The island of Manhattan is about 23 square miles.

Much of it is covered in roadway, street parking and parking garages.

If you added up all the space Manhattan devotes to cars, you'd have an area nearly four times as large as Central Park.

What if we gave that space back to New Yorkers?

Source: Practice for Architecture and Urbanism

I've Seen a Future Without Cars, and It's Amazing

Why do American cities waste so much space on cars?

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As coronavirus lockdowns crept across the globe this winter and spring, an unusual sound fell over the world's metropolises: the hush of streets that were suddenly, blessedly free of cars. City dwellers reported hearing bird song, wind and the rustling of leaves. (Along with, in New York City, the intermittent screams of sirens).

You could smell the absence of cars, too. From New York to Los Angeles to New Delhi, air pollution plummeted, and the soupy, exhaust-choked haze over the world's dirtiest cities lifted to reveal brilliant blue skies.

Cars took a break from killing people, too. About 10 pedestrians die on New York City's streets in an ordinary month. Under lockdown, the city went a record two months without a single pedestrian fatality. In California, vehicle collisions plummeted 50 percent, reducing accidents resulting in injuries or death by about 6,000 per month.

As the roads became freer of cars, they grew full of possibility. Rollerblading and skateboarding have come back into fashion. Sales of bicycles and electric bikes have skyrocketed.

But there is a catch: Cities are beginning to cautiously open back up again, and people are wondering how they're going to get into work. Many are worried about the spread of the virus on public transit. Are cars our only option? How will we find space for all of them?

In much of Manhattan, the average speed of traffic before the pandemic had fallen to 7 miles per hour. In Midtown, it was less than 5 m.p.h. That's only slightly faster than walking and slower than riding a bike. Will traffic soon be worse than ever?

Not if we choose another path.

Rather than stumble back into car dependency, cities can begin to undo their worst mistake: giving up so much of their land to the automobile.

The pandemic should not stop us. There is little evidence that public transit is responsible for the spread of the coronavirus in New York or elsewhere; some cities with heavily used transit systems, including Hong Kong, were able to avoid terrible tolls from the virus.
If riders wear face masks — and if there are enough subway cars, buses, bike lanes and pedestrian paths for people to avoid intense overcrowding — transit might be no less safe than cars, in terms of the risk of the spread of disease. In all other measures of safety, transit is far safer than cars.

What's that you say? There aren't enough buses in your city to avoid overcrowding, and they're too slow, anyway? Pedestrian space is already hard to find? Well, right. That's car dependency. And it's exactly why cities need to plan for a future of fewer cars, a future in which owning an automobile, even an electric one, is neither the only way nor the best way to get around town.

A few weeks ago, I began talking to Vishaan Chakrabarti, a former New York City urban-planning official and the founder of Practice for Architecture and Urbanism, a Manhattan-based architecture firm. Like other urbanists, Chakrabarti believes that the pandemic has created an opportunity for New York and other cities to reduce their reliance on cars.

Manhattan, already one of the most car-free places in the country, is the best place to start. Chakrabarti's firm, PAU, had been working on an intricate proposal to show what it might look and feel like to live in a city liberated from cars, to show how much better life in New York might be with one simple change: Most cars would be banished from Manhattan.

PAU's proposal would not ban all motor vehicles, just privately owned cars. There would still be delivery trucks, emergency vehicles and taxicabs and Ubers, if you needed them.

But private cars account for so many of Manhattan's vehicles that banning them would instantly improve life for just about everyone who lives and works in New York.

In parts of downtown, pedestrians have to cross wide roads designed to carry traffic from the Williamsburg and Manhattan Bridges.

In a car-free world, the city could expand side-walks to give those pedestrians more space.

Two-way bike lanes could replace car lanes in both directions. A concrete barrier would protect bikers.

Dedicated bus lanes, free of car traffic, would efficiently shuttle people in and out of Man-hattan and relieve congestion on the subway system.

You already know what's terrible about cars: They're dirty. They're dangerous. They're expensive to buy and maintain, and environmentally hazardous to produce and operate. Automobiles kill around 90,000 Americans every year— about 40,000 in car accidents, and an estimated 50,000 more from long-term exposure to air pollution emitted by cars.

But Chakrabarti is among a group of urbanists who've been calling attention to a less-discussed problem with cars. Auto-mobiles are not just dangerous and bad for the environment, they are also profoundly wasteful of the land around us: Cars take up way too much physical space to transport too few people. It's geometry.

In most American cities, wherever you look, you will see a landscape constructed primarily for the movement and storage of automobiles, not the enjoyment of people: endless wide boulevards and freeways for cars to move swiftly; each road lined with parking spaces for cars at rest; retail establishments ringed with spots for cars; houses built around garages for cars; and a gas station, for cars to feed, on every other corner.

In the most car-dependent cities, the amount of space devoted to automobiles reaches truly ridiculous levels. In Los Angeles, for instance, land for parking exceeds the entire land area of Manhattan, enough space to house almost a million more people at Los Angeles's prevailing density.

This isn't a big deal in the parts of America where space is seemingly endless. But in the most populated cities, physical space is just about the most precious resource there is. The land value of Manhattan alone is estimated to top $1.7 trillion. Why are we giving so much of it to cars?

Without cars, Manhattan's streets could give priority to more equitable and accessible ways of getting around, including an extensive system of bike "superhighways" and bus rapid transit — a bus system with dedicated lanes in the roadway, creating a service that approaches the capacity, speed and efficiency of the subway, at a fraction of the cost.

Eliminating most cars in Manhattan would also significantly clean up the air for the entire region. It would free up space for new housing and create hundreds of acres of new parks and pedestrian promenades, improving the fundamental health, beauty and livability of America's largest metropolis.

There have been several proposals to ban cars in Manhattan, and the city has been working on a system to impose a toll on

Parking spots and piles of trash dominate much of the space on a typical residential street in Manhattan.

Eliminating parking would create space for large trash receptacles and more bike lanes. Additional crosswalks would make it easier for people to safely cross the street.

Any proposal to ban cars had better look amazing, because in America, the automobile has never been just a way of getting from A to B. More than a century of car ads and a good deal of hagiographic cultural propaganda has done a job on a lot of us. For many Americans, cars are not just a consumer product but a rite of passage, a symbol of national pride, and an expression of liberty nearly as fundamental as anything promised in the Bill of Rights.

I know, because I too have long loved cars. I love them viscerally, the way a dog loves a bone, or an Instagrammer loves a sunset, and I am as surprised as anyone to be calling for their eradication from cities.

As a teenager growing up in Southern California, America's center of car culture, I spent endless hours lusting after the vehicles in car magazines; these days my appetites are whetted digitally, with ridiculously detailed car-review videos on YouTube. My current ride is a car that only European automobile nerds would appreciate: an apple-red Volkswagen Golf R, a "hot hatch" that does 0 to 60 in under five environmentally disastrous seconds, which I bought only because driving it very fast touched me in unmentionable places.

Yet when I got my speedy ride, I quickly realized it was kind of pointless, because most of the time there's too much traffic where I live to go any faster than a golf cart. This is the drab reality of driving you'll never see in car ads — a daily, rage-inducing grind of traffic, parking, and shelling out to fill up, an option that many people choose not for any love affair with cars, but often because driving is the least-inconvenient way of getting around where they live and work.

I was receptive to Chakrabarti's proposal because in the last few years, I've grown increasingly disillusioned about America's tolerance for the public health and environmental damage caused by cars, not to mention the frustrations of commuting by car. And I'm losing hope that the car industry will be able to fix them anytime soon.

I've spent much of the last decade watching Silicon Valley take on that industry, and I once had great expectations that techies would soon make cars substantially cleaner, safer, more efficient, more convenient and cheaper to operate.

But many of their innovations are turning into a bust — or, at the very least, are not making enough of a difference. Uber and Lyft once promised to reduce traffic through car-pooling. In fact, ride-hailing services have greatly worsened traffic in many big cities.

Tesla turned the electric car into a mainstream object of lust — but most of the rest of the auto industry is struggling to get consumers to switch over from gas, so it could take 15 years or more to electrify America's entire fleet. The largest automakers still make most of their profits from dangerous, gas-guzzling S.U.V.s that will be on the roads for years to come, and automakers continue to mount aggressive legal and lobbying campaigns against mileage standards.

And electric cars are no environmental panacea — they are more efficient than gas-powered cars, but they still consume a lot of resources to produce, and if they result in people driving more, they may not greatly reduce overall emissions.

Then there's the accident-free, self-driving car — the auto industry's holy grail. Don't hold your breath: The dream is proving to be far trickier than many carmakers imagined, and cars will remain reliably deadly for years to come.

When he wanted to underscore the unexpected nature of invention, Steve Jobs was fond of quoting a line widely attributed to Henry Ford: "If I'd asked customers what they wanted, they would have told me, 'A faster horse!'" Silicon Valley's collective quest for a better car has begun to look similarly narrow: What if Ubers and Teslas are just faster horses — and what if the real way to revolutionize transportation is to think beyond the car entirely?

A more straightforward campaign against the automobile has been winning results around the world. This is a movement by urban planners, community groups and far-thinking elected officials to reduce the amount of land cars occupy.

The effort has resulted in the wresting of major tracts of land away from cars in some of the world's largest cities. Late in Michael Bloomberg's tenure as mayor, Janette Sadik-Khan, the transportation commissioner, pedestrianized large sections of New York, including Times Square, and created hundreds of miles of new bike lanes. Last year, New York banned cars from part of 14th Street in Manhattan, resulting in faster crosstown bus service.

Market Street in San Francisco has been turned into a car-free promenade. And in Paris, Mayor Anne Hidalgo has made taking away land from cars the centerpiece of her politics, and it's working. Traffic in Paris has fallen by 40 percent in the last decade; last month, Hidalgo handily won re-election.

Manhattan reimagined
How communities might redesign various types of streets.

Residential streets like 46th Street in Hell's Kitchen   Mid-block pedestrian crossing

Recycling and waste pickup   Social services

Commercial streets like 50th Street in Midtown   Two-way protected bike lane
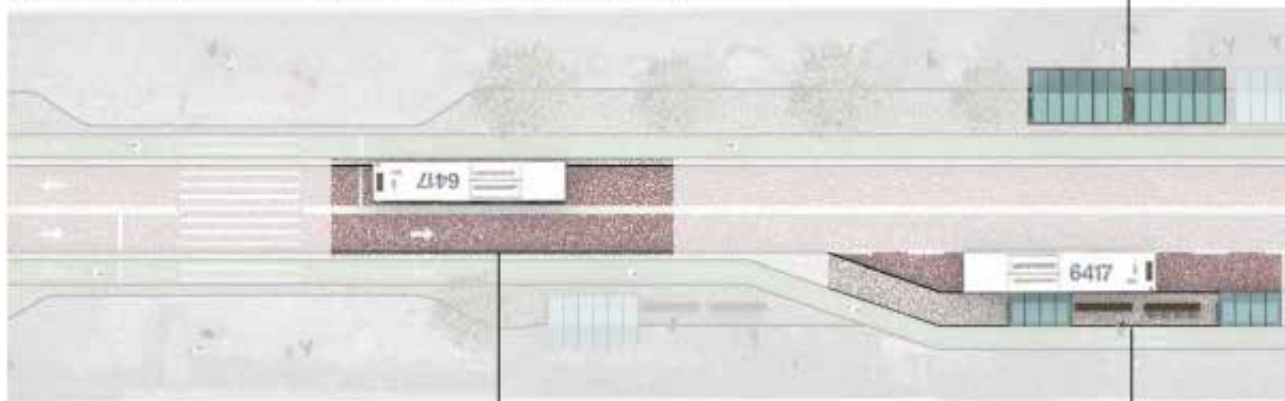
Taxi and rideshare drop-off   Sidewalk expansion

Crosstown arterials like 125th Street in Harlem   Street vendors

Dedicated bus lanes   Bus stop

Source: Practice for Architecture and Urbanism

It's good urban policy, but it's also a matter of equity and justice. Chakrabarti often refers to a concept he calls "street equity."

Imagine you'd like to transport 50 people from one end of Manhattan to the other. If you were to send them by bus, you could stuff everyone in a single bus car — taking up around 450 square feet of road space, about the size of a tiny studio apartment. But if you were going to send 50 people by automobile, you'd need a lot more road. For 50 people, each driving alone, you'd need 2,750 square feet of space — basically a McMansion of roadway to transport 50 fat cats.

What does it take to move 50 people?
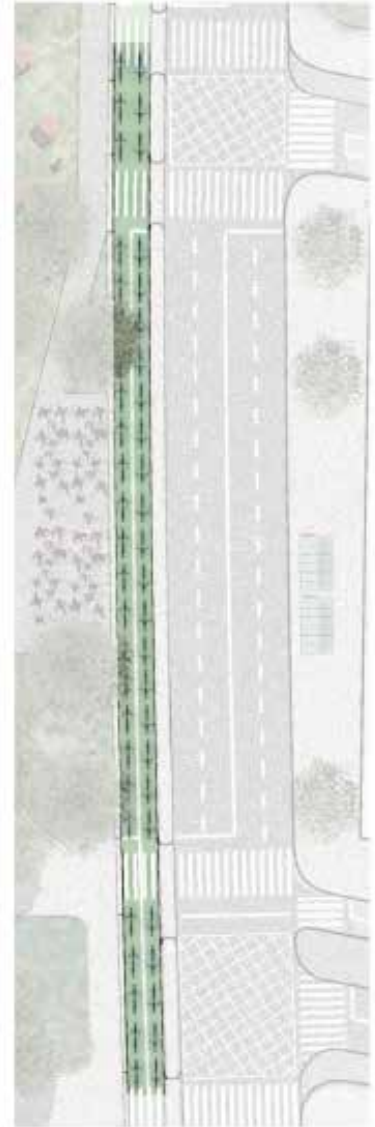
50 cars
55 square feet per person

One bus
9 square feet per person

50 bicycles
15 square feet per person

Source: Practice for Architecture and Urbanism

And cars take up space even while they're not in use. They need to be parked, which consumes yet more space on the sides of streets or in garages. Cars take up a lot of space even when they're just looking for parking.

Add it all up and you get a huge number: In addition to the 2,450 acres of roadway in Manhattan, nearly 1,000 more acres — an area about the size of Central Park — is occupied by parking garages, gas stations, carwashes, car dealerships and auto repair shops. There is three times more roadway for cars on Manhattan as there is for bikes. There's more road for cars than there is sidewalks for pedestrians.
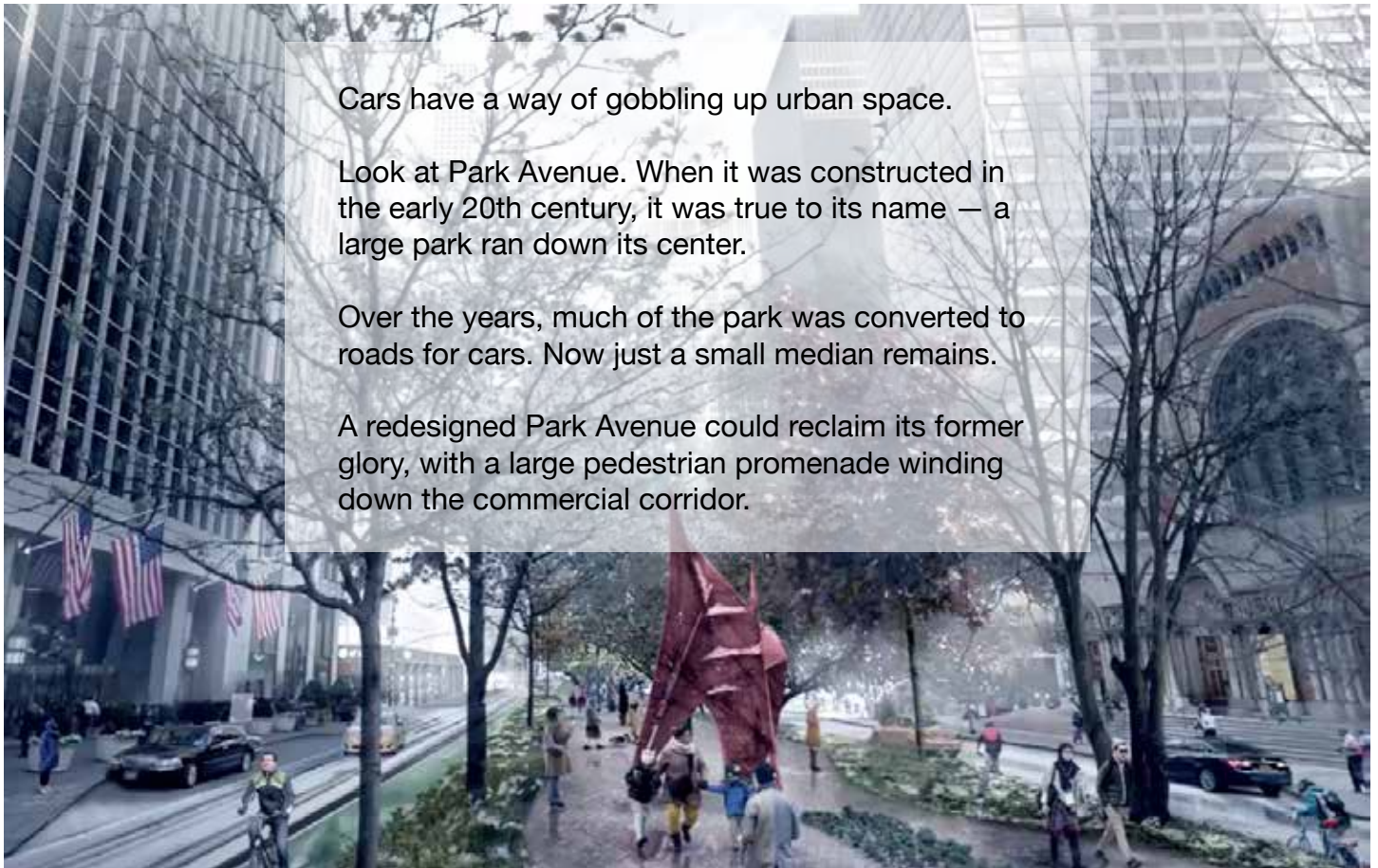
Cars have a way of gobbling up urban space.

Look at Park Avenue. When it was constructed in the early 20th century, it was true to its name — a large park ran down its center.

Over the years, much of the park was converted to roads for cars. Now just a small median remains.

A redesigned Park Avenue could reclaim its former glory, with a large pedestrian promenade winding down the commercial corridor.

The amount of space devoted to cars in Manhattan is not just wasteful, but, in a deeper sense, unfair to the millions of New Yorkers who have no need for cars. More than half of the city's households do not own a car, and of those who do, most do not use them for commuting. Of the 1.6 million commuters who come into Manhattan every weekday (or, who did, before the virus), more than 80 percent make the trip via public transit, mostly trains and buses. Only around 12 percent of daily commuters get to the island by car.

"It really does feel like there is a silent majority that doesn't get any real say in how the public space is used," Chakrabarti told me.

New York's drivers are essentially being given enormous tracts of land for their own pleasure and convenience. To add the overall misery of the situation, though, even the drivers are not especially happy about the whole deal, because despite all the roadway they've been given, they're still stuck in gridlock. And they likely will be forever, because cars are not just greedy for physical space, they're insatiable. There is even a term for the phenomenon: "induced demand," which holds that the more land you give to cars, the more attractive driving becomes, leading to more traffic, leading to more roads — an unwinnable cycle that ends with every inch of our cities paved under parking lot.

In that sense, even drivers should have an interest in fostering alternatives to driving.

"The one thing we know for sure, because we understand geometry, is that if everyone drives, nobody moves," Brent Toderian, the former chief planner for the city of Vancouver, British Columbia, told me. Even if you're a committed daily driver, "it's in your best interest for walking, biking and public transit to be as attractive as possible for everyone else — because that means you're going to be able to drive easier."

Indeed, PAU's plan bears this out. Banning private cars on Manhattan would reduce traffic by as much as 20 percent on routes that start and end within New York's other boroughs — that is, in places where cars would still be allowed — according to an analysis by traffic engineers at Buro Happold, a consulting firm that studied PAU's plan.

Currently, wide uptown avenues like Adam Clayton Powell Jr. Boulevard are mired in traffic.

Eight lanes of traffic and parking take up most of the roadway, with pedestrians forced to hustle to cross long crosswalks.

In the new plan, community members could vote on how they wanted to use the space reclaimed from cars. There would be room for curbside vendors, gathering spaces and civic and social services.

How would people get around in a Manhattan without private cars?

Mostly on foot, by bus or by subway; often on a bicycle, e-bike, scooter, or some future light, battery-powered "micromobility" device (things like one-wheeled, self-balancing skateboards); and sometimes, in a pinch, in a taxi or Uber.

Some of these may not sound like your cup of tea. Buses are slow, bicycles are dangerous, and you wouldn't be caught dead on a scooter, let alone a onewheeled skateboard. But that's only because you're imagining these other ways of getting around as they exist today, in the world of cars.
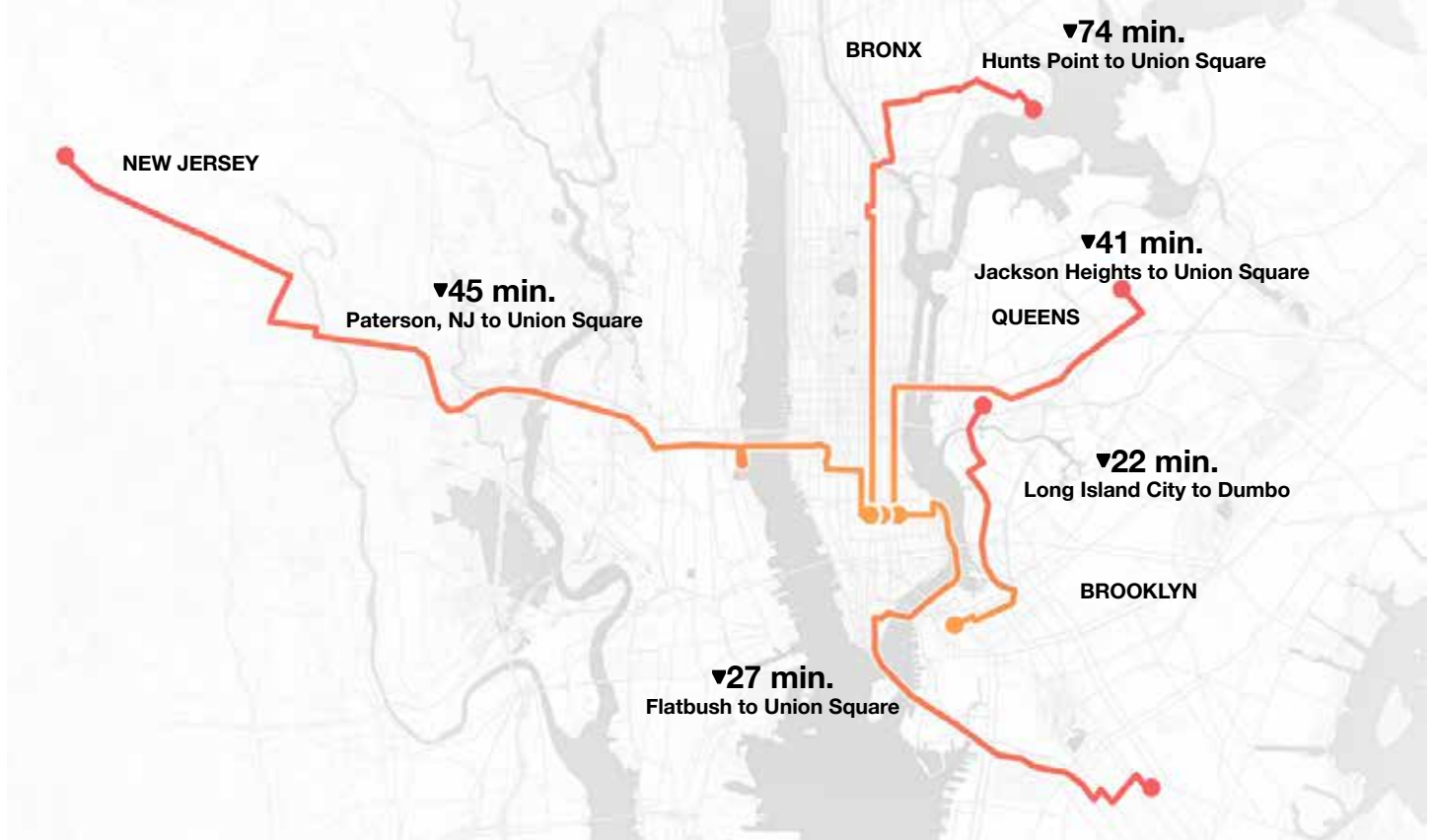
Cars make every other form of transportation a little bit terrible. The absence of cars, then, exerts its own kind of magic — take private cars away, and every other way of getting around gets much better.

Under PAU's plan, road traffic in a car-free Manhattan would fall by about 60 percent. The absence of cars would allow pedestrians, buses and bikes to race across New York at unheard-of speeds. Today, a bus trip from uptown to downtown — for instance, from Harlem to City Hall — takes an hour and 48 minutes. With the sort of rapid bus system PAU imagines, and without cars in the way, the same trek would take 35 minutes.
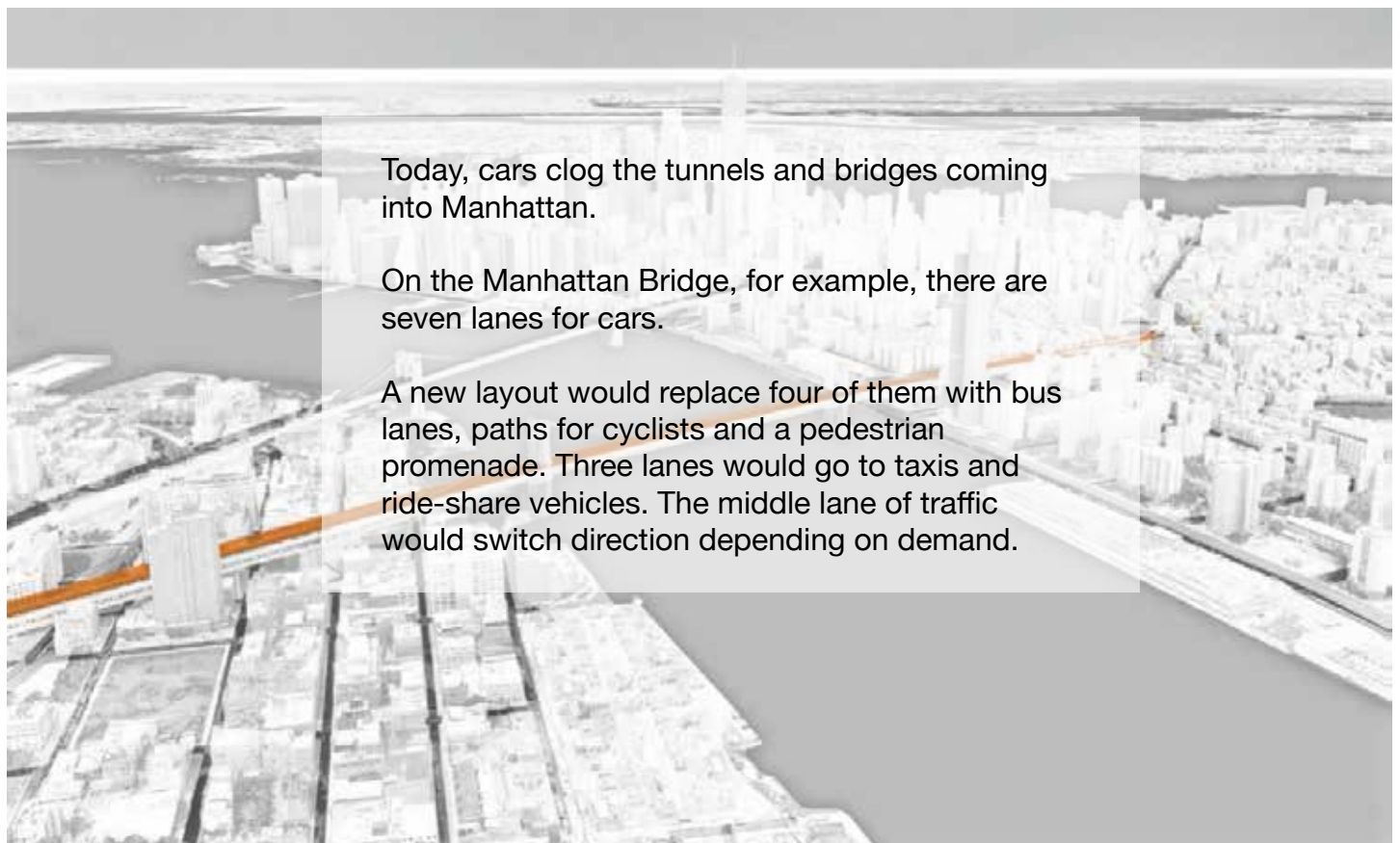
The plan wouldn't improve just Manhattan. A ban on private cars on the island would ripple across the Hudson, altering transportation and livability across the wider metropolitan region.

Fewer cars, faster buses

Removing private cars would shorten bus commutes into and around Manhattan.

BRONX

▼74 min.
Hunts Point to Union Square

NEW JERSEY

▼41 min.
Jackson Heights to Union Square

▼45 min.
Paterson, NJ to Union Square

QUEENS

▼22 min.
Long Island City to Dumbo

BROOKLYN

▼27 min.
**Flatbush to Union Square**

Note: Assuming a traffic reduction of 60 percent in Manhattan and 8 percent outside of the borough. Source: Practice for Architecture and Urbanism, estimates from Buro Happold

Today, cars clog the tunnels and bridges coming into Manhattan.

On the Manhattan Bridge, for example, there are seven lanes for cars.

A new layout would replace four of them with bus lanes, paths for cyclists and a pedestrian promenade. Three lanes would go to taxis and ride-share vehicles. The middle lane of traffic would switch direction depending on demand.

Source: Practice for Architecture and Urbanism

The public health effects would ripple across the region, too. The most polluted air in New York hangs over the Bronx and Queens, in communities largely populated by immigrants and people of color. New York City has some of the dirtiest air in the nation, estimated to cause 3,000 premature deaths annually.

Among other ailments, long-term exposure to polluted air is thought to increase the deadliness of Covid-19. Much of the unhealthy air is caused by traffic sitting idle on the roads leading to Manhattan. Buro Happold estimates that PAU's plan would lead to a 50 percent reduction in toxic air pollution in Manhattan, and a 20 percent reduction in the other boroughs.
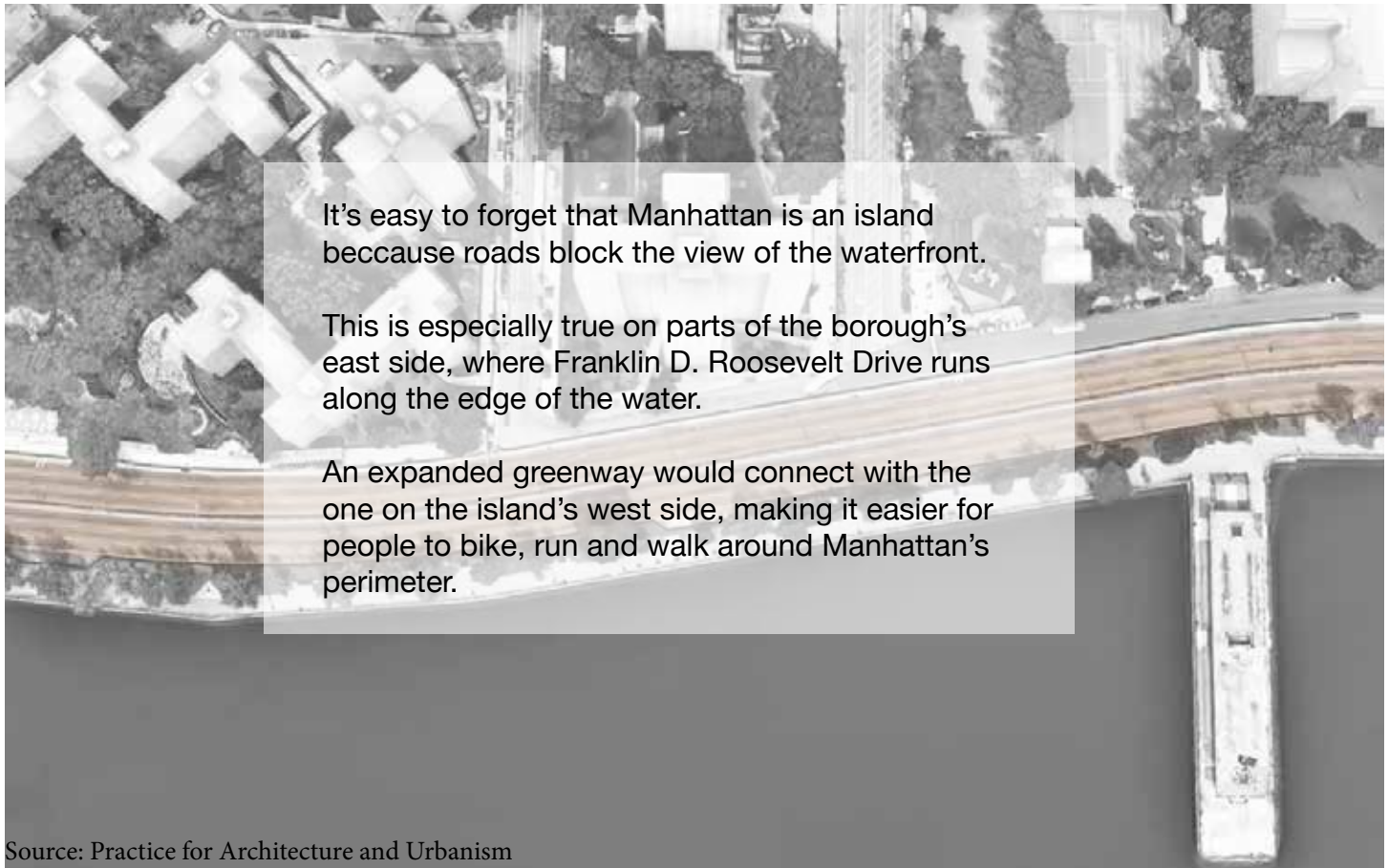
It's easy to forget that Manhattan is an island beccause roads block the view of the waterfront.

This is especially true on parts of the borough's east side, where Franklin D. Roosevelt Drive runs along the edge of the water.

An expanded greenway would connect with the one on the island's west side, making it easier for people to bike, run and walk around Manhattan's perimeter.

Source: Practice for Architecture and Urbanism

Given how completely they rule most cities, calling for the outright banishment of automobiles can sound almost ludicrous. (We can't even get people to agree to wear masks to stop the spread of a devastating pandemic.)

Instead of fighting a war on cars, Toderian told me, urbanists should fight a war on car dependency — on cities that leave residents with few choices other than cars. Alleviating car dependency can improve commutes for everyone in a city, including drivers.

Chakrabarti acknowledges the political risks of trying to ban private cars. But Manhattan, he points out, is a special place. With a population that is already quite used to getting along without cars, the island is just about the only place in the country where you could even consider calling for the banishment of cars. Manhattan could be a place for all of America to witness how reducing an urban area's reliance on cars can lead to a better life.

At the moment, many of the most intractable challenges faced by America's urban centers stem from the same cause — a lack of accessible physical space.
We live in a time of epidemic homelessness. There's a national housing affordability crisis caused by an extreme shortage of places to live. And now there's a contagion that thrives on indoor overcrowding.

Given these threats, how can American cities continue to justify wasting such enormous tracts of land on death machines?

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