

Title: Life in the Bike Lane: Cycling Expansion in NYC

Introduction

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- Introduction of self
 - Thank you for listening; my name is Lauryn, and in the unforeseen amount of time ahead I want to talk about cycling in New York City — some of the ways it's grown from a niche community activity to something the average New Yorker can access, and what some of the barriers are that still exist in making cycling safe and accessible for all.

Research Initiatives

- So, in a more formal sense, the question I set out to answer in conducting my research is: How might improvements to the existing bike network benefit members of cycling communities and New York City residents alike?
- And I think it's helpful to begin with who exactly is considered a cyclist in the city?
- Anyone who rides a bike to get from one point to another — for work, leisure, exercise, errands, or anything in between — can be considered a cyclist.
- In a broad sense, this is the case for 30% of adult New Yorkers, or more than 1.8 million people, who ride a bike - (according to the Department of Transportation's *Cycling in the City* report)
- DOT - shorthand for Department of Transportation, will be used frequently
- Plenty of people can ride bikes but might not consider themselves members of the cycling community. On a community level, cyclists are those who use bicycle transportation regularly as a primary means of getting around.
- Approximately 880,000 New Yorkers ride a bike regularly (which means more than a few times a month) - (DOT, *Cycling in the City*)
- In recent years, certainly following the rollout of bike share, biking shifted from a small, niche community-level activity into something that is very accessible and continually becoming more accessible to novice riders and people who do not own bikes or feel safe enough to ride in bike lanes.
- As ridership goes up, there is a higher potential for cycling to become a viable means of getting around
- It's also important for me to distinguish off the jump that my views are not extremist like ban cars, I think that cars are very important

- I definitely have a bias, since I don't drive, but if there is anything I've learned in doing this research — it's that a multimodal transportation system is efficient, equitable, and highly feasible in New York City.
- In certain situations, cars are necessary. I can't imagine a trip to the Red Hook Ikea or late night travel home from Manhattan without an Uber or Lyft. I bought a piano keyboard recently and that's something I can't use a cycling trip for.
- But my point is that cars do not need to dominate the roads in the way that they do.
- Streets are places for cars, cyclists, pedestrians, (and dogs, arguably) to coexist safely.
- The landscape of New York City's streets and the present bike network do not support this idea to the fullest extent.
- So, my goal is to put biking on the level of other modes of transportation.
- Here's a hypothetical: when you're thinking to yourself, hmm, I have a meeting across town, should I take a crosstown bus or a subway transfer or can I grab a CitiBike?
- Putting biking up as this reliable mechanism to travel is my idea.
- This is only possible if the bike network is efficient, equitable, and safe.
- Those are the main barriers I encountered when doing this research.
- When I set out initially to do this project, I was trying to tackle all of those problems in their own respect - making the system more safe, more equitable, more accessible - and I had a hard time bridging together my argument - so it all fell under the umbrella of making cycling something viable and attractive as a choice in getting around the city.
- I'm still incorporating those factors, but utilizing them as barriers in the success of better connecting the NY bike network
- Again, a lot of my view is not that cars are unnecessary.
- The goal is not to encourage radical redevelopment of the existing cycling network, but to look at the current state of bicycle transit and the areas in which it falls short.
- I also want to talk about some areas that are really doing it right.
- My interest and what really made me want to do this is my love of biking.
- I really do love biking as a fast, affordable, and efficient way to get around.
- So, to brief what's to come: I'm gonna touch upon two areas of study where I conducted my own research to draw conclusions about the greater bike network as a whole.
- I'm also gonna talk about Citi Bike bikeshare, which is a huge factor in making cycling something accessible to the average NYer and contributes to today's ridership numbers.
- In terms of policy, my reference point will be Green Wave — a 2019 plan; five-year initiative spearheaded by the Department of Transportation to expand infrastructure and promote cycling in the city.
- One of the key promises is to build 30 miles of PBL's per year which they've upheld so far (DOT, *Green Wave*)
- Ridership statistics and insight were the main supports of the policy in my research.

History & Community Background

- Alright, now that my preamble has concluded: I want to provide a little bit of history about bike lanes in New York, because I think it lends to some of the patterns, issues of accessibility, and some of the reasons why biking is much more popular today than it ever was.
- NY streets were not historically designed with bike lanes in mind.
- Some of the first bike lanes came to NY in 1894 (from City Journal, *Pedal Power*)
- Short, 5 mile stretch along Ocean Parkway in Brooklyn (from City Journal, *Pedal Power*)
- It wasn't until the 1980s when Ed Koch was mayor that Manhattan started to see a network of PBL's (from City Journal, *Pedal Power*)
- However, due to outcry from taxis, garages, local businesses, and everyone in between - they were quickly demolished in November of the following year.
- Much of the opposition echoes some of the same opposition from drivers today - that bike lanes are too dangerous, cyclists are reckless, they take up too much street space, etc.
- So it's interesting that history kind of repeats itself in that way.
- Then, in 2007, when Bloomberg was in office, NYC finally had about 220 miles of bike lanes (from City Journal, *Pedal Power*)
- While this sounds pretty good, many of these bike lanes were unprotected, and also highly limited, and disconnected.
- Certainly not expansive into the outer boroughs.
- Bear in mind Citi Bike - New York's bike share system - did not roll out until 2013.
- So, cycling was still largely something that existed in a small, niche community of people who not only owned bikes, but felt safe enough to use NY's largely disconnected bike network at the time.
- Some of the greatest strides in making New York a viable cycling city happened between 2007 and 2013 when Janette Sadik-Khan was commissioner of the DOT and made valiant efforts at expanding and protecting the bike network in the city.
- We can credit much of the bike network we use today to her efforts.
- In fact, her book *Streetfight: Handbook for an Urban Revolution*, which was sort of my bible in doing this project, is what sparked my interest in the first place.
- But to get back to this idea of a bike boom, as it became more accessible to people - I wanna talk about what the cycling community used to look like, and what it looks like today.
- Previously, not to be redundant - biking was seen as this elitist, inaccessible, dangerous pastime.
- It was highly limited to owners of bicycles and those who felt brave enough to take to the largely dysfunctional streets.
- Because of this, bike clubs formed in the city.
- To name a few, we've got: NYCC, Bike New York, Five Borough Bicycle Club, Transportation Alternatives

- These groups organize group rides, share resources, and most importantly advocate for cyclists and bike network support in the city.
- Members of these groups dominated the scene for a long time before CitiBike hit the streets.
- Now, on a typical day, there are over 550,000 cycling trips made in New York City, according to the Department of Transportation's *Cycling in the City* report.
- In fact, as of April 2023, ridership hit an all time high (DOT Press Release, April 2023)
- Similarly, Citi Bike hit record numbers with roughly 124,000 riders per day in May (CitiBank/Lyft).

Implications

- What this signifies to me is the idea that as ridership increases, there is greater potential for cycling to become a viable means of travel alongside driving or taking the train.
- Whether for leisure, exercise, errands, commutes — more people are utilizing bikes as a way to get around.
- The pandemic partially gives this data context; there was an increase in bicycle ridership, as many novice riders were looking to explore new hobbies and also avoid taking mass transit.
- There were far less cars in the street during that time as well, allowing people to explore bike lanes freely and safely.
- Kind of like the 34th Avenue Open Streets, but every day...
- Numerically, New York City has seen a +33% growth in cycling between 2019 and 2020, according to the DOT (*Cycling in the City*)
- Overall, and even as of last month, ridership is seeing steady increases from this time - which means it's time to expand and better connect infrastructure - including bike lanes, Citi Bike docks, and bike signals.
- A quote came to mind from Streetfight:
- “In building bike lanes, we had built demand for biking, creating demand for new and better bike infrastructure.” (-Janette Sadik-Khan, *Streetfight: Handbook for an Urban Revolution*)
- Ideal cycle for bike lane developments: build infrastructure, people use it, and you continue to improve until the system is balanced, safe, accessible, and reliable
- Reminds me of that famous quote in field of dreams “if you build it, he will come”

Introduction of key areas observed

- For this project, I was having a hard time narrowing down exactly where to focus my research.

- I decided to focus on two key areas — one where cycling infrastructure is highly functional, and one where there is a highly dysfunctional setup.
- A minor conflict here is that these developments are both in increasingly gentrified areas of Brooklyn, which is definitely prioritized in transportation efforts more than other boroughs (aside from Manhattan, obviously)
- In a future project with more than a semester's timeline, I'd like to explore the potential to make New York City's bike network more equitable and accessible across all five boroughs.
- For now, and for the sake of time, I'm gonna stick with these two I know very well from my time on two wheels.

Methodology

- Over the course of the project, I conducted observations in Brooklyn - specifically a stretch of Jay Street in Downtown Brooklyn and a stretch of Kent Avenue in Williamsburg, Brooklyn.
- Before doing any walking observation, I decided to ride in my areas of focus; riding a mile in their lane, so to speak...
- I also conducted observations on foot, visiting each site 3x.
- Each visit, I observed for 30-45 minutes at a time, noting general observations.
- I noted if there were any obstructions in the lanes (construction or deliveries), how heavy ridership seemed to be, if there were any disconnects in the network, conflicts with pedestrians, volume of bike messengers and food deliveries, accidents (luckily none), and general feelings of safety.
- I also interviewed cyclists informally at the start of the research, which shifted a bit over time, but still lent helpful insight in conducting my observations.
- For instance, a cyclist I interviewed pointed out that there are a ton of pedestrian conflicts on Kent due to crossings to the two major parks, Domino Park and Martha P. Johnson
- Then, I paid attention to that in my observations
- The combination of these methods allowed me to understand cycling in these areas from both a cyclist's perspective and a pedestrian's perspective.
- They also represented plenty of other high functioning and poor functioning stretches of bike infrastructure in NYC's current system.

Jay Street

- (Freestyle a bit on the spot, explain what's going on in photographs I took)

- Between Willoughby Street and Fulton Street
- Lane abruptly ends and disconnects
- Parked cars obstruct the right hand side, forcing riders to cross the street

Kent Ave

- (Freestyle a bit on the spot, explain what's going on in photographs I took)
- From Grand Street to North 14th Street
- Two-way protected bike lanes with parked car barrier
- Abundant Citi Bike docks

Bike share (CitiBike)

- Another highly important sector of New York City's bike network is Citi Bike, a public bike share system.
- Many New Yorkers do not own bikes.
- Now that there is a higher demand for biking, with the expansion of bike lanes, New Yorkers need bike access!
- Citi Bike launched in 2013.
- At initial rollout, Citi Bike had a number of startup difficulties, like software glitches or broken docks.
- If there's anything this proves, it's that New Yorkers - while impatient in many, many other ways - are willing to gradually adapt and transition into a multimodal transportation network that has the potential to improve over time, like Citi Bike has.
- I couldn't particularly visit and conduct observations about Citi Bike, since the system is vast, but I think it plays a large role in accessibility for cyclists.
- I decided to research their most recent expansion - Phase 3 - which, according to Lyft, the principal owner, intends to:
 - Double the current service area by 35 square miles
 - Triple the number of bikes
 - And expand into the South Bronx & northern Manhattan, extensions in parts of Brooklyn and Queens
- (CitiBank/Lyft, Phase 3 Map)
- The limitation of presenting my research in podcast format is that I'm unable to show a map of this expansion, but a key takeaway is that it's definitely great to see Citi Bike expand into places it hasn't previously expanded.
- Especially since its Phase 1 launch only included areas in Lower Manhattan, Downtown Brooklyn, and Williamsburg - which is where all transit developments are prioritized.
- There are 10 DOT-identified Bicycle Priority Districts in Brooklyn and Queens, which are being included in this expansion, as well in the DOT's plans to expand protected bike lanes, based on evidence of high ridership and demand.

- (This designation comes from the DOT's 2017 *Safer Cycling* policy brief)
- To name a few: Midwood, Sheepshead Bay, Kensington, Corona, Jackson Heights, and Elmhurst (DOT, *Safer Cycling*)
- You get the gist...
- So this is definitely a positive, but there is still more room to expand and grow in the outer boroughs in future expansions until the bike network is balanced.
- When you visualize the expansion map colored in - there are a lot of areas that are left out, especially in Queens, and Staten Island entirely.
- To support this, I found some research through a collaboration between McGill's School of Urban Planning in Montreal and New York Communities of Change — a non-profit which advocates for low-income residents (Wachsmuth, et al.)
- Together they compiled a report on the state of New York's Citi Bike network through a socioeconomic perspective.
- Dated to July 2019, pre-Phase 3 expansion
- Findings suggest there is a substantial disparity in class, ethnicity, and education between communities with adequate Citi Bike access and those without.
- To quote, "the Citi Bike network mainly serves a privileged population that already has strong transit options." (Wachsmuth, et al.)
- To continue, "More than three quarters (76.8%) of New Yorkers do not have access to bike sharing, and the remaining 23.2% who do are wealthier, whiter and better educated than the rest of the city" (Wachsmuth, et al.)
- Excluded populations, which are consistently underserved by the city in a multitude of ways, are often looked over in conversations about cycling infrastructure.
- For a truly equitable system that promotes cycling as a means of everyday travel, there need to be greater efforts to prioritize transit deserts and provide access to the same transportation options as other better-served neighborhoods.
- Beyond this, it's not only important to have bike docks like Citi Bike where you live, but also near your destinations, to reliably use the system.
- This will be possible with a more balanced spread of docking stations.

Implications

- CitiBike also supports an idea that Jeanette Sadik Khan poses in *Streetfight* — that many New Yorkers do not always rely on one singular mode of transportation in a day.
- Someone may take a bus to get to work, walk to run an errand, return home on the train, you get the idea...
- Or, you may be a 15 minute walk to the train, but that can be biked.
- In my experience, I live off the M and the L, which are notoriously changing service, and sometimes I prefer to take the J - which is a quick 10-minute bike ride from my apartment, with a Citi Bike dock directly outside of the station.

- Point being, we rely on different systems to get us to different places.
- All of my research poses the question - why not add bikes to that mix?

Why does cycling matter in general? What are the benefits?

- With more accessible docking stations, and safe, protected bike lanes, cycling can add a whole different mechanism for getting to work, meeting with friends, running to the pharmacy, taking a lunch break, heading cross-town, the list goes on.
- Cycling can even help people who drive get out of their cars for short trips, like picking up food or a day at the park.
- Parking a bike is definitely easier than parking a car, whether personal or Citi Bike - which is the appeal for many fast-moving New Yorkers who seem to not have more than 5 minutes to spare at any given time.
- Bike share also has the potential to boost transit - riding to and from transportation hubs, like I mentioned earlier, my quest to the J train.
- This is especially beneficial in areas poorly served by the bus and train networks, but highly contingent on sufficient access to docking stations and bike lanes.
- If a rider can bike to a bus station, instead of just hopping in the car and waiting in traffic, there is potential for a positive shift towards utilizing public transportation.
- This can change the scope of how fast you get somewhere and planning for the day overall.
- But, the network has to be connected to be reliable.
- In the same vein, cycling helps with the first mile/last mile problem, which has presented itself a bunch in my time as an urban studies student.
- Basically this is where a traveler needs a second mode of transportation to complete their journey.
- For instance, a subway rider who needs a bus or car ride home from the station to their home or workplace.
- Cycling has the potential to curb this issue, allowing able-bodied travelers to reach transportation points via a quick bikeshare ride.
- Shifting away from cars - especially for short trips - has potential environmental benefits in reducing emissions.
- Cars are expensive to own, lease, and maintain. Personal bikes are free (after purchase) with limited maintenance, no charges for gas, insurance, etc. - and Citi Bike trips operate at a low cost, subjectively.
- There can definitely be efforts made to make Citi Bikes more affordable or even free, but in comparison to the cost of owning a car, bikeshare pales in comparison.
- In terms of actual infrastructure, a substantial appeal of building more bike lanes is that they are also low cost.
- Construction involves paint, cones or bollards, [in some cases cement Jersey barriers], and labor costs.

- 80% of the DOT's expenditures on bike lanes come from Federal clean air funds (JSK, *Streetfight*)
- Citi Bike is also paid for by a private sponsor (CitiBank/Lyft), which means the bike network does not need to be supported by taxpayer dollars.
- Health and wellbeing:
- Beyond physical health and exercise, cycling has the potential to improve mental health for riders
 - In fact, researchers have found there is an association between utilitarian bicycling and psychological distress (Ma & Ye)
 - This data comes from a study in Victoria, Australia
 - ...which looked at the relationship between the built environment for cycling and life satisfaction, by survey
 - To quote researchers Liang Ma and Runing Ye “We found that bicycling for transportation is negatively associated with psychological distress and positively associated with life satisfaction” (Ma & Ye)
 - Meaning, the more frequently someone bikes, the greater the impact on mental well-being
 - Something I also found interesting about the piece is that there was a stronger statistical relationship between these variables among women and older adults (Ma & Ye)
 - This aligns with a statistic that the DOT put out in *Cycling in the City* (2021), stating an 8% growth in female cycling commutes.
 - Although this is not a New York-based source, it provides insight the DOT lacks — accounting for quality of life factors.
 - Other means to measure the efficacy of New York's bike network beyond ridership growth and numbers.
 - Speed and efficiency:
 - Above all, biking — when safe — is one of the fastest, most efficient ways of getting around.
 - You can beat traffic, train delays, bus wait times, and more.
 - Many destinations are easily reachable within a 10, 15, 20 minute ride.
 - David Byrne, who arrived at the 2023 Met Gala via bicycle, and brought it on the red carpet - said something pertinent that I think really supports this idea...
 - “I don't think people are going to switch over to bikes because it's good for them or because it's politically correct. They're going to do it because it gets them from A to B faster.” (Byrne)
 - Whether you know him as a musician or an outspoken bike activist or a combination of the two, I think he lends some interesting insight on bike transportation and definitely captures some of the benefits of cycling as an efficient and attractive way to travel.

- Again, especially for New Yorkers, the most impatient breed of humans alive.

Future initiatives

- Some other projects in motion for the future:
- If you can recall at the very beginning, I mentioned the DOT hit record ridership numbers and held a press conference just shy of a month ago
- Which is interesting to see this kind of stuff happen in real time, and makes me question if a year or two from now all of this information will seem dated...
- I'm sourcing my information from the recent conference, where NYC DOT intends to install a record number of protected bike lanes in 2023
- This includes: Bedford Avenue (Brooklyn), -Flushing Avenue (Brooklyn) 3rd Ave (Manhattan), 10th Ave (Manhattan), Soundview Ave (Bronx), Rosedale Ave (Bronx), 33rd Ave (Queens), even Goethals Road North (Staten Island)
- The DOT also plans to to harden more than 10 miles of existing bike lanes through their Better Barriers Program
- This means, implementing sturdier cement Jersey barriers and curb materials
- This will start with: Second Ave (Manhattan), Queens Boulevard (Queens), Park Ave (Bronx),
- NYC DOT will also plans to launch a safety campaign regarding e-bike safety
- To quote Commissioner Rodriguez:
 - “We're focusing on thoughtfully expanding our existing bike network with new lanes in underserved communities; new connections across bridges; and comprehensive neighborhood networks—all while developing innovative new bike boulevard designs that reduce vehicle volumes and prioritize cycling safety.”

Conclusion & Findings

- With more cyclists on the road, there is greater potential for positive changes in cycling safety and access
- The DOT has made substantial progress since putting Green Wave out in 2019, but there is still a way to go in redesigning streets and expanding into areas underserved by transportation
- However, as of April 2023 - DOT is working actively to expand the bike lane network — particularly protected bike lanes — to support ridership trends and accommodate newer riders
- Access to cycling infrastructure, such as bikeshare docks or connected protected bike lanes, is still largely unbalanced in the Bronx, Queens, and Staten Island.
- However, slowly but surely, New Yorkers are willing to adapt to multimodal transportation mechanisms.

- E-bikes and other micro mobility devices also pose new challenges to existing conflicts over space and safety.
- As we witness the number of active cyclists grow in real time, the need for adequate, accessible, and safe bike infrastructure grows stronger.
- Although many New Yorkers already rely on alternative means of transportation besides cars, such as buses, trains, and ferries, there is great potential to add biking to that mix.
- Since my interest all of this started with *Streetfight*, I'd like to end with a clip from a Ted Talk Janette Sadik-Khan gave about 9 years ago, where some of the principles and ideas still hold up today:
 - “It used to be a very scary place to ride a bike. And now – New York has become one of the cycling capitals in the United States...And so, I think the lesson that we have from New York is that it's possible to change your streets quickly. It's not expensive, it can provide immediate benefits, and it can be quite popular. You just need to reimagine your street — they're hidden in plain sight.”

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