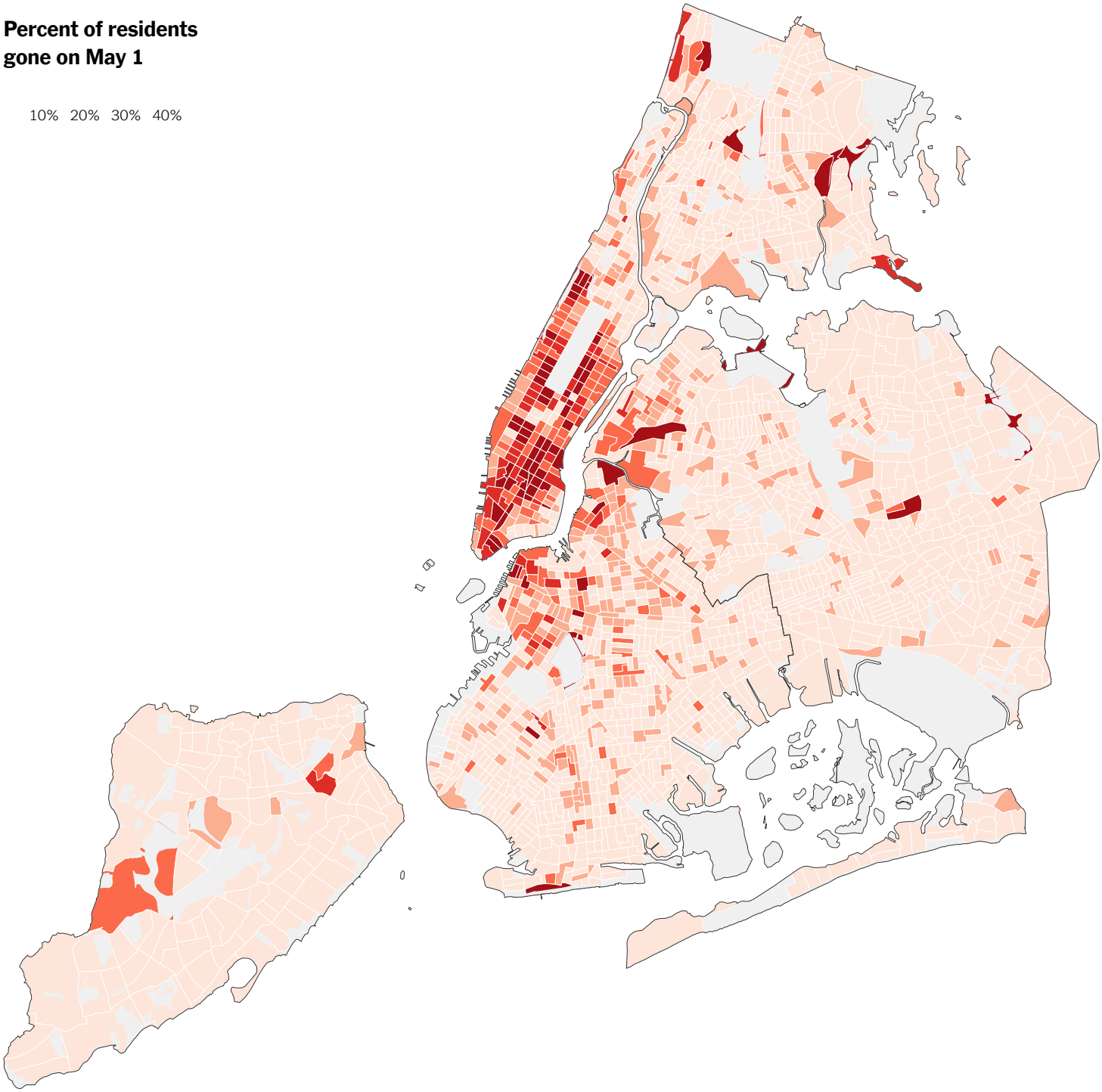
The New York Times

The Richest Neighborhoods Emptied Out Most as Coronavirus Hit New York City

By Kevin Quealy May 15, 2020



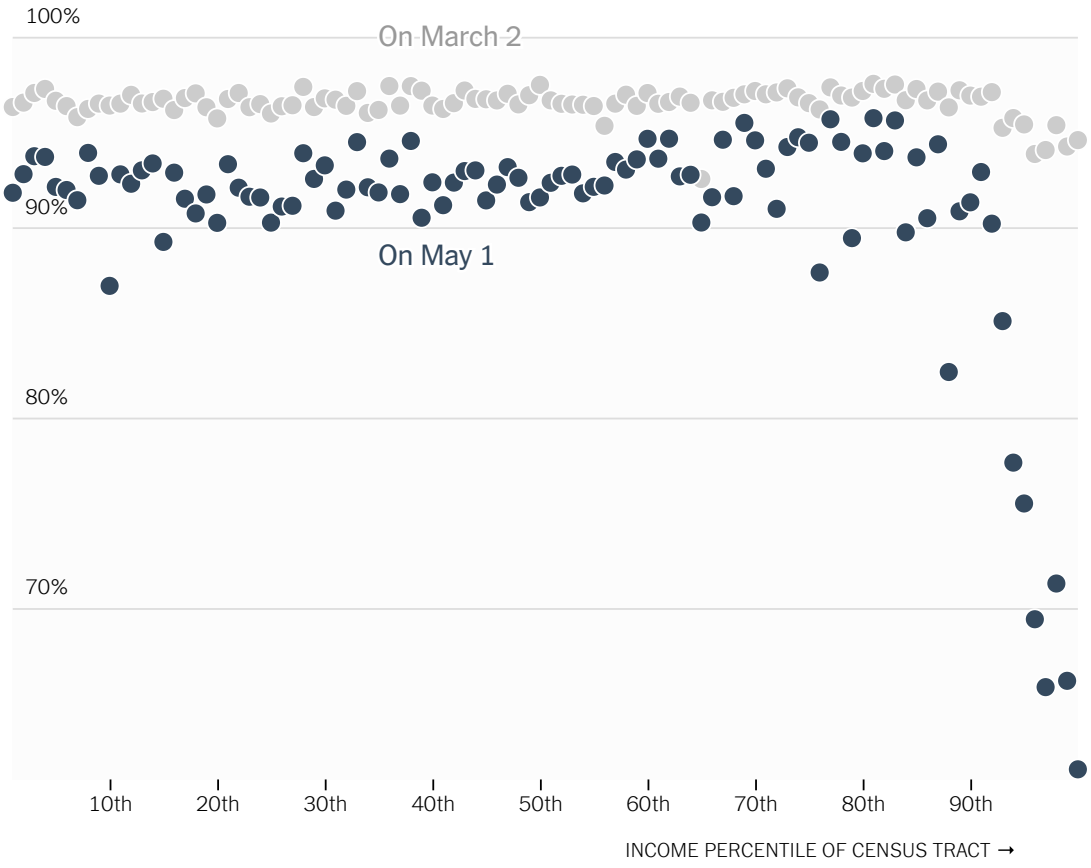
Map represents share of people who lived in New York over a two-week period in February but who were not living there on May 1. ▪ Descartes Labs

Hundreds of thousands of New York City residents, in particular those from the city's wealthiest neighborhoods, left as the coronavirus pandemic hit, an analysis of multiple sources of aggregated smartphone location data has found.

Roughly 5 percent of residents — or about 420,000 people — left the city between March 1 and May 1. In the city's very wealthiest blocks, in neighborhoods like the Upper East Side, the West Village, SoHo and Brooklyn Heights, residential population decreased by 40 percent or more, while the rest of the city saw comparably modest changes.

Some of these areas are typically home to lots of students, many of whom left as colleges and universities closed; other residents might have left to care for friends or family members across the country. But, on average, income is a strong simple predictor of a neighborhood's change: The higher-earning a neighborhood is, the more likely it is to have emptied out.

Percent of N.Y.C. residents who were home, in rich and poor neighborhoods



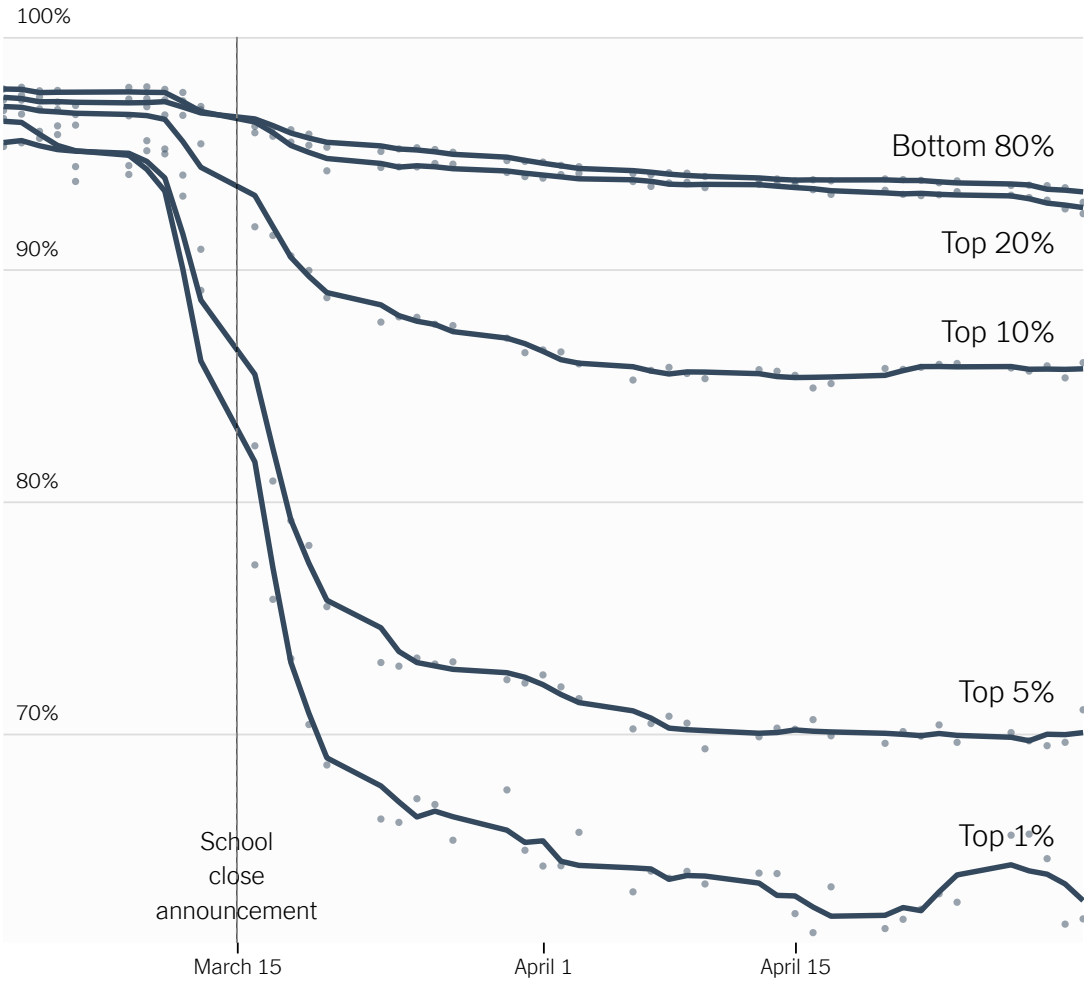
Income percentiles reflect those in New York's five boroughs.

Relatively few residents from blocks with median household incomes of about $90,000 or less (in the 80th percentile or lower) left New York. This migration out of the city began in mid-March, and accelerated in the days

after March 15, when Mayor Bill de Blasio announced that he was closing the city's schools.

The highest-earning neighborhoods emptied first.

Percent of residents who were home, by income group of their census tract



Income percentiles reflect those in New York's five boroughs, by census tract

"There is a way that these crises fall with a different weight on people based on social class," said Kim Phillips-Fein, a history professor at New York University and author of a book about how New York changed during the fiscal crisis of the 1970s. "Even though there's a strong rhetoric of 'We're all in it together,' that's not really the case."

These estimates are based on data provided by Descartes Labs, a geospatial analysis company.

Descartes Labs used anonymized smartphone location data to find a large sample of New York City residents — not commuters or tourists — based on where they lived during a two-week period in February. They then

analyzed their aggregate movements as the pandemic hit and whether they had left the city. The sample was about 140,000 residents, including residents from nearly every populated census tract in the city.

Smartphone location data is imperfect. It misses people who don't own a smartphone. It requires some guesswork about who is a resident rather than a visitor or commuter. It relies on the kinds of apps that track and transmit a user's precise location. And it is unlikely to be perfectly representative of the general population.

But it can be more useful than other methods to measure quick changes in population on a large scale.

There is already evidence that many New Yorkers with the means to do so have left town. Reports have depicted a withdrawal to second homes and vacation towns. The weight of household trash is down in affluent neighborhoods. But to find more precise estimates, location data may be the best choice.

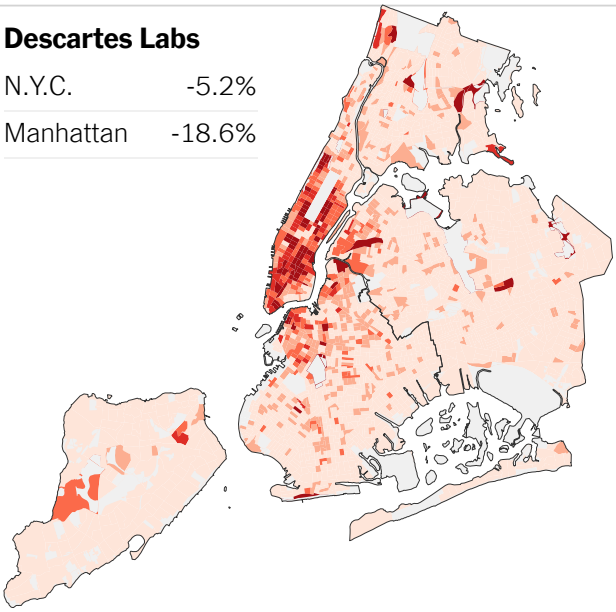
Descartes Labs was the biggest contributor of the data for the estimates in this article, but its findings are consistent with two separate estimates based on other providers of location data.

The first of these two estimates is from a working paper by Arpit Gupta and Joshua Coven of New York University, who used smartphone location data to measure disparities and mobility patterns among New York City residents from March 2 to March 27. The second is from Teralytics, a company that uses data from cellular phone towers to measure migration patterns. Cellular towers interact with users of any kind of cellular device from a provider — not just smartphones with location-transmitting third-party applications — which means they capture a larger and wider range of residents.

How three different groups estimated New York's population change

Descartes Labs

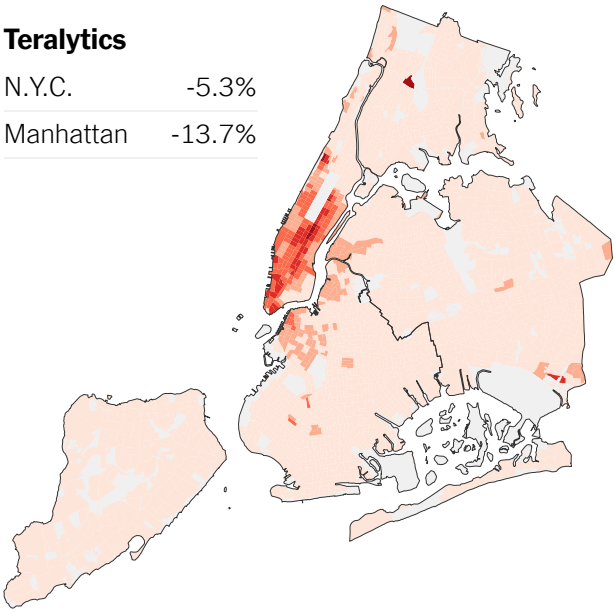
N.Y.C.	-5.2%
Manhattan	-18.6%



Based on about 140,000 smartphones, measured from March 2 to May 1.

Teralytics

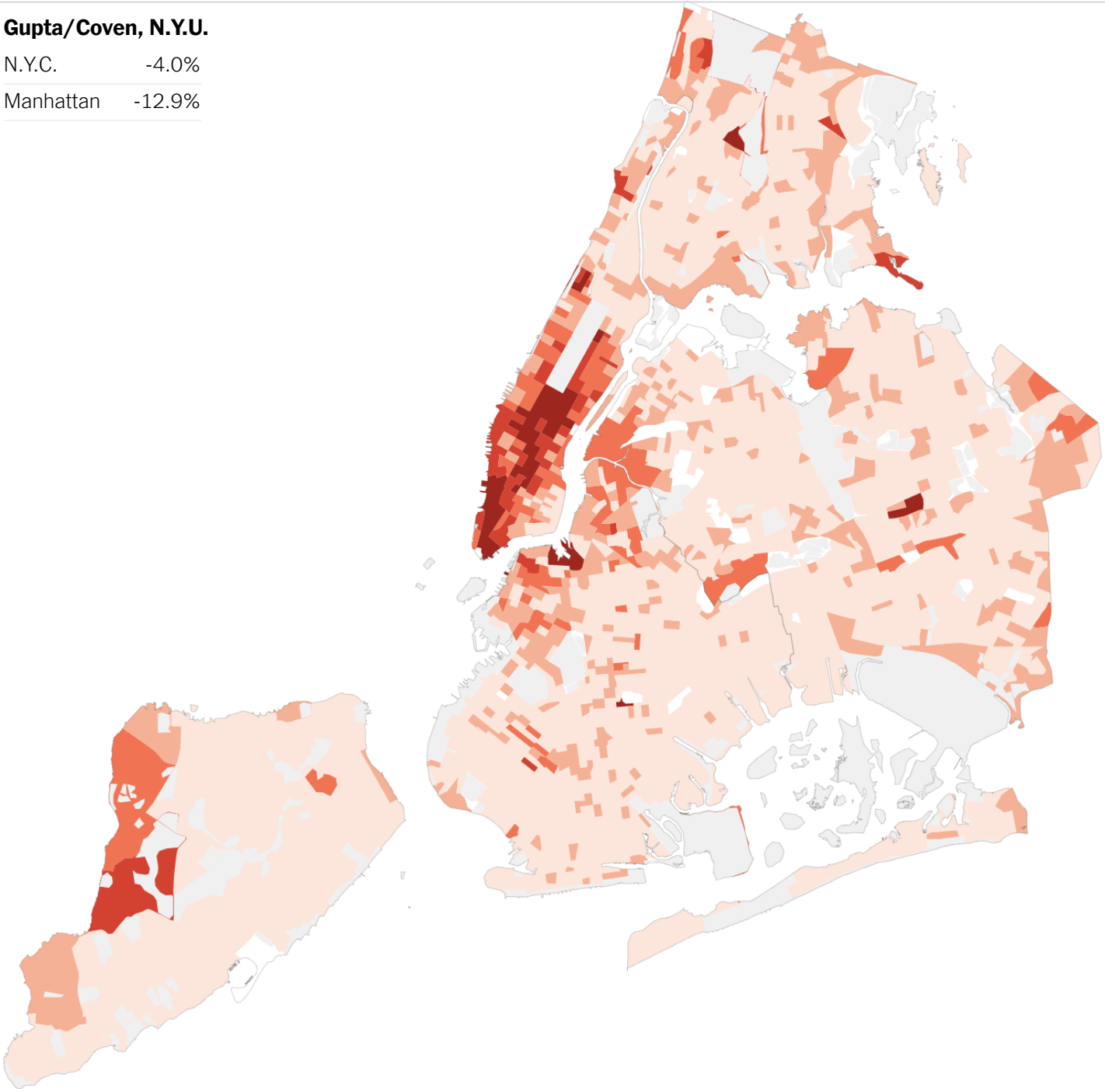
N.Y.C.	-5.3%
Manhattan	-13.7%



Based on more than 1 million cellular devices from Jan. 1 to April 15.

Gupta/Coven, N.Y.U.

N.Y.C.	-4.0%
Manhattan	-12.9%



Based on about 373,000 smartphones, measured from March 2 to March 27. Data provider: VenPath.

Together, these three estimates differ in some ways — in how they define exactly who is a New York City resident; in the period they observed movement; and in exactly how they registered whether a resident moved away rather than visited a place. But they all point to the same conclusion: The city's population decreased by 4 percent to 5 percent, and the residents who left were overwhelmingly from the city's wealthiest neighborhoods, chiefly in Manhattan.

The neighborhoods driving the exodus do not resemble the city as a whole.

The residents from these places are mostly white in a city that's mostly not. Residents from these places are more than twice as likely to have a college degree. These places have higher rents and lower poverty rates. People who live there are more likely to be able to walk or bike to work, or to work from home.

And the incomes of residents there are considerably higher: More than half of these neighborhoods' residents have household incomes of more than $100,000; nearly one in three earn more than $200,000.

	Where more than 25% left	Everywhere else
Total pop.	803,228	7.6 mil.
Race		
White	**68%**	28%
Hisp. or Latino	12%	31%
Black	5%	24%
Asian	13%	14%
Income		
Median houshold income	**$119,125**	$60,521
Median rent	**$2,223**	$1,414
Incomes over $100k	**55%**	28%
Incomes over $200k	**29%**	7%
Incomes below $35k	19%	35%
Pct. in poverty	10%	17%
Education		
College deg. or higher	**76%**	33%
HIgh school diploma	19%	47%
Less than high school	5%	20%
How they get to work		
Public transit	57%	57%
Walk	**23%**	8%
Work at home	**8%**	4%
Car	8%	29%

Bike	3%	1%

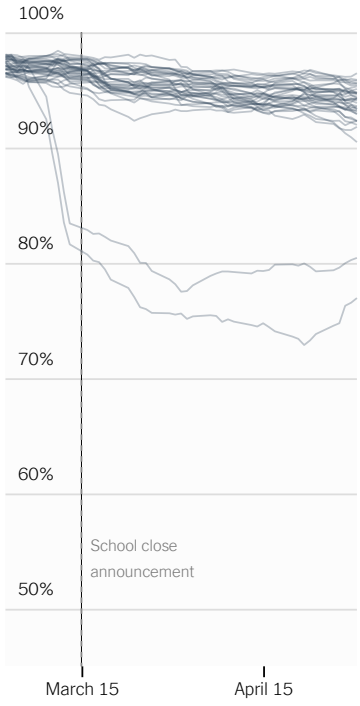
The divergence between these groups is particularly striking at a time when New Yorkers have a heightened awareness of inequality in their interactions with “essential workers”: not just medical personnel, but also cooks, food deliverers, janitors, mail carriers, truck drivers and transit workers — people who can neither do their jobs from the safety of home, nor leave the city.

“Everybody is really aware of the uneven distribution of risk, and the unfairness of having to work to provide services to people who are wealthy enough to avoid providing services for themselves,” said Peter Bearman, a sociologist at Columbia University who wrote a book about New York City doormen and their relationship with the tenants they serve.

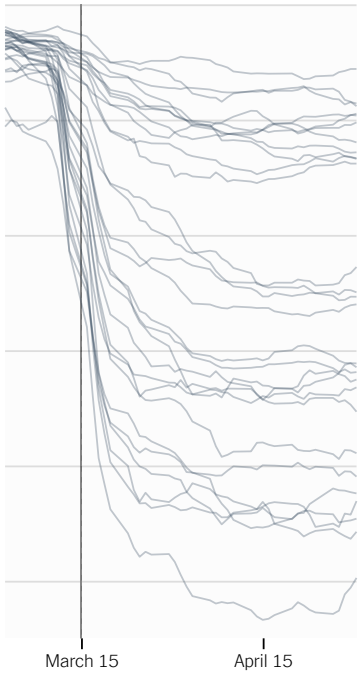
Here, look up any neighborhood in New York and see how it changed:

Search for a N.Y.C. neighborhood

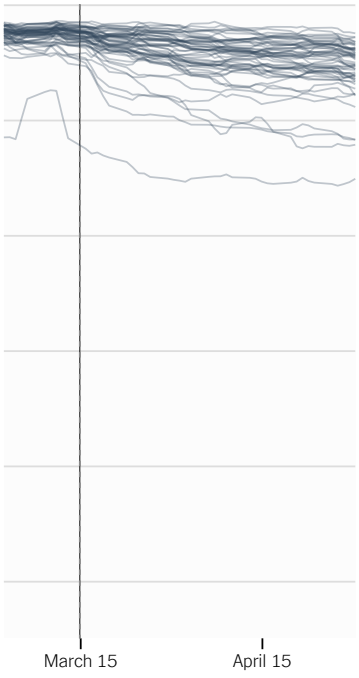
Bronx



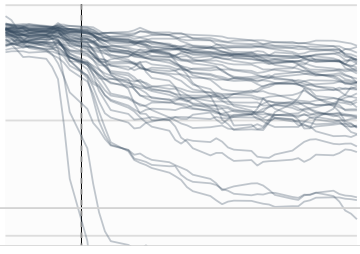
Manhattan



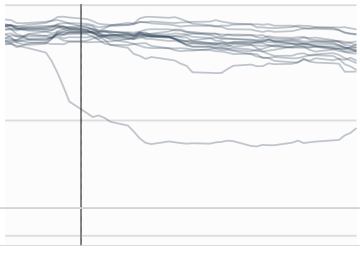
Queens

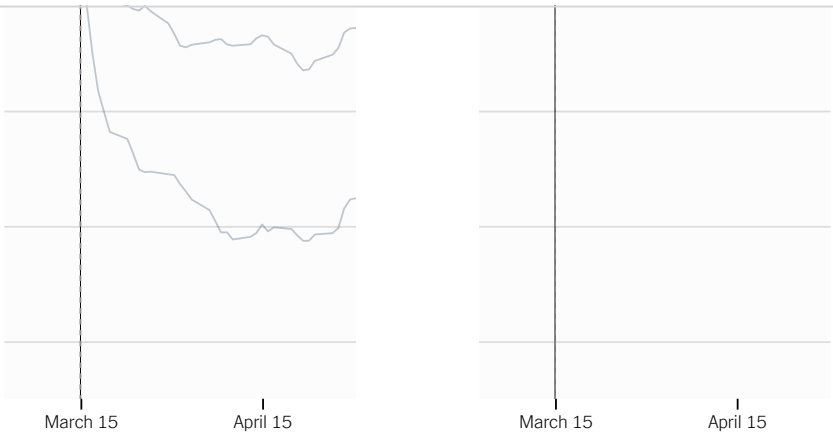


Brooklyn



Staten Island

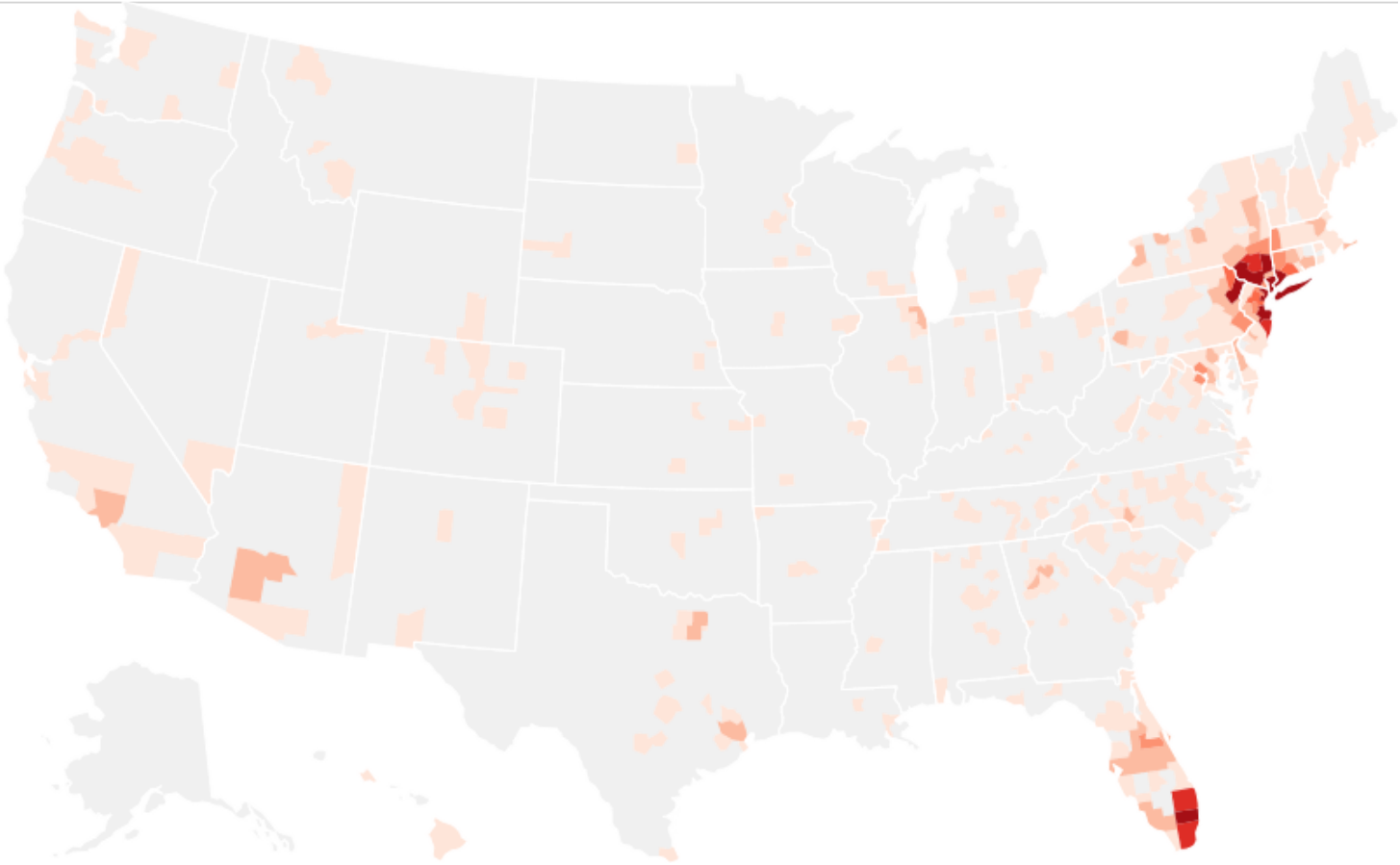




Where New Yorkers Went

The phone data shows New Yorkers primarily went to surrounding counties — east into Long Island's Nassau and Suffolk counties, west to Monroe County in Pennsylvania, south to Monmouth County in New Jersey, north to Westchester County, northeast to Fairfield County in Connecticut and farther afield in all directions. Palm Beach County, in South Florida, was among the top locations for displaced New Yorkers.

Where New Yorkers were on May 1, as a share of all departures



Fleeing a city during a time of crisis is an instinctive reaction for many of us, said Andy Horowitz, a professor at Tulane University who studies disasters and wrote a book about the impact of Hurricane Katrina.

This applies not just to pandemics, but also to hurricanes, nuclear accidents, invading armies, agricultural disasters and other such events.

“This is a tried-and-true human strategy — that when you encounter trouble, run away,” he said.

Additional work by Charlie Smart