is celebrated in the form of a competition dubbed **Dengenzela Bicycle Race**. In this annual contest, elderly women race while simultaneously carrying a bucket of water on their heads, a mock baby on their backs and 25 litres of water on the back carriers of their bicycles. These cumbersome burdens – something that would never be seen at the hyper-efficient bike races of Europe – are intended to mimic the way bicycles were once commonly used in Botswana.



The Dengenzela Bicycle Race takes place every year in the village of Sinete, celebrating the role that cycling has played in local culture (Credit: Kenneth Middleton)

But this celebratory attitude towards bicycles in Sinete is not shared in the rest of Botswana. As soon as his business, AYS Cycling Solutions, had sprouted, Ndubo realised just how deep-rooted societal prestige around cars really was in Gaborone.

"My concept was welcomed by retailers. I was going to distribute to them, but they later turned their backs on me," says Ndubo. Distributing bicycles for everyday transport wasn't seen as a sound business plan, as bike

shops tended to be viewed as niche outlets for those interested in cycling as a competitive sport, not for everyday travel. So, for his plan to go ahead, Ndubo had to become a retailer himself. "Generally people liked the products, but did not actually buy. I can't help but think that my business came too early. Though cycling is leading in the first world, we are still decades behind development here."

It was a discouraging start. Ndubo was stuck with a large fleet of bicycles that only a few people were buying. He did not give up, but instead started a non-governmental organisation called Cycling Embassy Botswana. Through it, he educates locals about the health and environmental benefits of cycling, and offers cycling tutorials to help people learn to ride. He is also became Gaborone city's **bicycle mayor**, supported by BYCS, an Amsterdam-based social enterprise encouraging cycling in cities worldwide.

Young people, university students and government officials are among the people beginning to take up cycling day-to-day in Gaborone (Credit: Sharon Tshipa)

The European Union's ambassador to Botswana Jan Sadek is working to encourage cycling in Gaborone too. "Dialogue on pollution and climate change inspired me to promote cycling in Botswana as a mode of transportation," says Sadek, who is trying to cycle to and from work during his appointment in Botswana. For him, this is not a challenging commitment as he has been cycling since he was seven years old. When he came to Botswana in 2018, he brought his old bicycle that he has ridden in Sweden, the Czech Republic, Moscow, Russia, Belarus, Stockholm and Sudan. As Ambassador to Sweden in Sudan, he also cycled to and from work.



"Many people in Gaborone appreciate seeing me on the streets, but some want me off," Sadek says. "Especially taxi drivers – they are annoyed by my presence on the road." An upside for him are the groups of fascinated people who wave and greet him, as it is unusual to see leaders opt for an "undignified" means of transport. To date, Sadek says he personally knows of two other people he has inspired to take up regular cycling, and many others have expressed an interest.

Slowly, attitudes in Gaborone are changing. "Cycling is a perfect solution to air pollution in Gaborone," says Opha Pauline Dube, a leading environmental change scientist at the University of Botswana and a resident of Gaborone. "We need to reduce our air pollution so there is no person who finds themselves exposed to levels that are higher than what is stipulated by the World Health Organization (WHO)," she says.

Botswana's air **pollution levels often rise higher than the WHO's guidelines** for particulate matter, ozone, nitrogen dioxide and **sulphur dioxide**. As well as emissions from vehicles, Botswana struggles with air pollution from **industrial and indoor heating** as many people continue to rely on traditional fuels for **heating and cooking**.

A cultural shift towards cycling in Gaborone has been slow, but entrepreneurs like Ndubo and Sadek hope it will continue (Credit: Sharon Tshipa)



But perhaps the biggest hurdle standing in the way of cycling returning as a popular mode of transport is the lack of proper infrastructure – good bicycle lanes, showers at workplaces, and clothing-changing facilities, among others. Without these people's attitudes towards cycling will not change, says Dube. She recently received a bicycle as a gift, but has not yet learned to ride it. "Both my parents were

cyclists, but they stopped cycling once they acquired cars," she says. "So the bicycle disappeared in the home." Regardless of the disadvantage, she intends to overcome her fear of falling and learn how to ride.

Ndubo's Cycling Embassy Botswana lobbies for the provision of the infrastructure and policy changes that would make cycling safer in the city, seeking to contribute to the broader achievement of the UN's Sustainable Development Goals. "When I started this business, I also wanted to address the problem of traffic congestion in our city," says Ndubo. "But as time went by, I strove to contribute to the fight against climate change because bicycles are eco-friendly."

Though still small, Ndubo now takes pleasure in his promising customer base of university students and government officials. His network of cycling lovers, though they are not full-time cycling lovers, he says is also expanding. Right now he has two electric bicycles that people rent out regularly at a shop in Molapo Crossing Mall in Gaborone.

With time, Ndubo aims to erode the social stigma around cycling in Gaborone. He hopes that one day the residents of the capital city might see the bicycle with the same appreciation and respect that the local people of Sinete view the elderly women racing through the village towards the finish line. And if Gaborone does become **the next city to rediscover its love of the bicycle**, it could enjoy much cleaner air as a result.

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