TWO BAR CHARTS EQUAL A SCATTERPLOT

A REBUILD AND EXPLANATION OF A SCATTERPLOT PUBLISHED IN THE NEW YORK TIMES

ON APRIL 17, 2021 (ONLINE) AND APRIL 22, 2021 (PRINT)

THE SCATTERPLOT COMPARES VACCINE HESITANCY DATA BY STATE

WITH THE 2020 PRESIDENTIAL VOTE

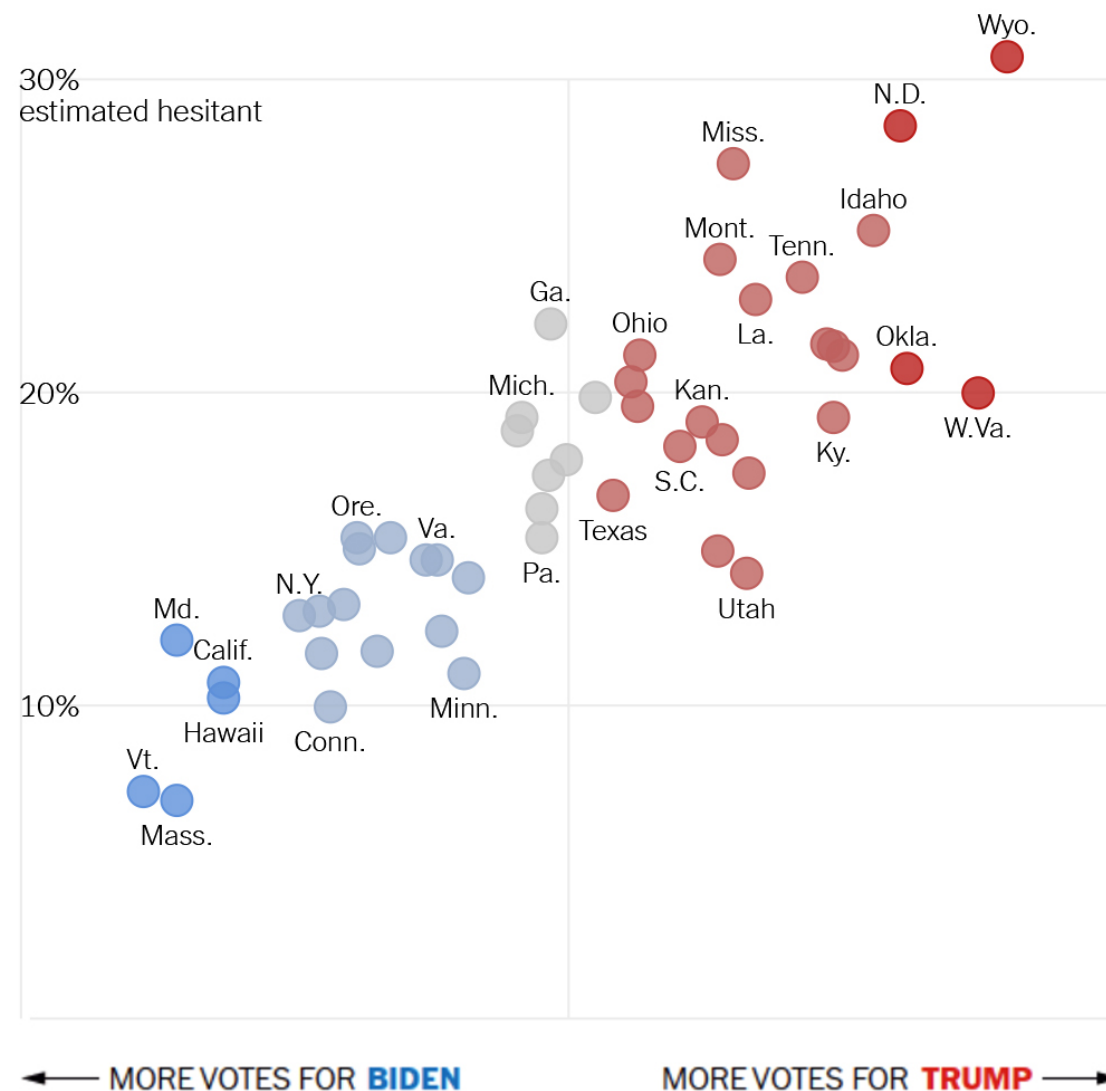A SECOND SCATTERPLOT SHOWS VACCINATION RATES AND 2020 VOTE
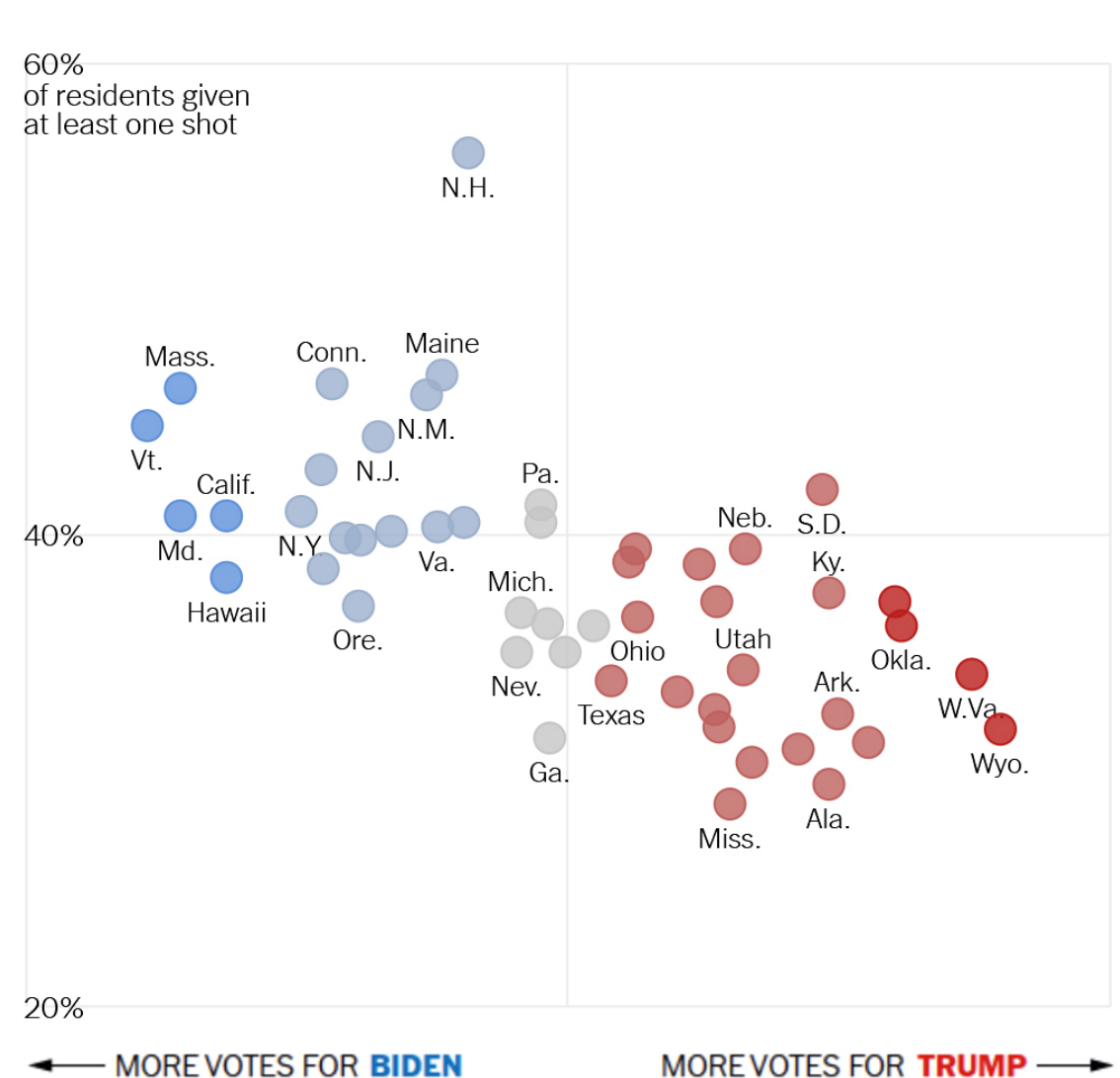
The New York Times

Least Vaccinated U.S. Counties Have Something in Common: Trump Voters

By Danielle Ivory, Lauren Leatherby and Robert Gebeloff   April 17, 2021

States with larger Trump vote shares are likely to have more adults who are vaccine hesitant …

… and have a smaller share of residents already vaccinated than states with larger Biden vote shares.

Source: Estimates of vaccine hesitancy by state come from the Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Data on the share of state residents who have been vaccinated comes from the Centers for Disease Control and Prevention and reflects vaccinations through April 16. Election data is from Edison Research.

For the rebuild, the datasets were downloaded or scraped from the internet, based on the sources provided by the New York Times or found elsewhere. They were then cleaned up and used to build the bar charts and the scatterplots in Tableau. The original was first published here:
https://www.nytimes.com/interactive/2021/04/17/us/vaccine-hesitancy-politics.html

For a brief description of the process, a list of links, and for all related files, download this zip archive:
http://static.trogu.com/documents/523_info_design/scatterplot_demo_2021-04-29.zip

The final, clean and updated dataset is titled:
`vaccine_hesitancy_2021-04.csv`
It has columns for:

state
state_abbreviation
percentage estimated vaccine hesitancy by state (as of April 13, 2021)
share of vaccinated state residents (at least one shot as of April 29, 2021)
2020 presidential vote by state (% of vote won by Trump in each state)

The latter is labeled in NYT as "More votes for Biden" and "More votes for Trump".
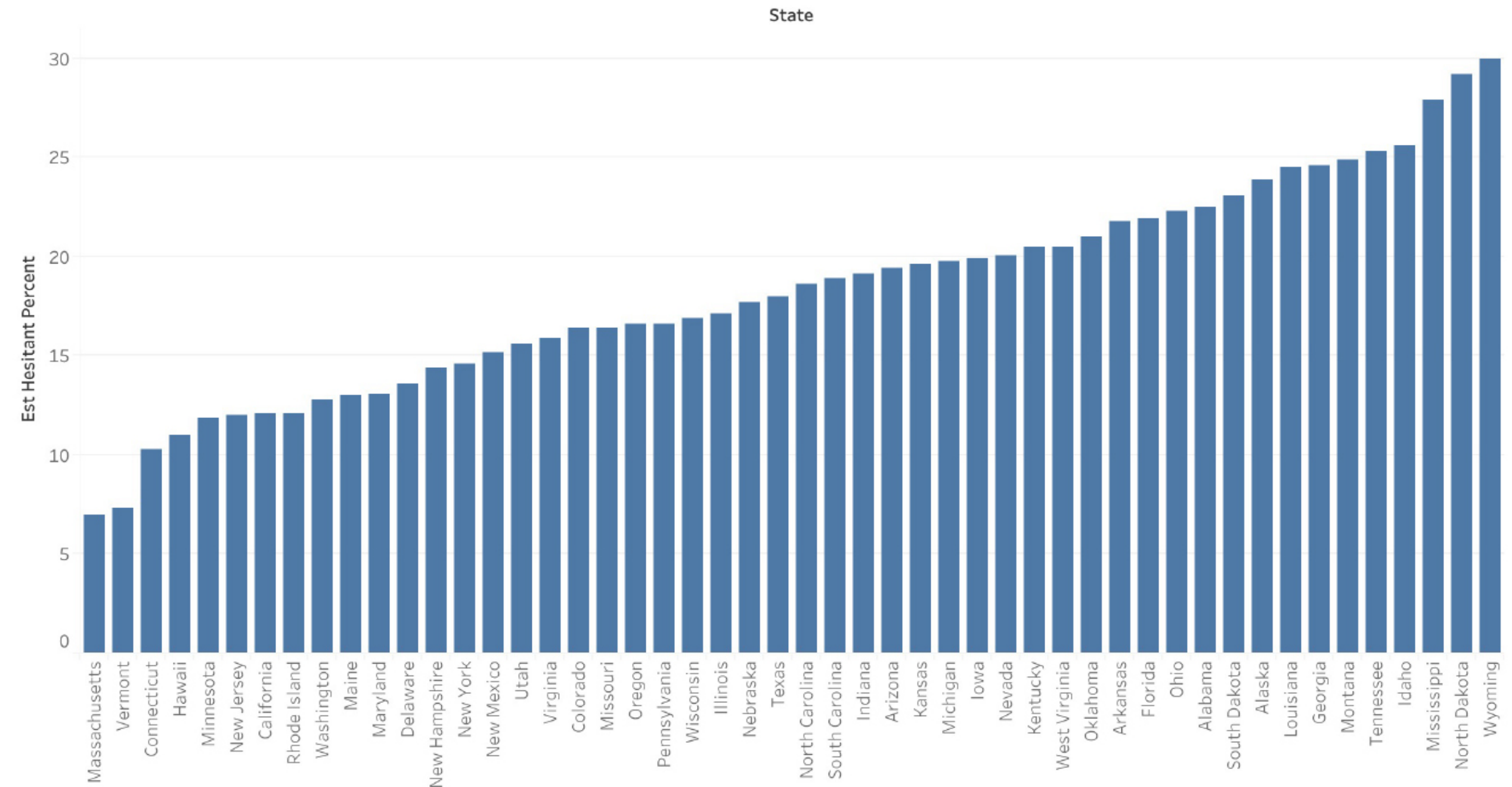As it turns out, each won exactly 25 states. D.C. was won by Biden but is omitted in this final dataset.

The dataset looks like this (Excel):

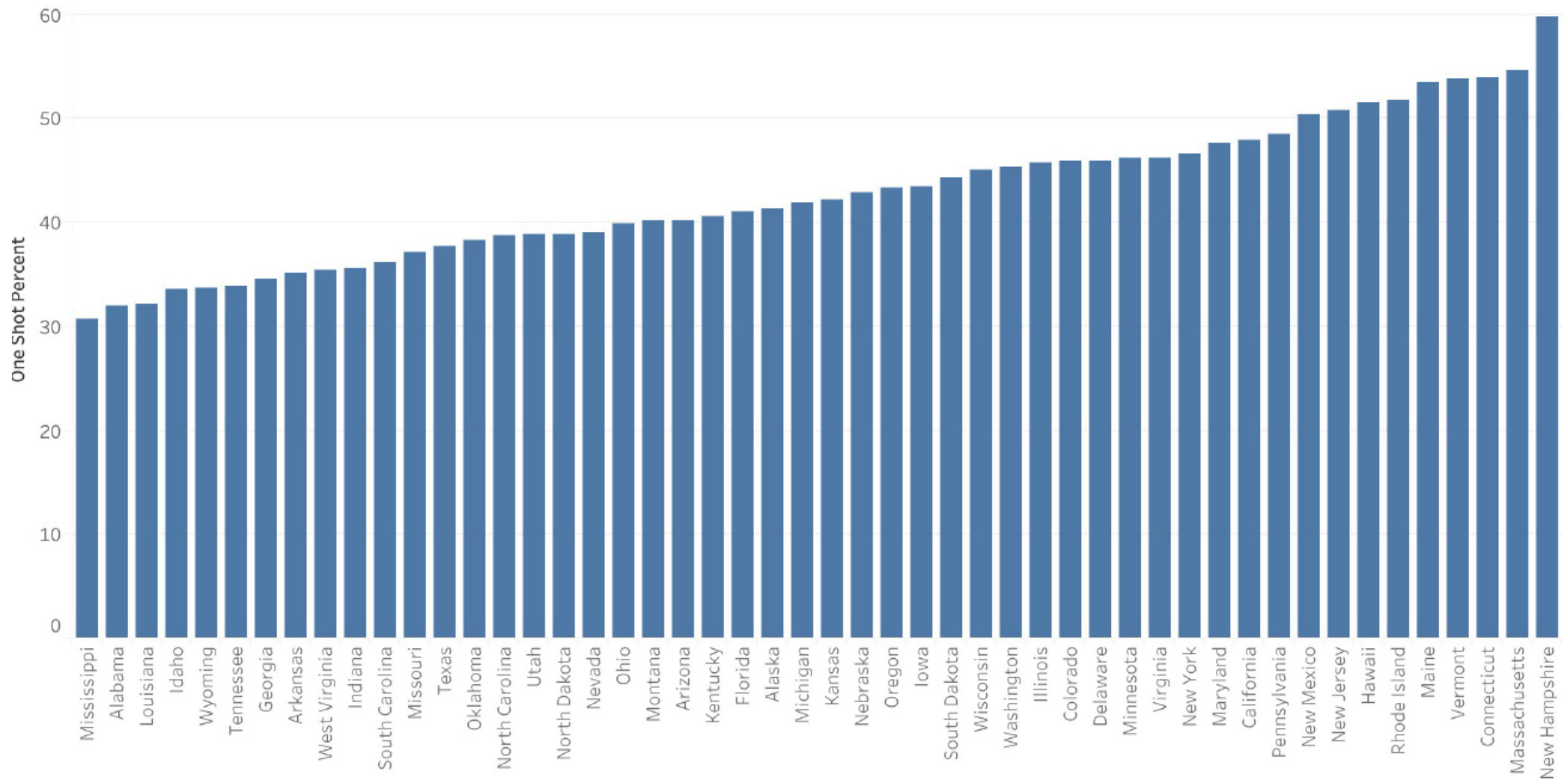|	A	B	C	D	E	F
1	state	state_abbr	est_hesitant_percent	one_shot_percent	trump_percent	
2	Vermont	Vt.	7.3	53.79	30.67	
3	Massachusetts	Mass.	7	54.7	32.14	
4	Maryland	Md.	13.1	47.55	32.15	
5	Hawaii	Hawaii	11	51.49	34.27	
6	California	Calif.	12.1	47.87	34.3	
7	New York	N.Y.	14.6	46.6	37.67	
8	Rhode Island	R.I.	12.1	51.84	38.61	
9	Washington	Wash.	12.8	45.27	38.77	

In Tableau, first bar chart showing percentage of estimated hesitancy

percent hesitancy

State

Est Hesitant Percent

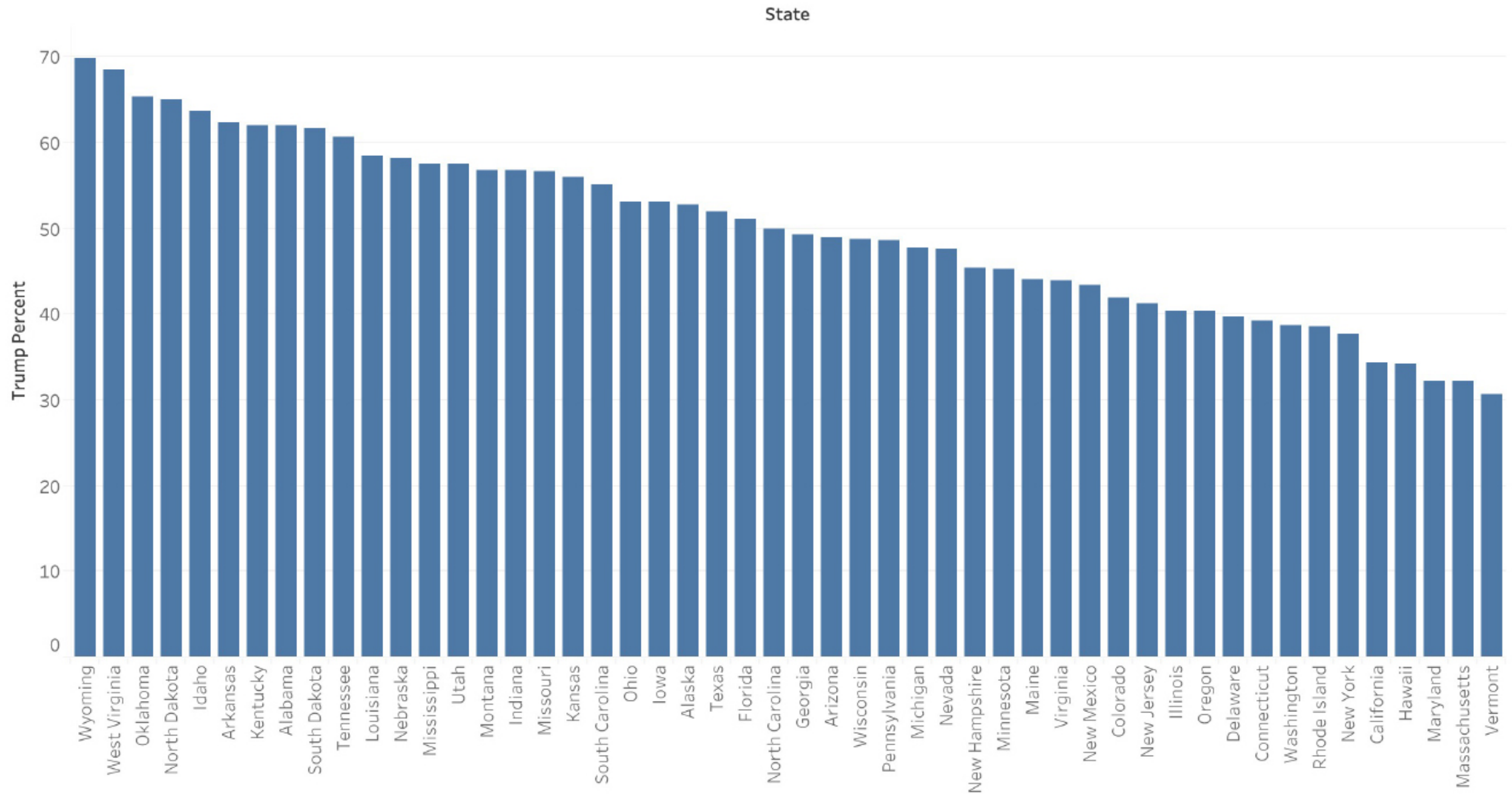Sum of Est Hesitant Percent for each State.

In Tableau, another bar chart showing percentage of vaccinated population by state (at least one shot).

im of One Shot Percent for each State.

In Tableau, the bar chart showing the 2020 election.
Data shows percentage of vote won by Trump in each state, from highest to lowest.
Later, in the diagram, this chart will be tilted 90 degrees clockwise.
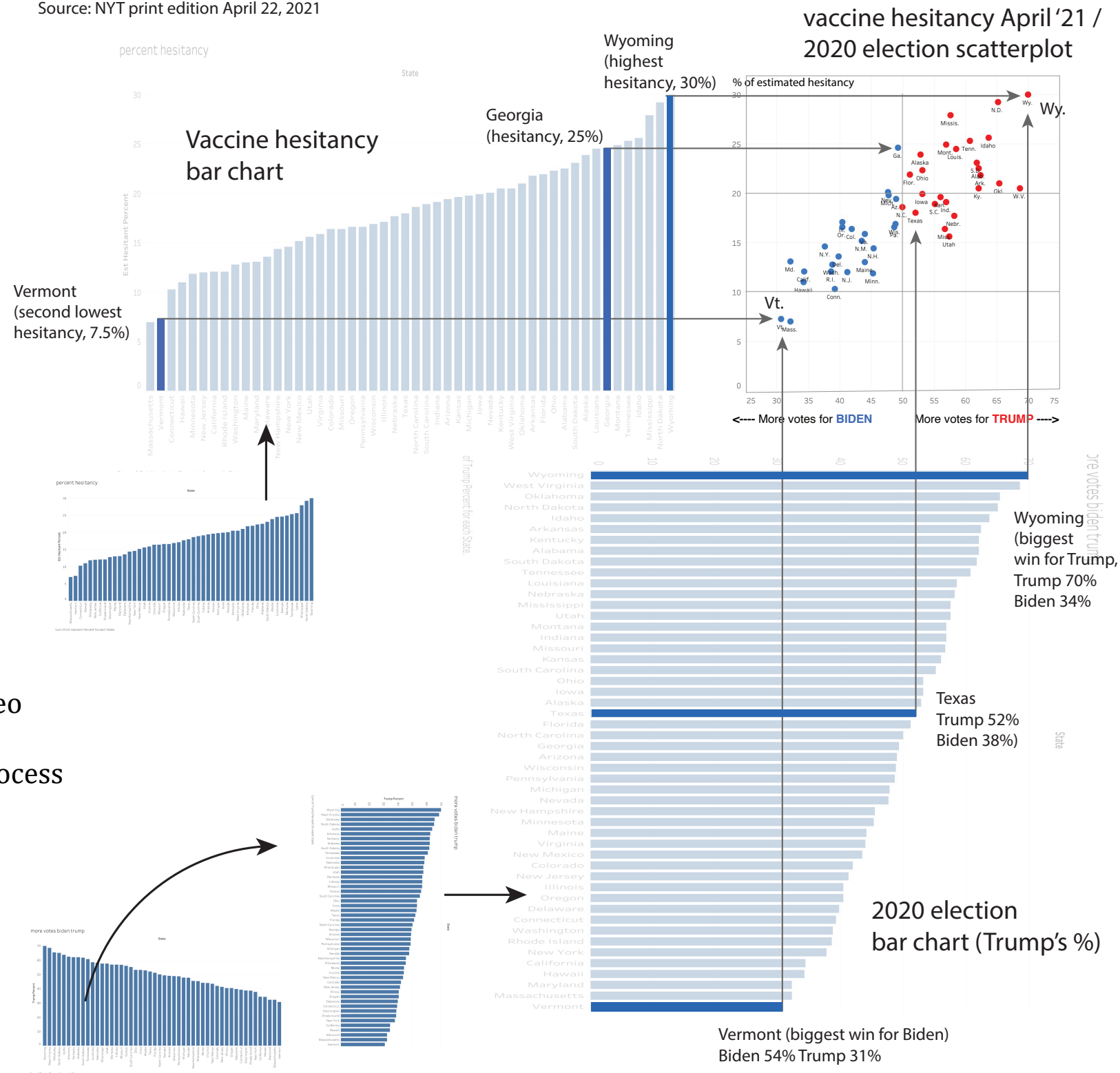
more votes biden trump

Sum of Trump Percent for each State.

This (bi-variate) scatterplot combines the vaccine hesitancy data (first variable), with the election data (second variable), and visualizes the correlation between the two. An enlarged view of the scatterplot is on next page.

Source: NYT print edition April 22, 2021

Vaccine hesitancy bar chart

vaccine hesitancy April '21 / 2020 election scatterplot

Wyoming (highest hesitancy, 30%)

Georgia (hesitancy, 25%)

Vermont (second lowest hesitancy, 7.5%)

<---- More votes for **BIDEN**   More votes for **TRUMP** ---->

View this video for a live presentation where I explain this process in detail.

Wyoming (biggest win for Trump, Trump 70% Biden 34%)

Texas Trump 52% Biden 38%)

2020 election bar chart (Trump's %)

Vermont (biggest win for Biden) Biden 54% Trump 31%

Vaccine estimated hesitancy/2020 vote   scatterplot

In this rebuild, the colors for the dots are simplified: all states won by Biden are blue, And all states won by Trump are red. In the NYT original, the blue and red colors were gradated from light to dark (smaller to larger margin of victory); and a group of eight states in the middle, where the margin was very small, were painted gray. This rebuild still needs refining of the labels and typography for the names of the states.

% of estimated hesitancy

<---- More votes for **BIDEN**   More votes for **TRUMP** ---->

This second (bi-variate) scatterplot combines the vaccination rates (at least one shot), with the election data (second variable), and visualizes the correlation between the two.
An enlarged view of the scatterplot is on next page.

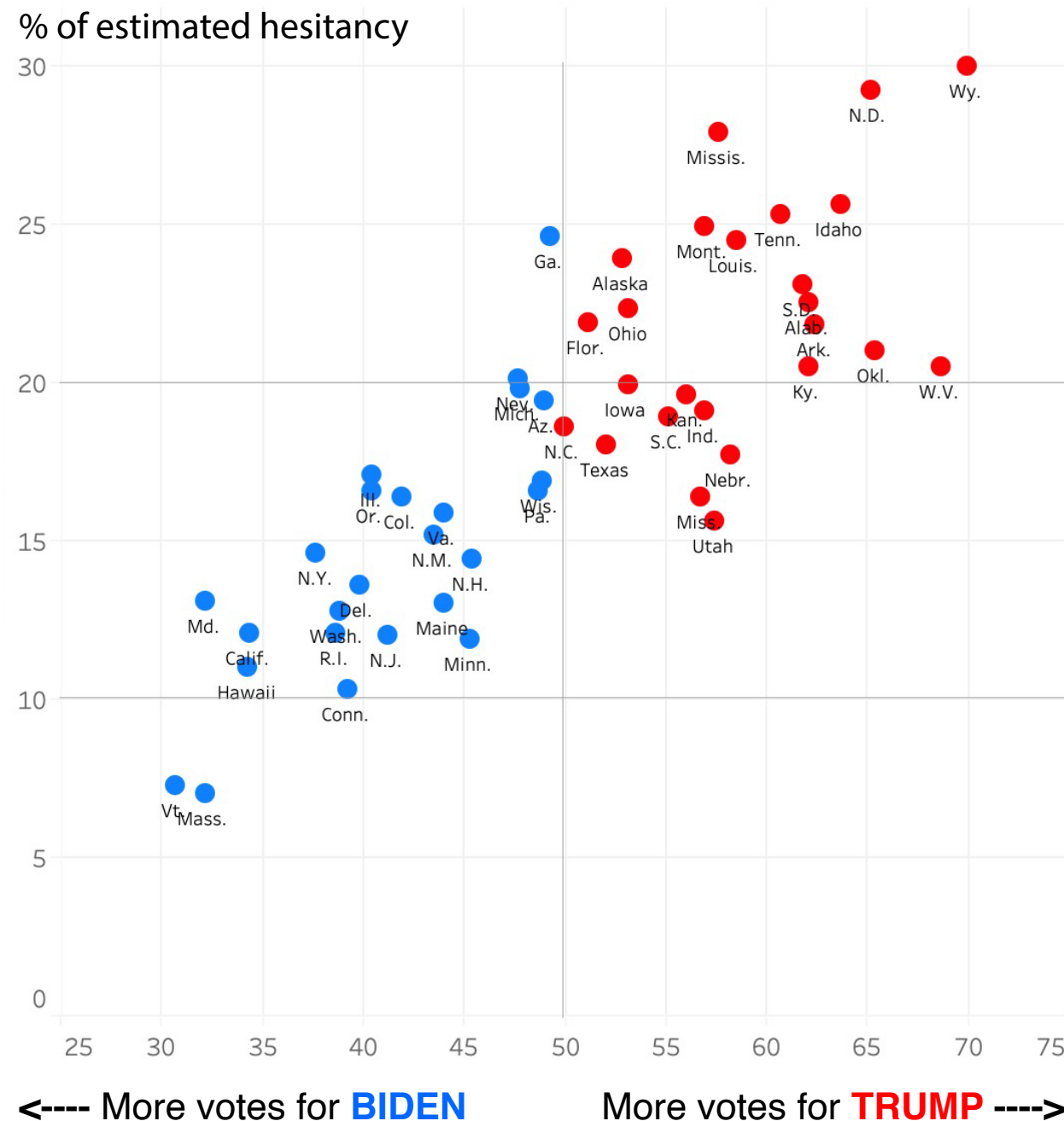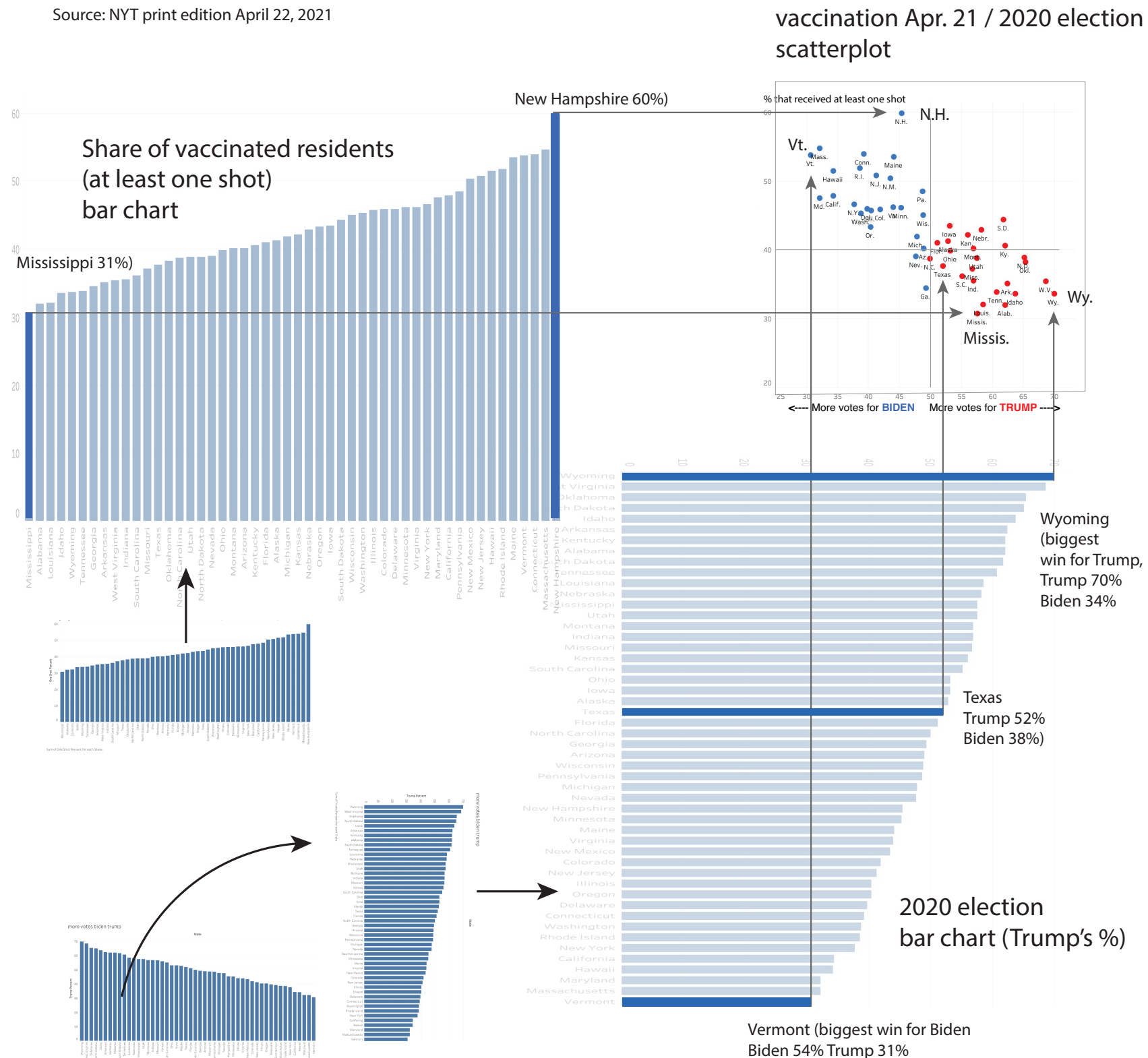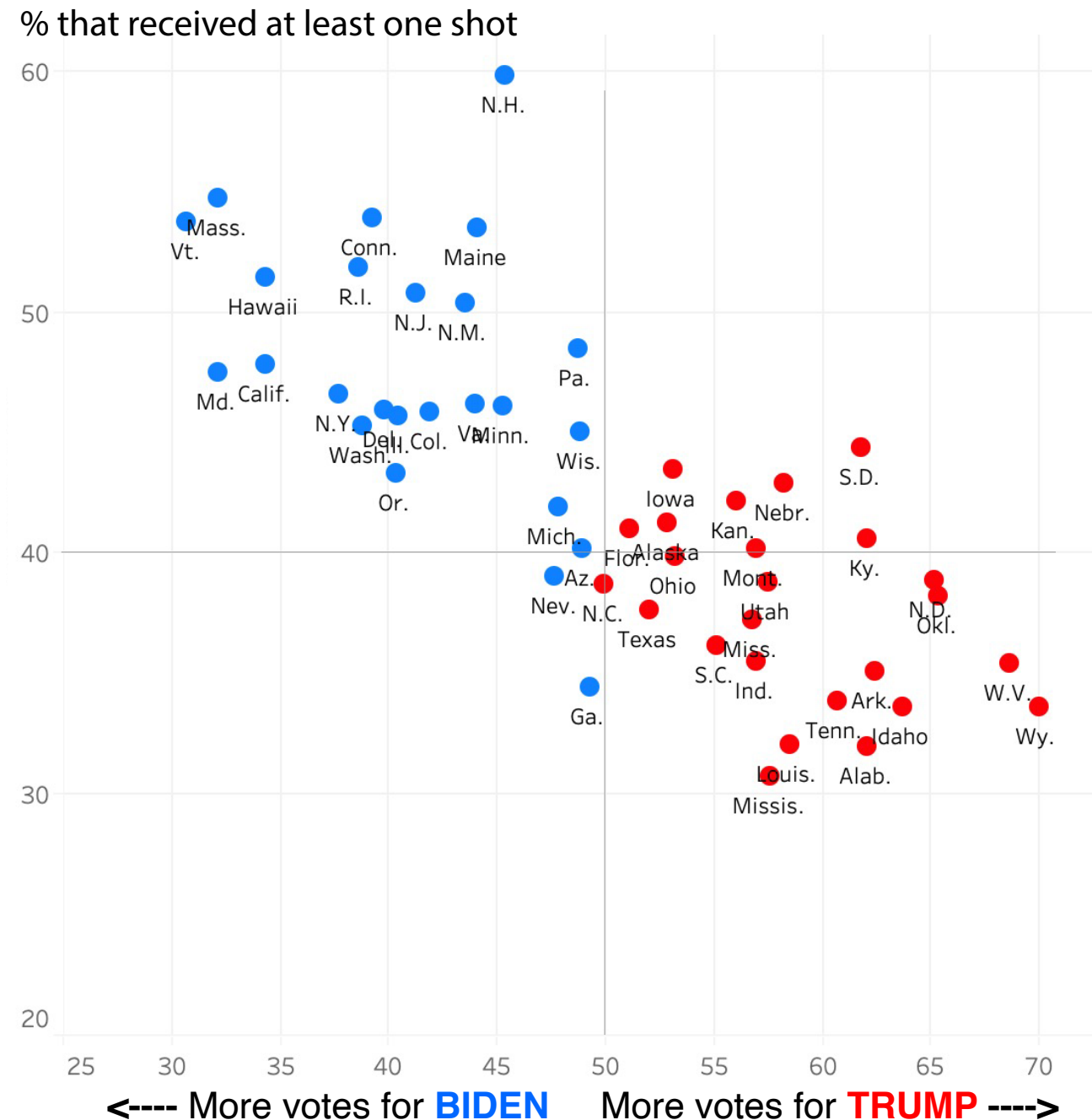Source: NYT print edition April 22, 2021

vaccination Apr. 21 / 2020 election scatterplot

Share of vaccinated residents
(at least one shot)
bar chart

New Hampshire 60%)

% that received at least one shot

N.H.

Vt.

Mississippi 31%)

←—— More votes for **BIDEN**   More votes for **TRUMP** ——→

Missis.

Wy.

Wyoming
(biggest
win for Trump,
Trump 70%
Biden 34%

Texas
Trump 52%
Biden 38%)

2020 election
bar chart (Trump's %)

more votes biden trump

Vermont (biggest win for Biden
Biden 54% Trump 31%

Vaccination rates (at least one shot)/2020 vote   scatterplot
In this rebuild as well, the colors for the dots are simplified: all states won by Biden are blue,
And all states won by Trump are red. In the NYT original, the blue and red colors were
gradated from light to dark (smaller to larger margin of victory); and a group of eight
states in the middle, where the margin was very small, were painted gray. This rebuild also
still needs refining of the labels and typography for the names of the states.

% that received at least one shot

<---- More votes for **BIDEN**   More votes for **TRUMP** ---->