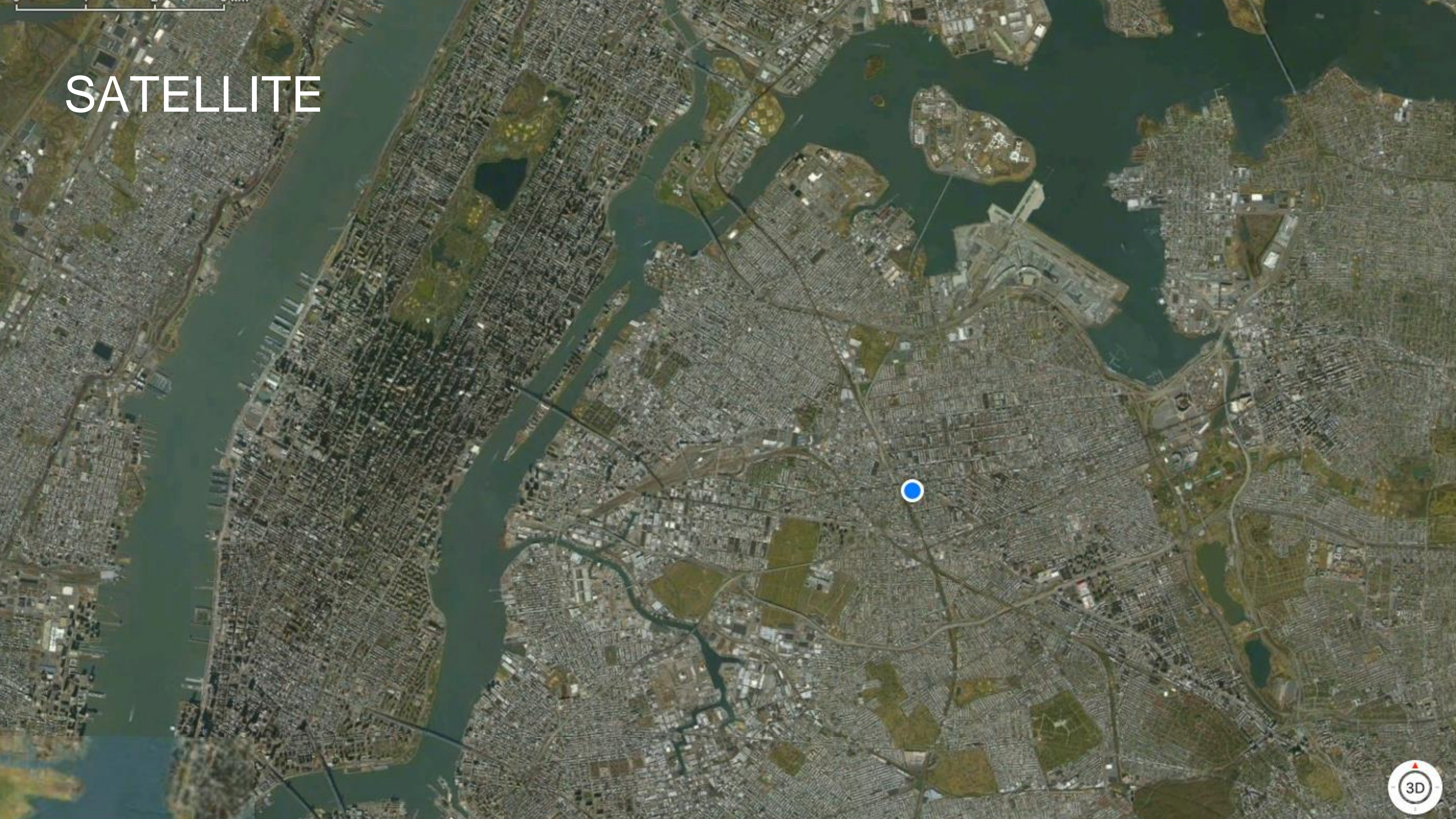




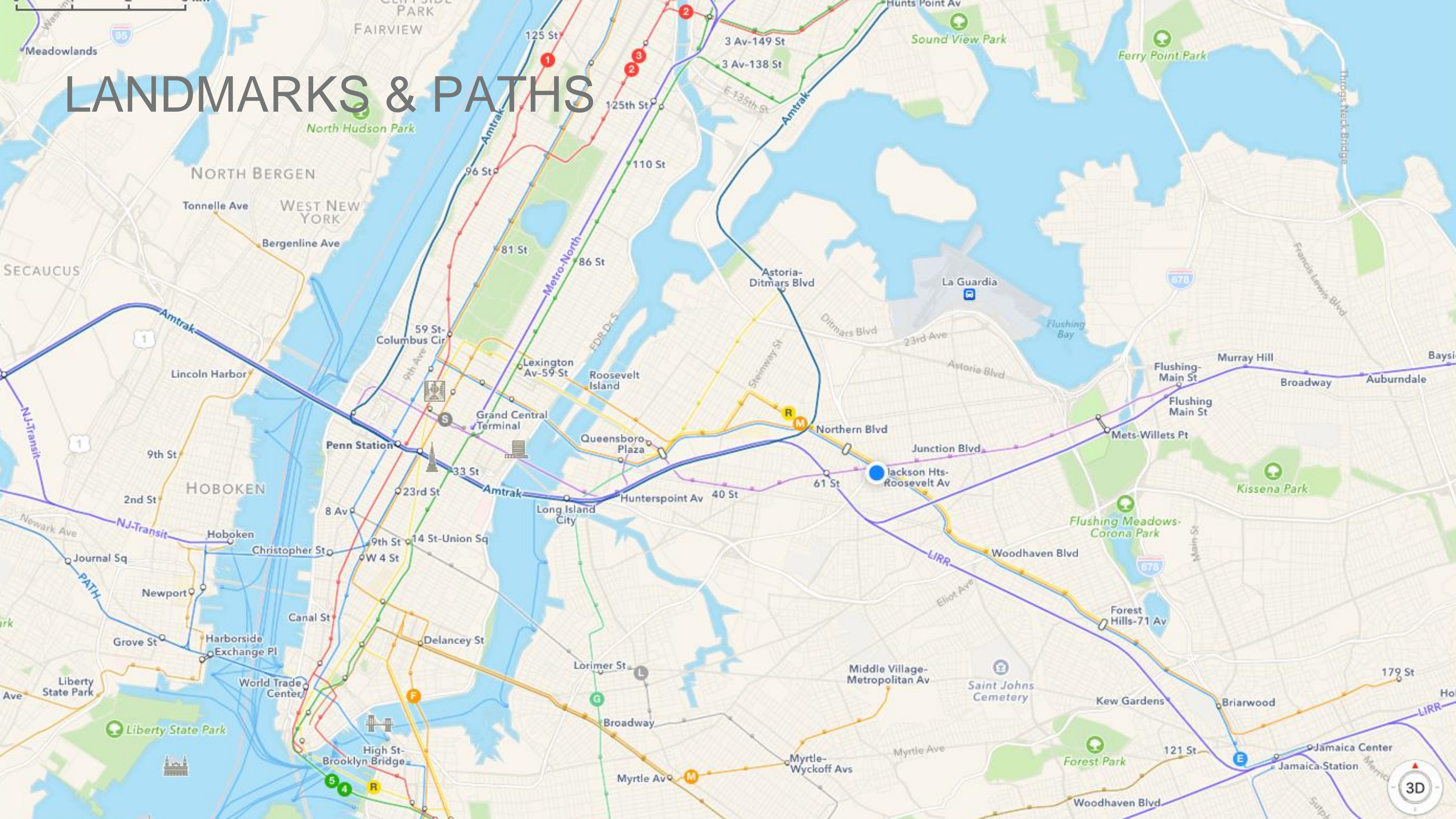


SATELLITE



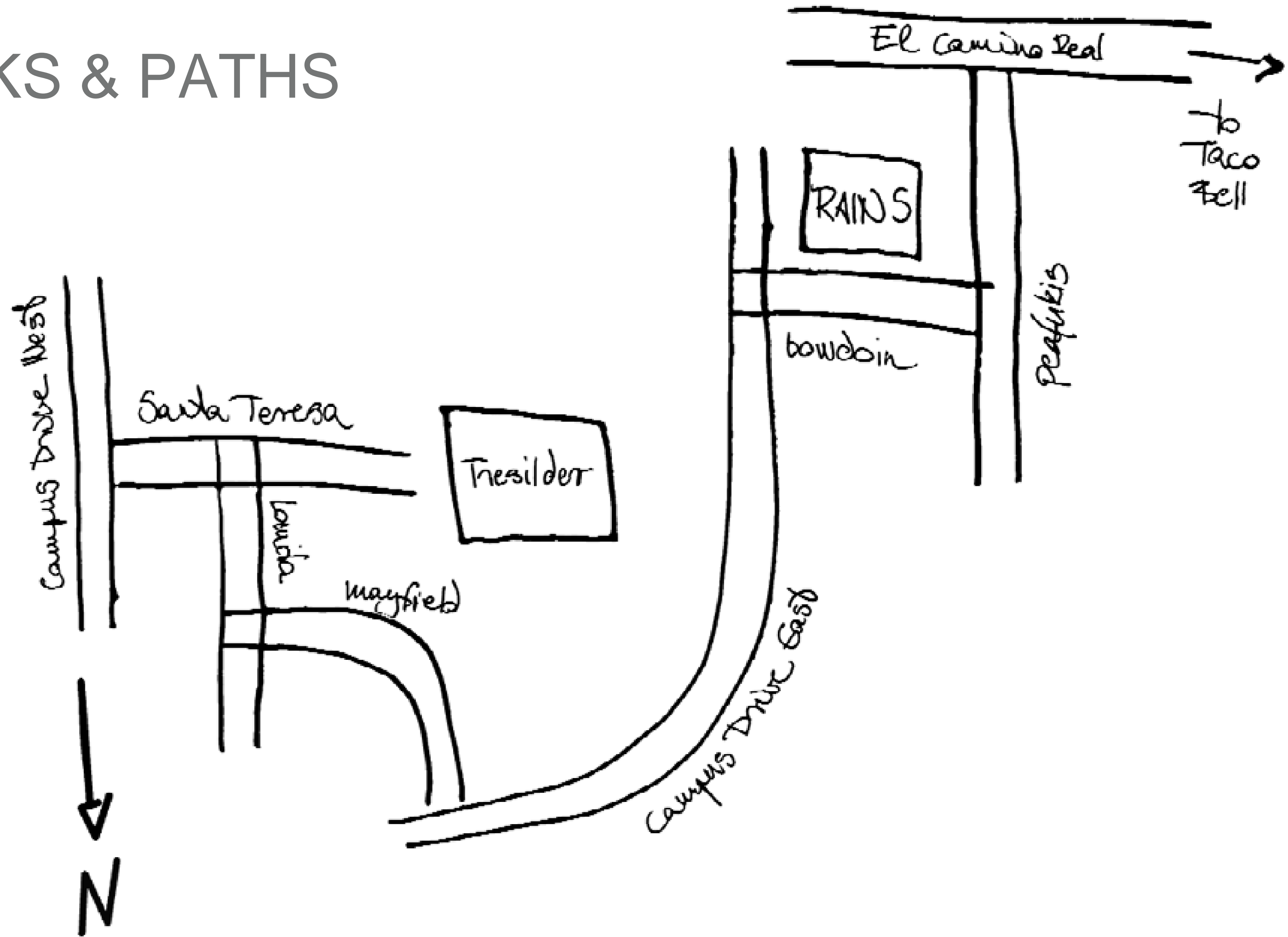


# LANDMARKS & PATHS





# LANDMARKS & PATHS



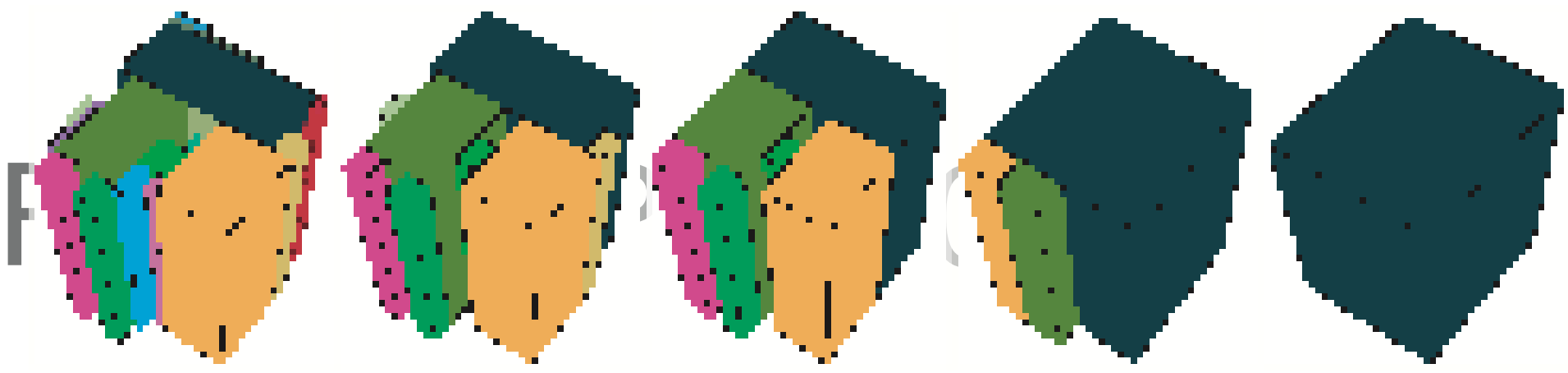


# LINEDRIVE (2001)





# AUTOMATIC GENERATION OF TOUR





# STREET VIEW



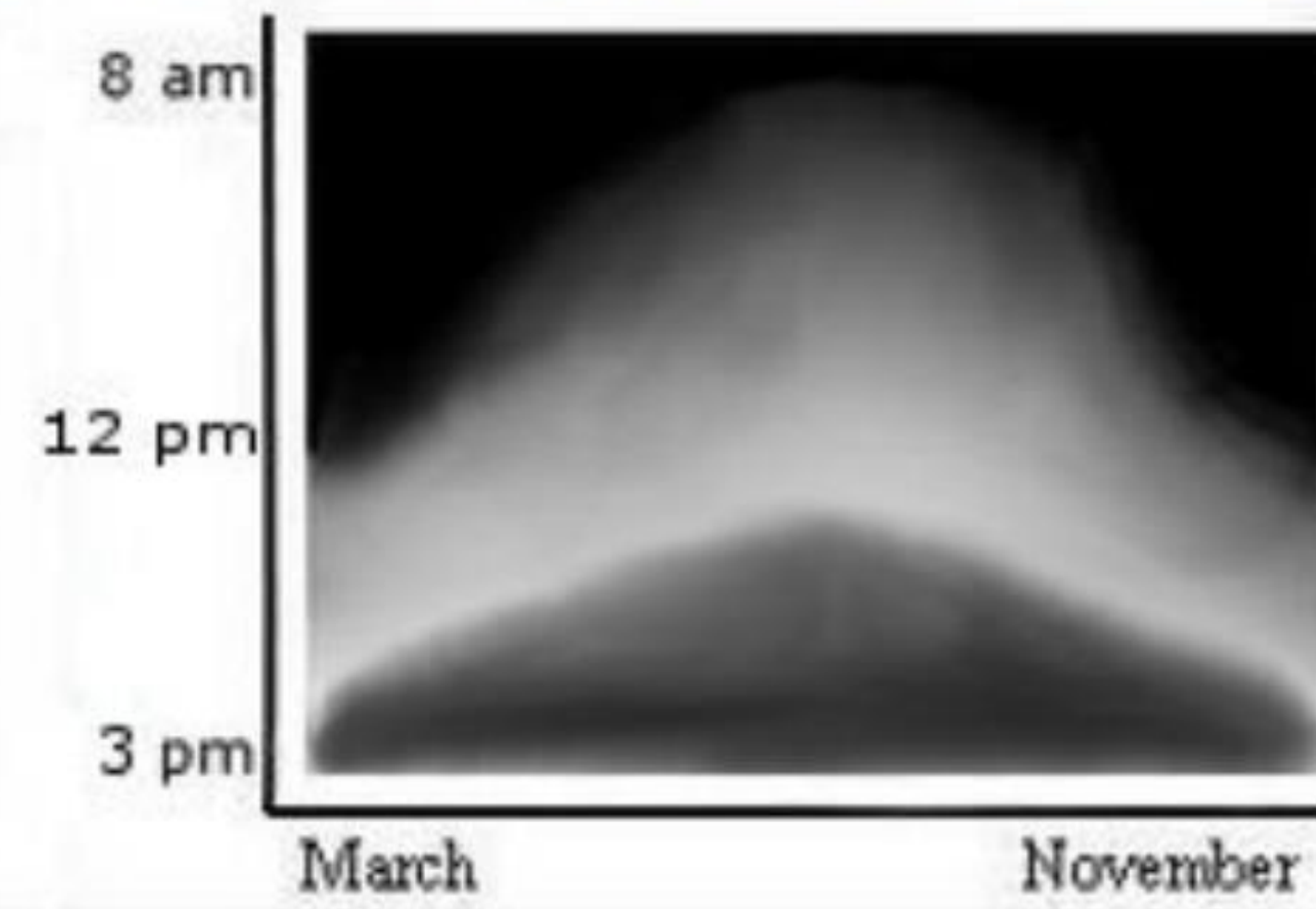
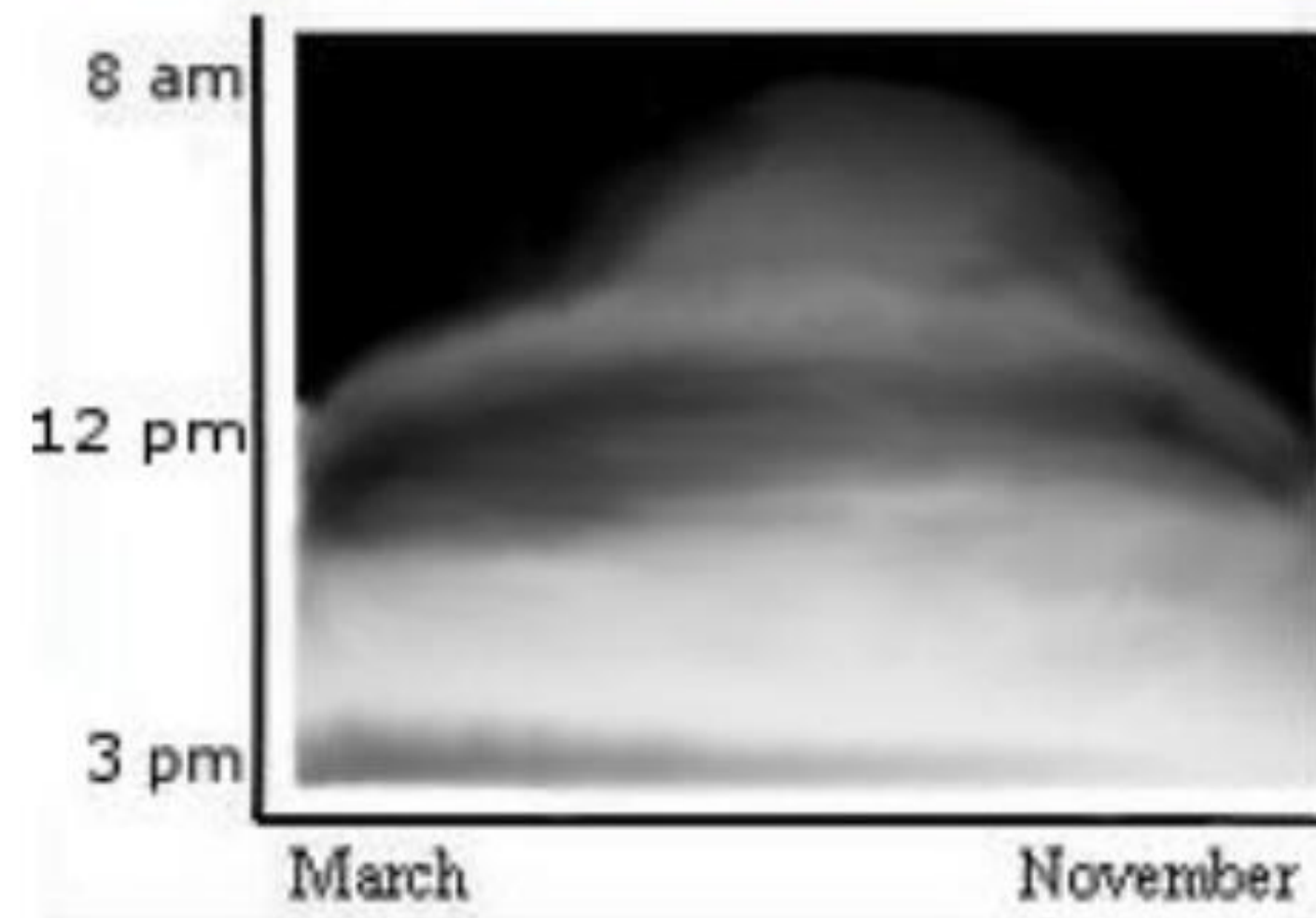
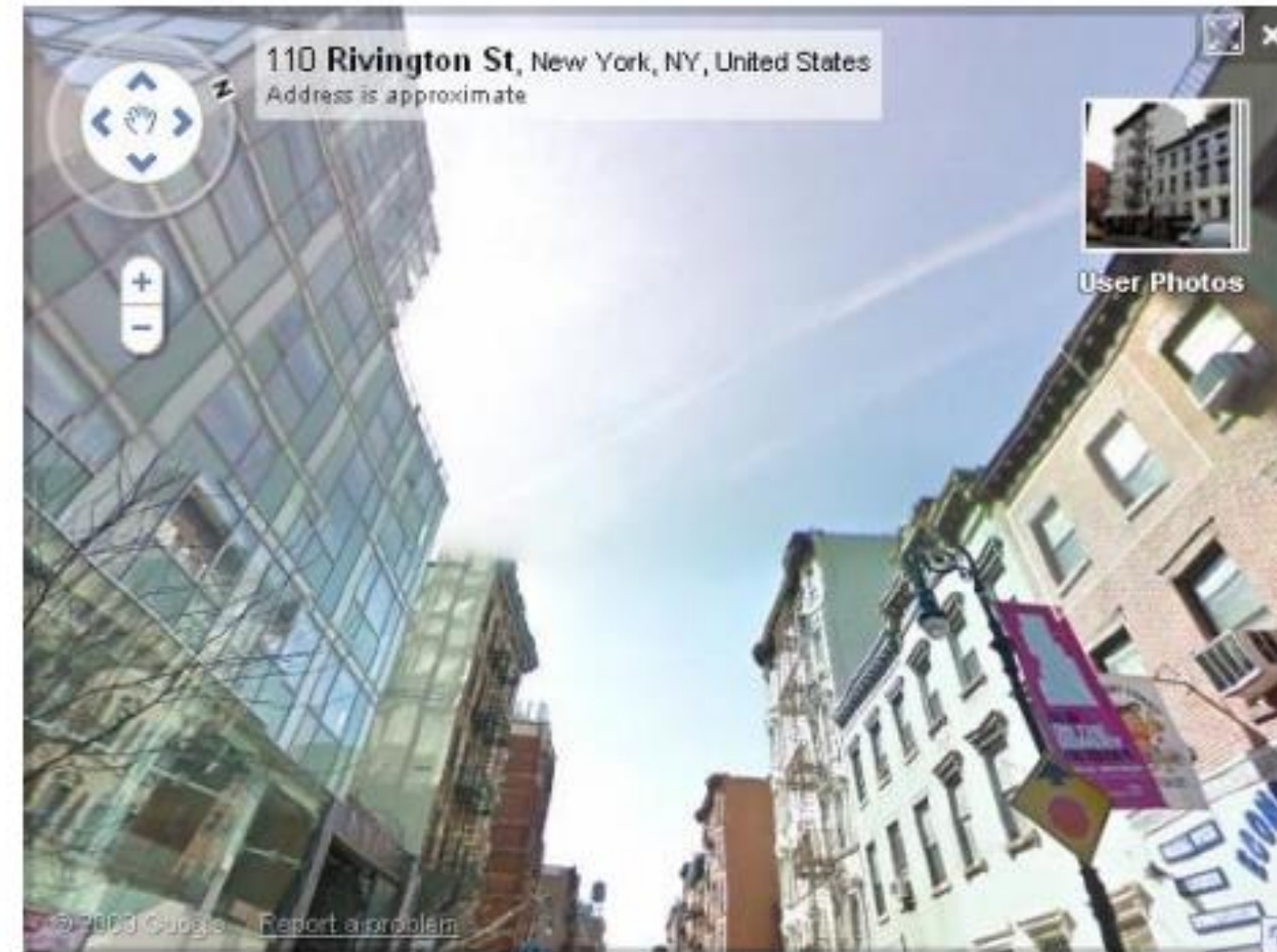


# STREETSIDE VIEW (2010)





# STREET LIGHT VIEW (2010)

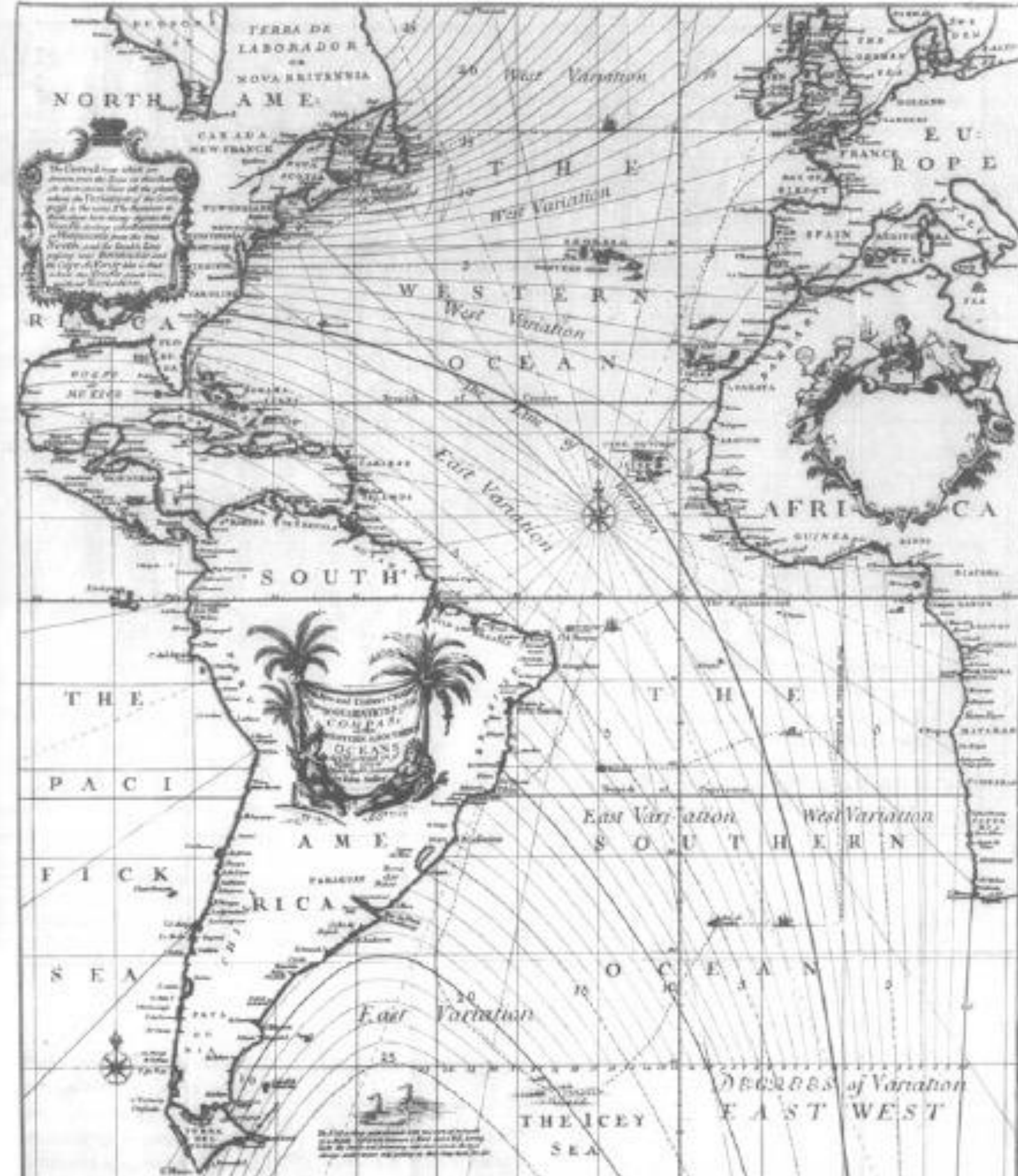




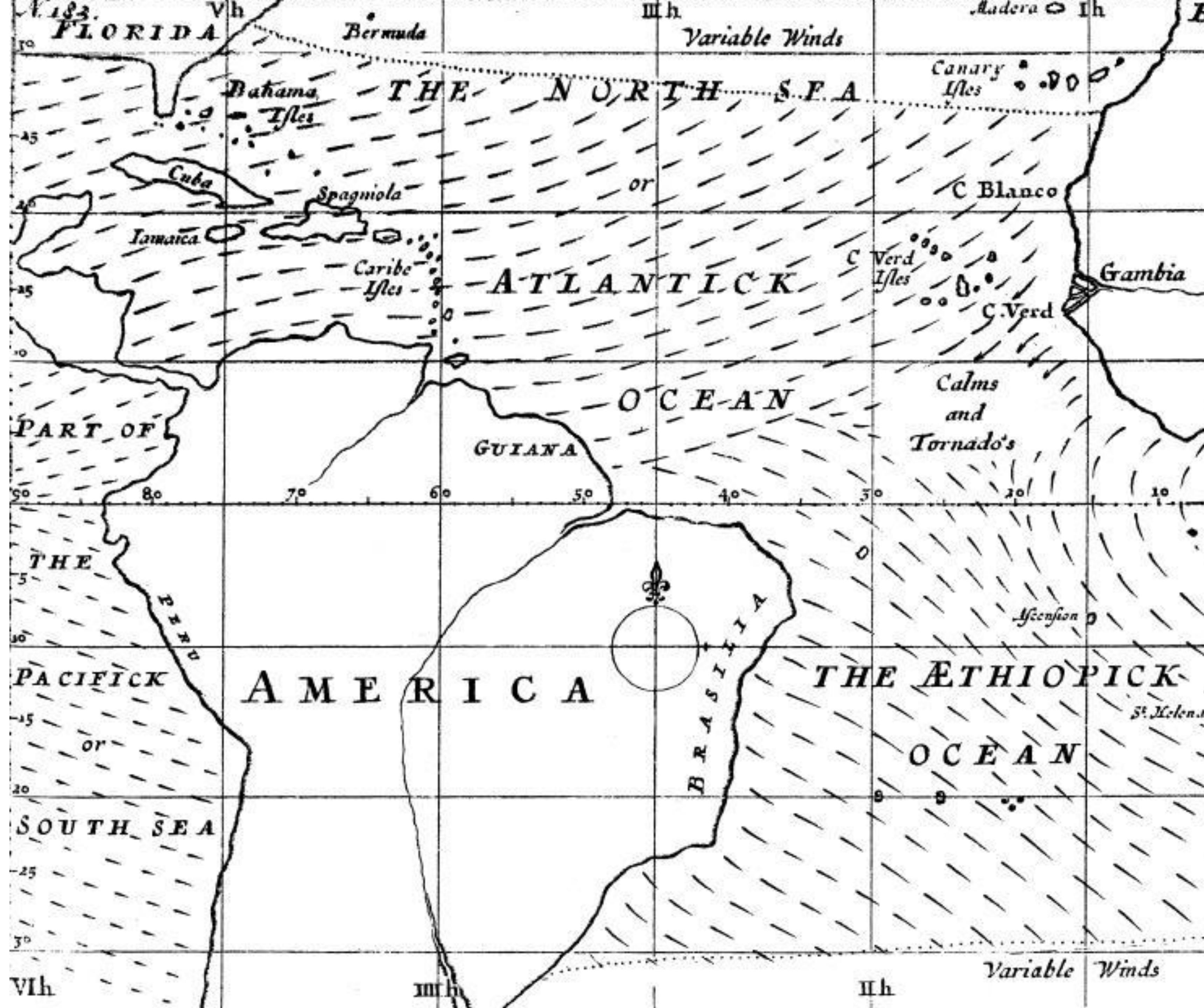
# ISOPLETH MAPS

---

- Use lines to show data
- First in 1701
  - Lines of Equal Magnetic Declination
  - By Edmond Halley (comet guy)











Reservoirs

St  
Hill

Stowe

Cady  
Hill

Taber  
Hill

Lower Village

BM 7231

BM 670

100

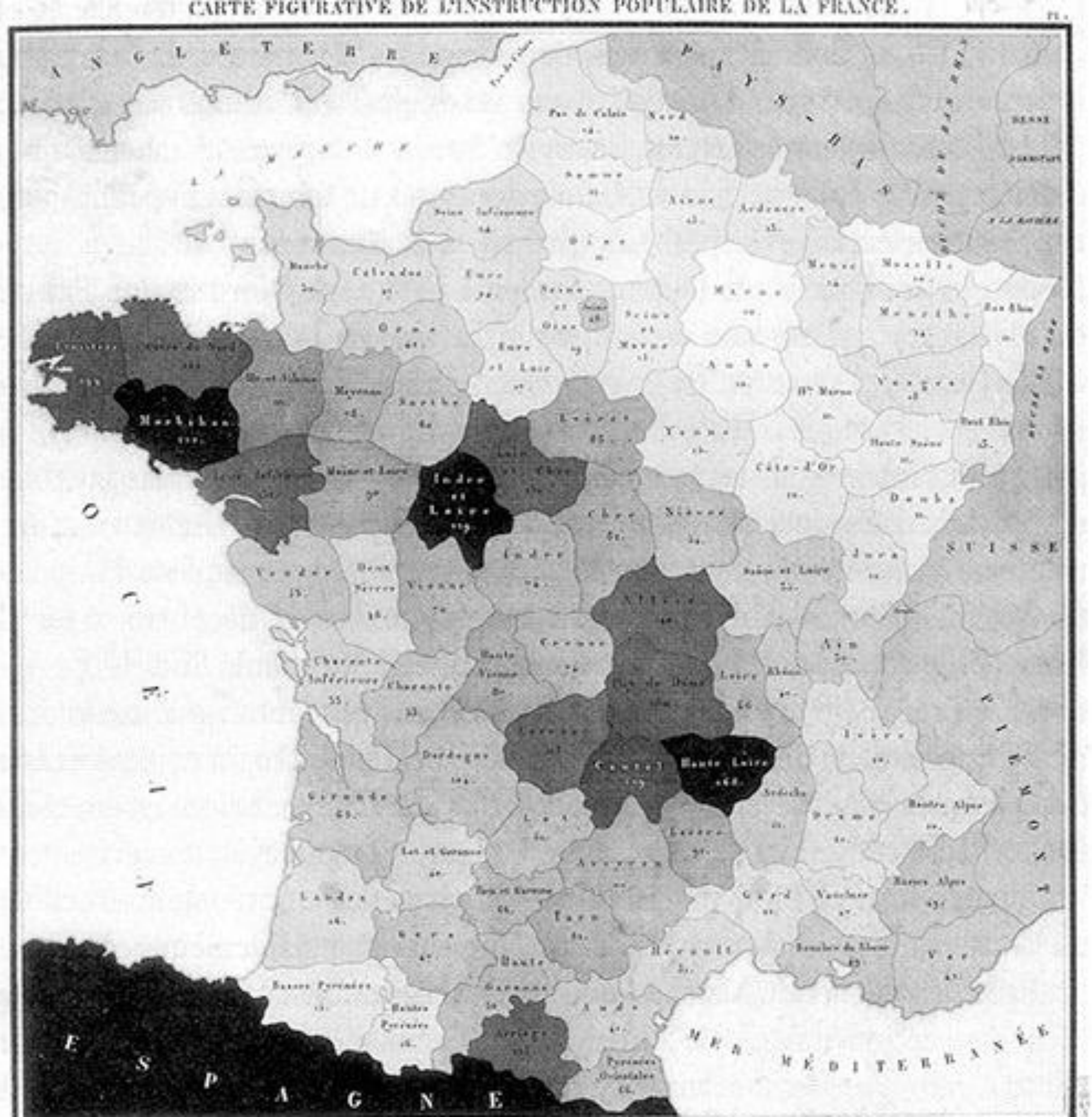
100



# CHOROPLETH MAPS

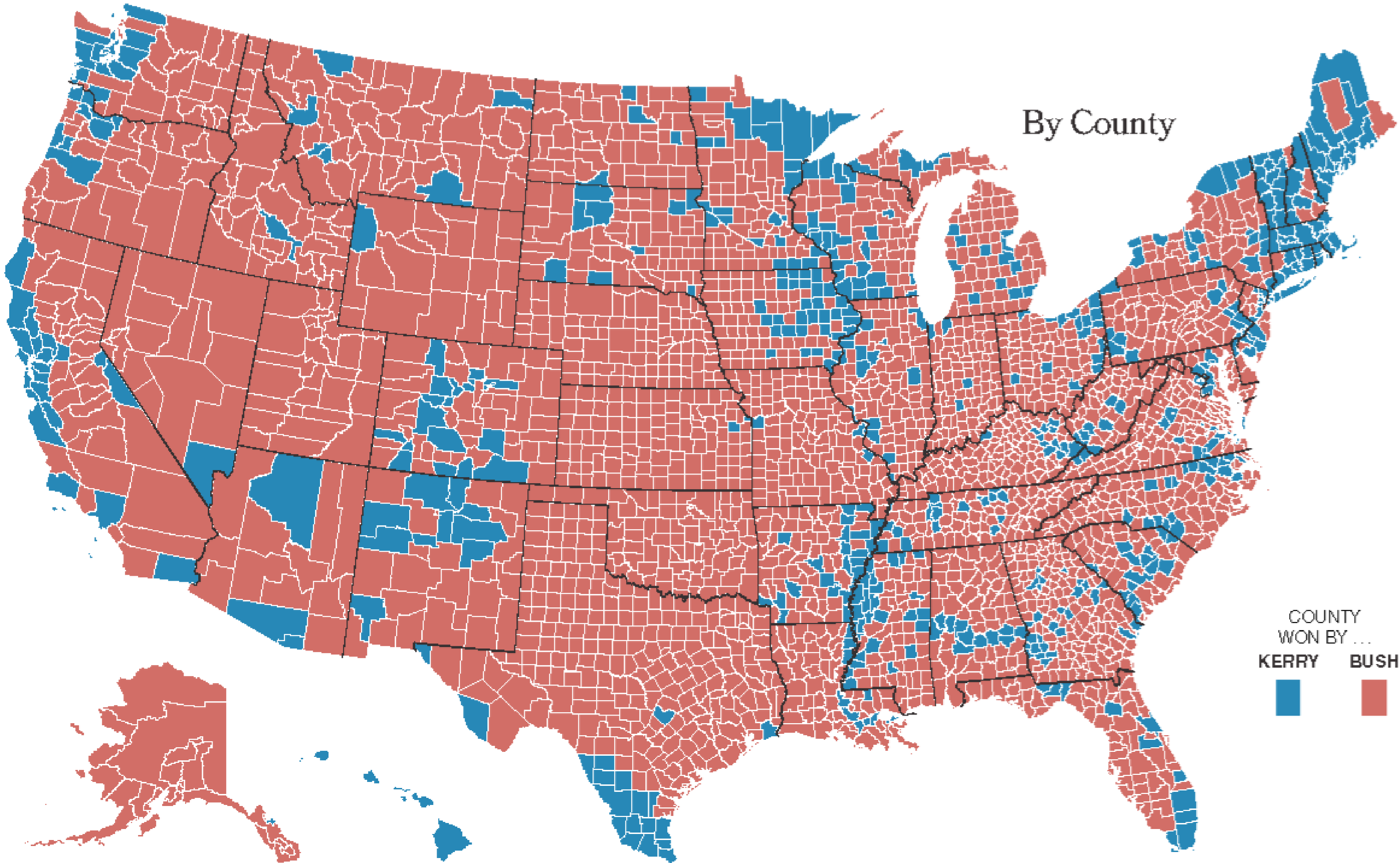
---

- Use colors/shadings to show data
- First in 1826
  - Illiteracy in France
- Perception problems?



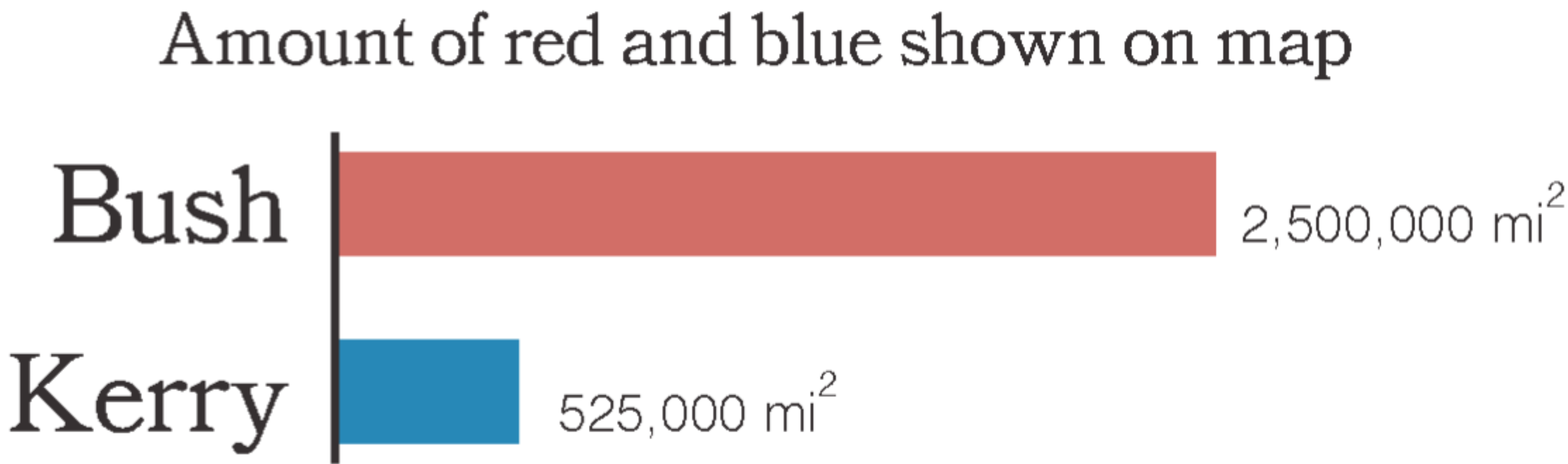
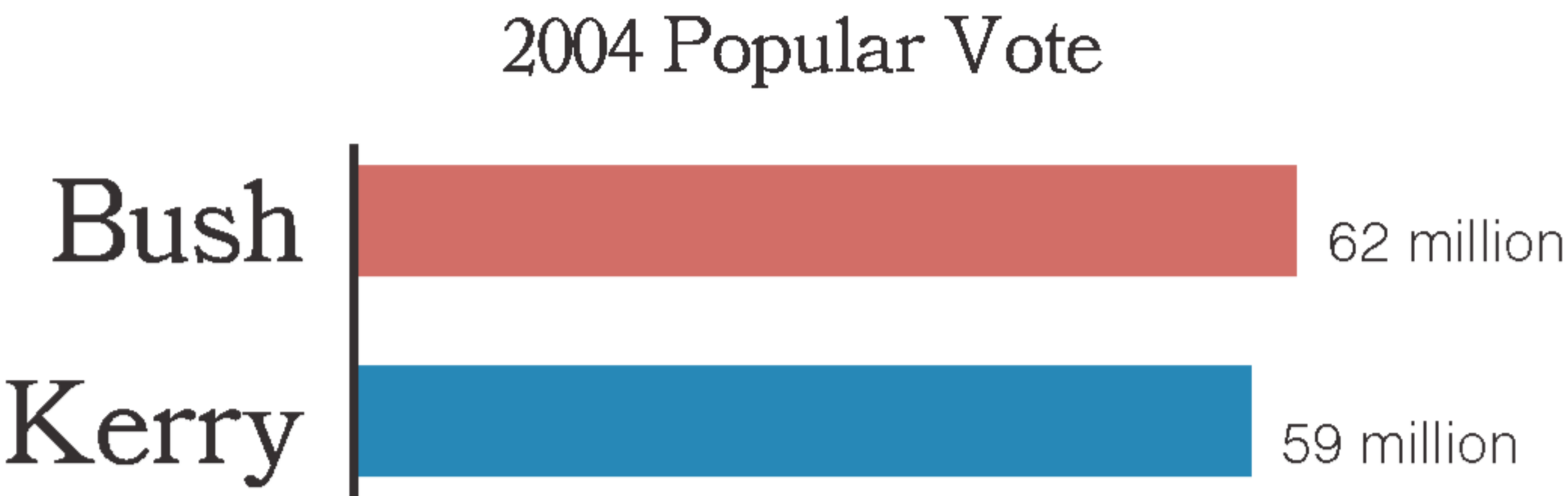


# KERRY VS. BUSH (2004)



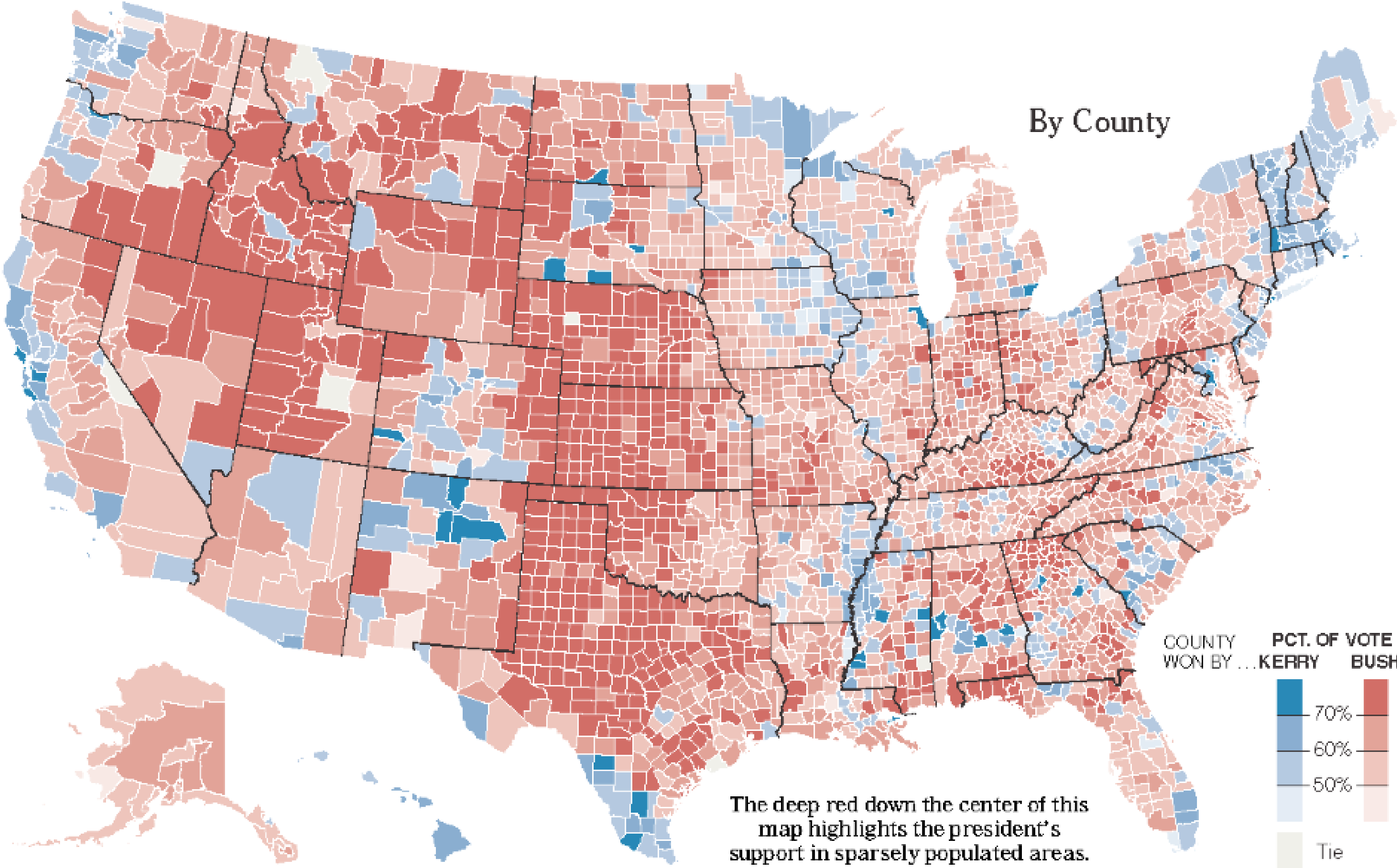


# KERRY VS. BUSH (2004)



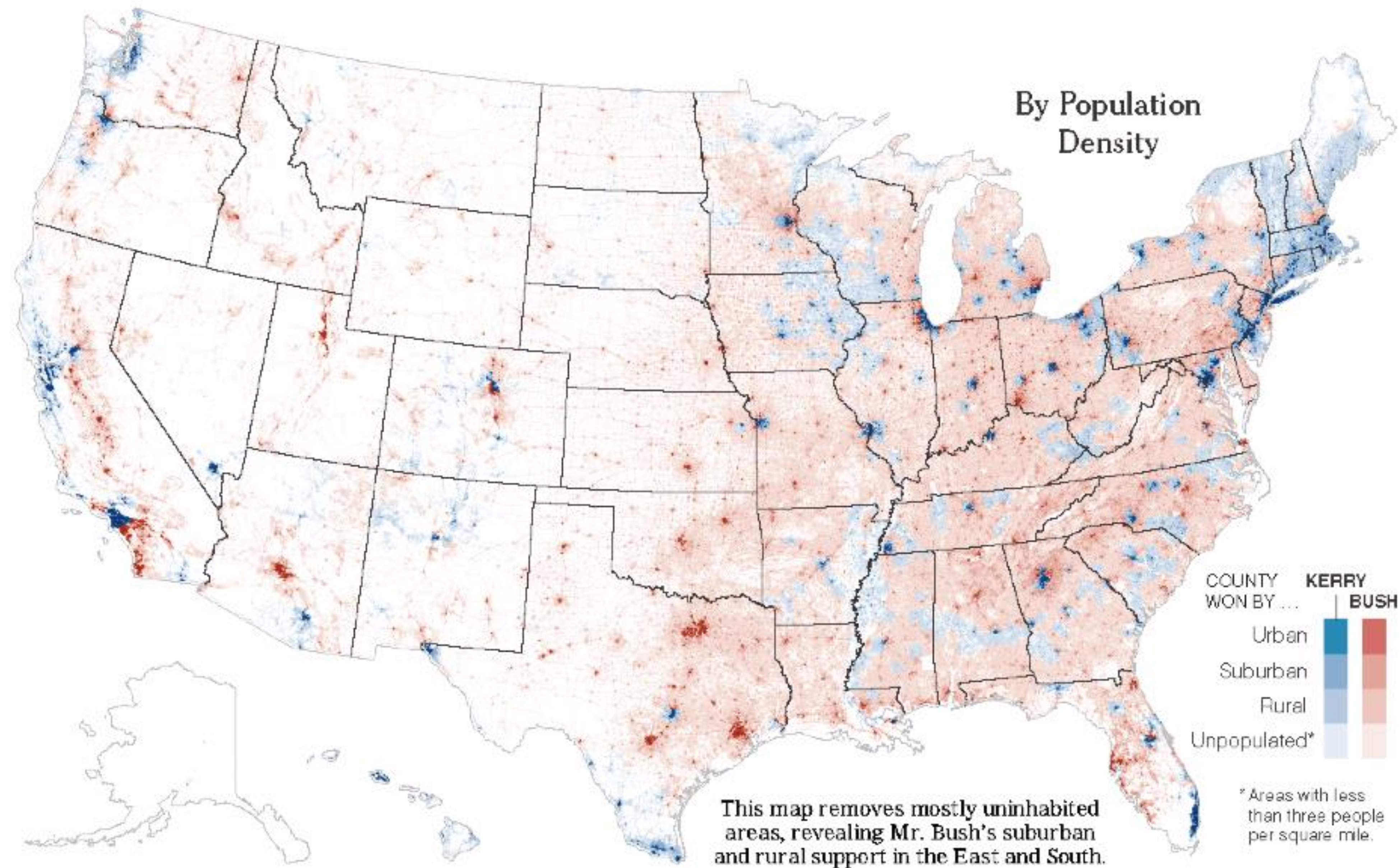


# KERRY VS. BUSH (2004)



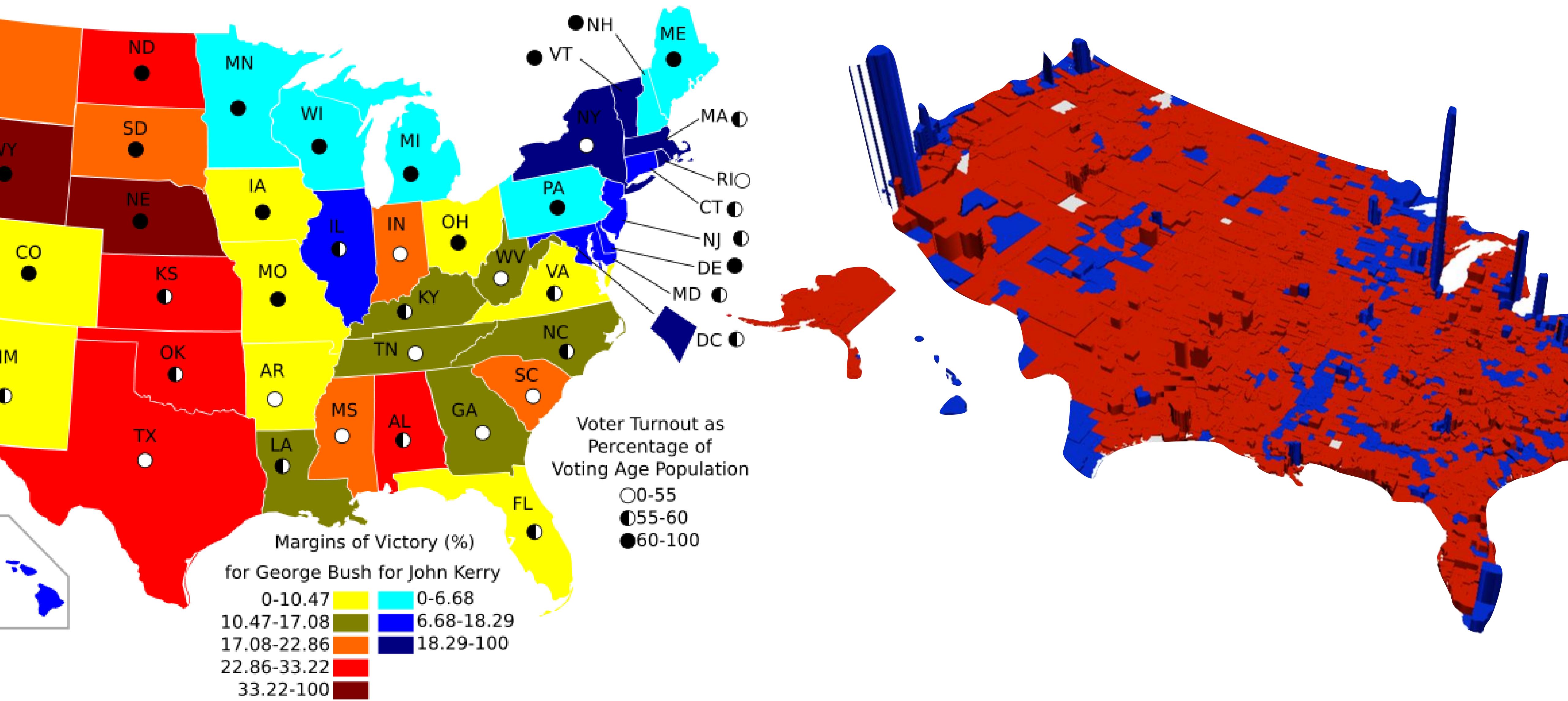


# KERRY VS. BUSH (2004)



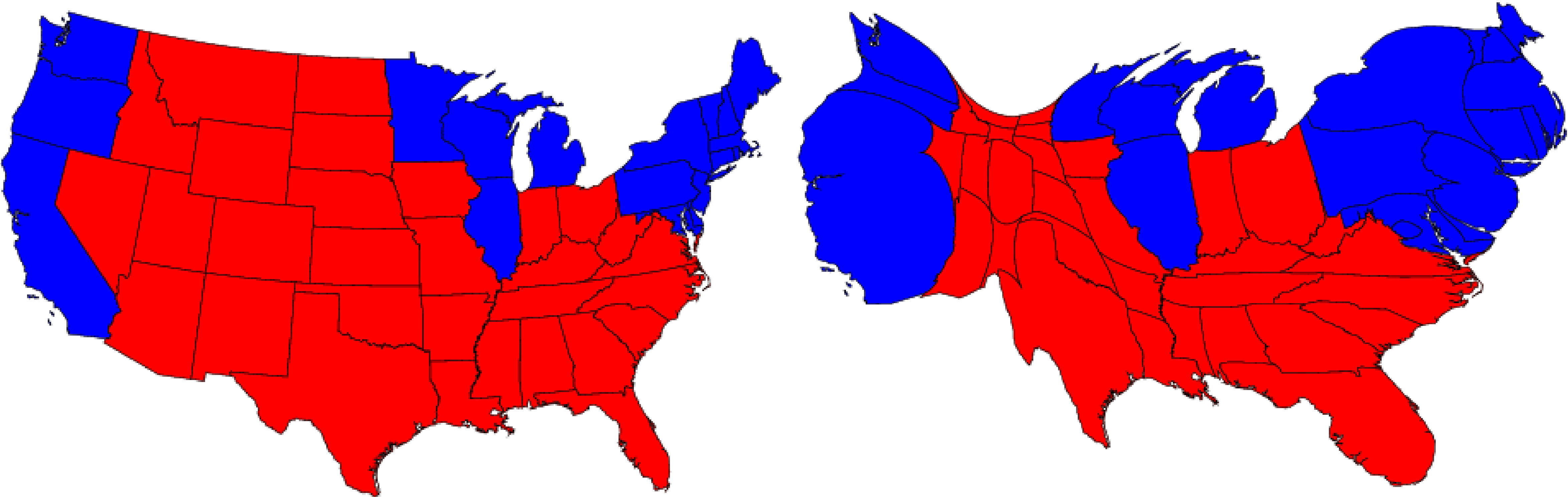


# KERRY VS. BUSH (2004)



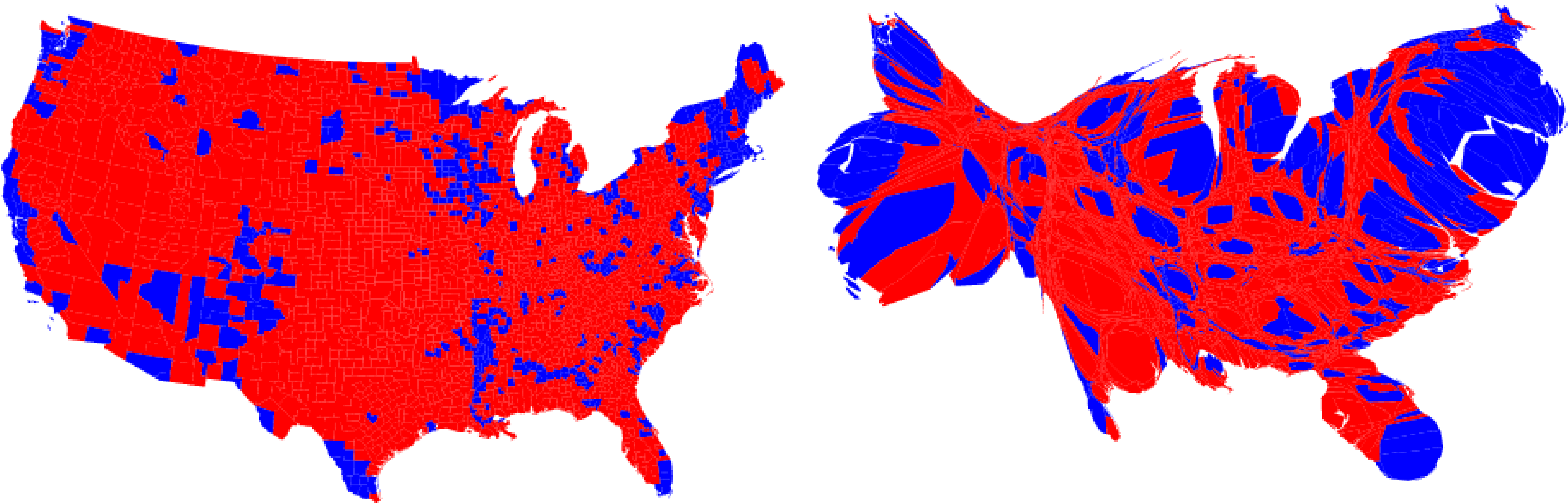


KERRY VS. BUSH (2004)



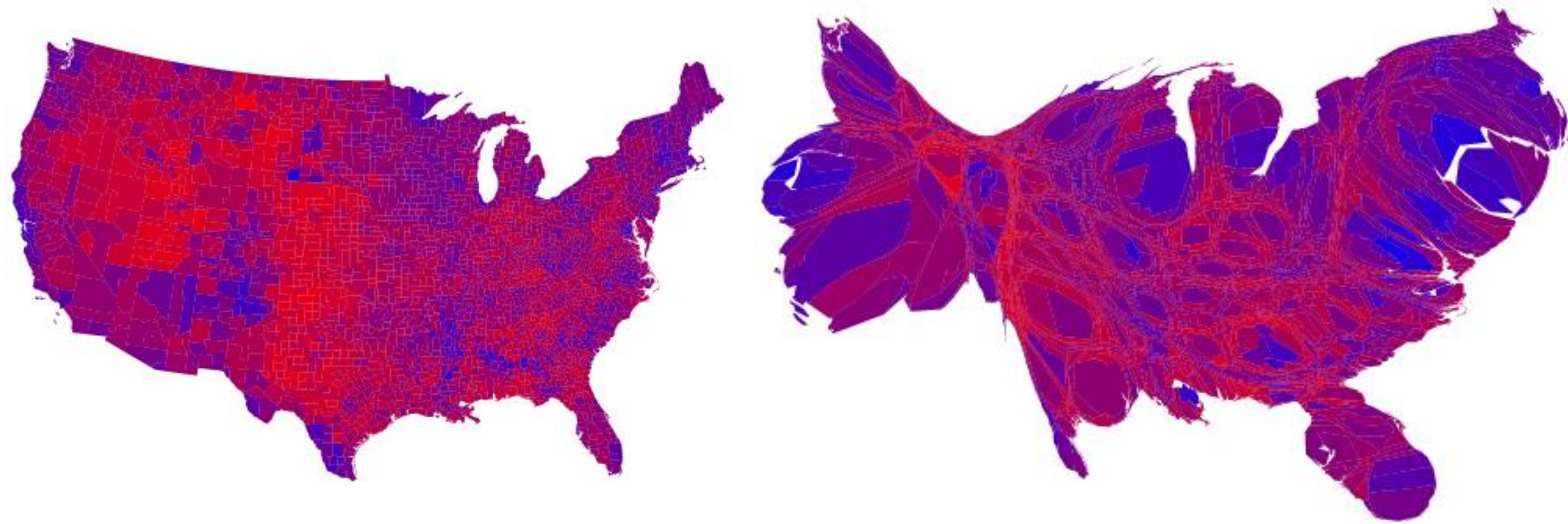


KERRY VS. BUSH (2004)



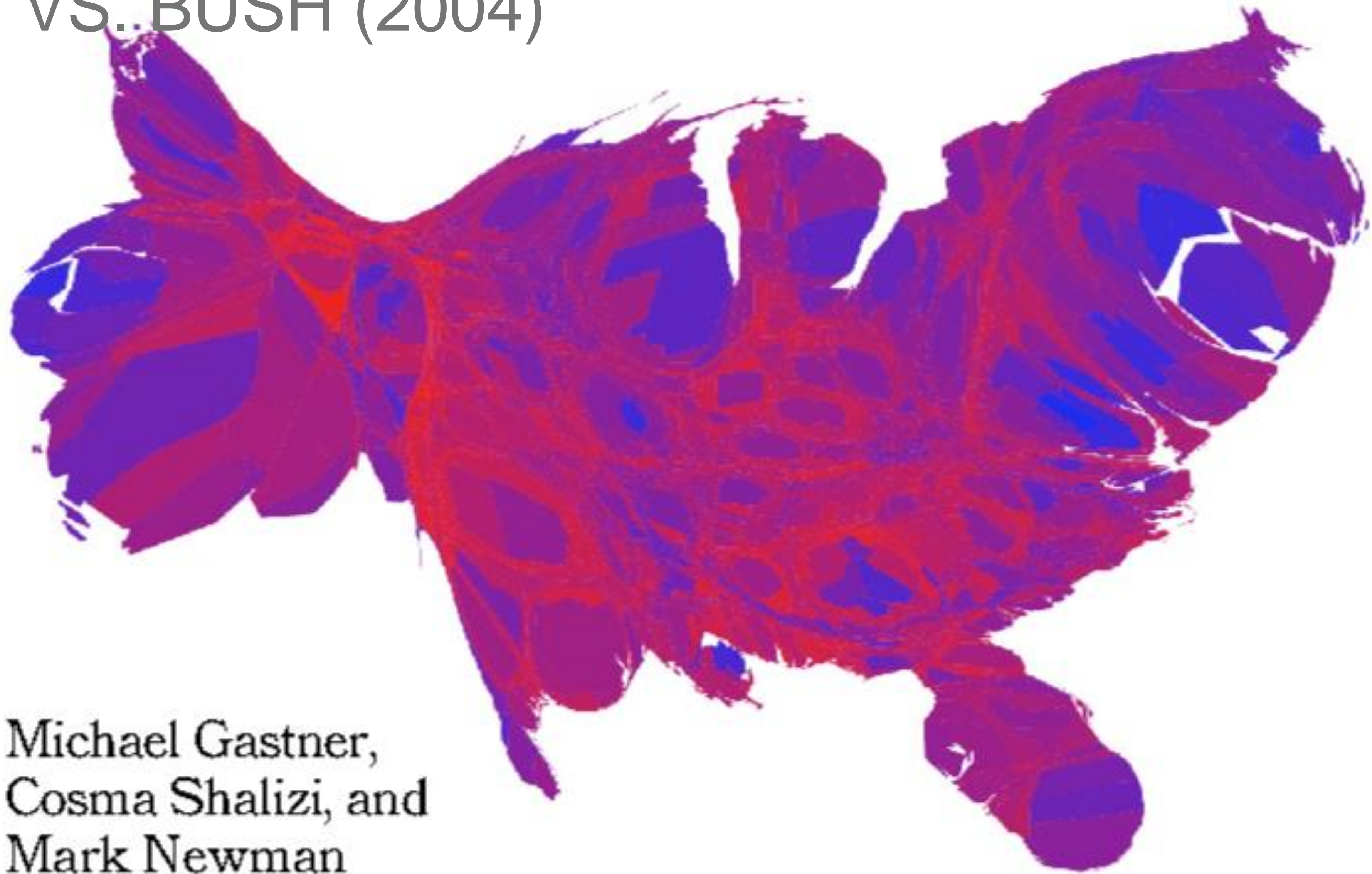


# KERRY VS. BUSH (2004)





# KERRY VS. BUSH (2004)



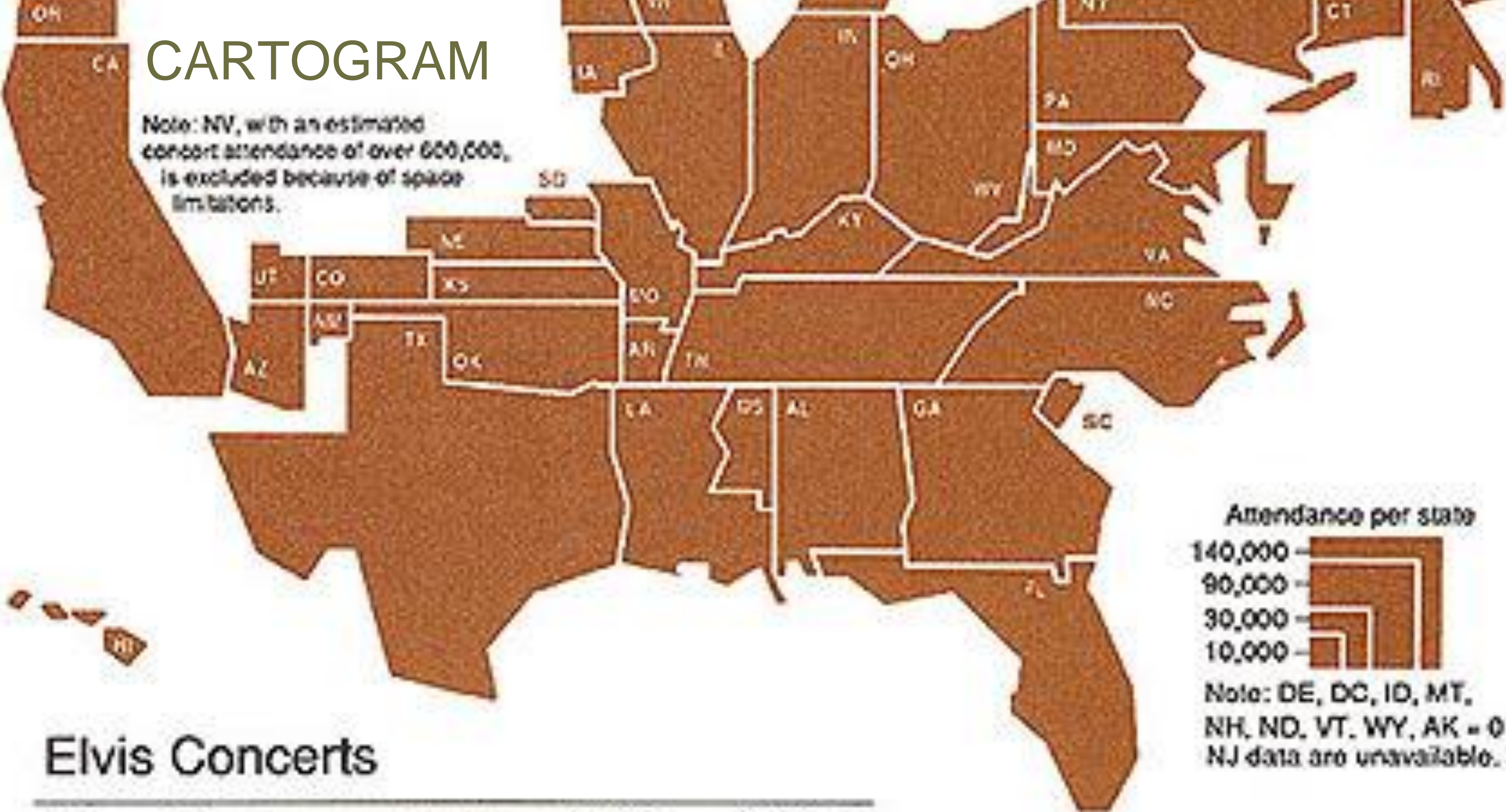
Michael Gastner,  
Cosma Shalizi, and  
Mark Newman

*University of Michigan*



# CARTOGRAM

Note: NV, with an estimated concert attendance of over 600,000, is excluded because of space limitations.



## Elvis Concerts

### Attendance per State, 1970 - 1977



cylindrical



conical



azimuthal



azimuthal



polyconical

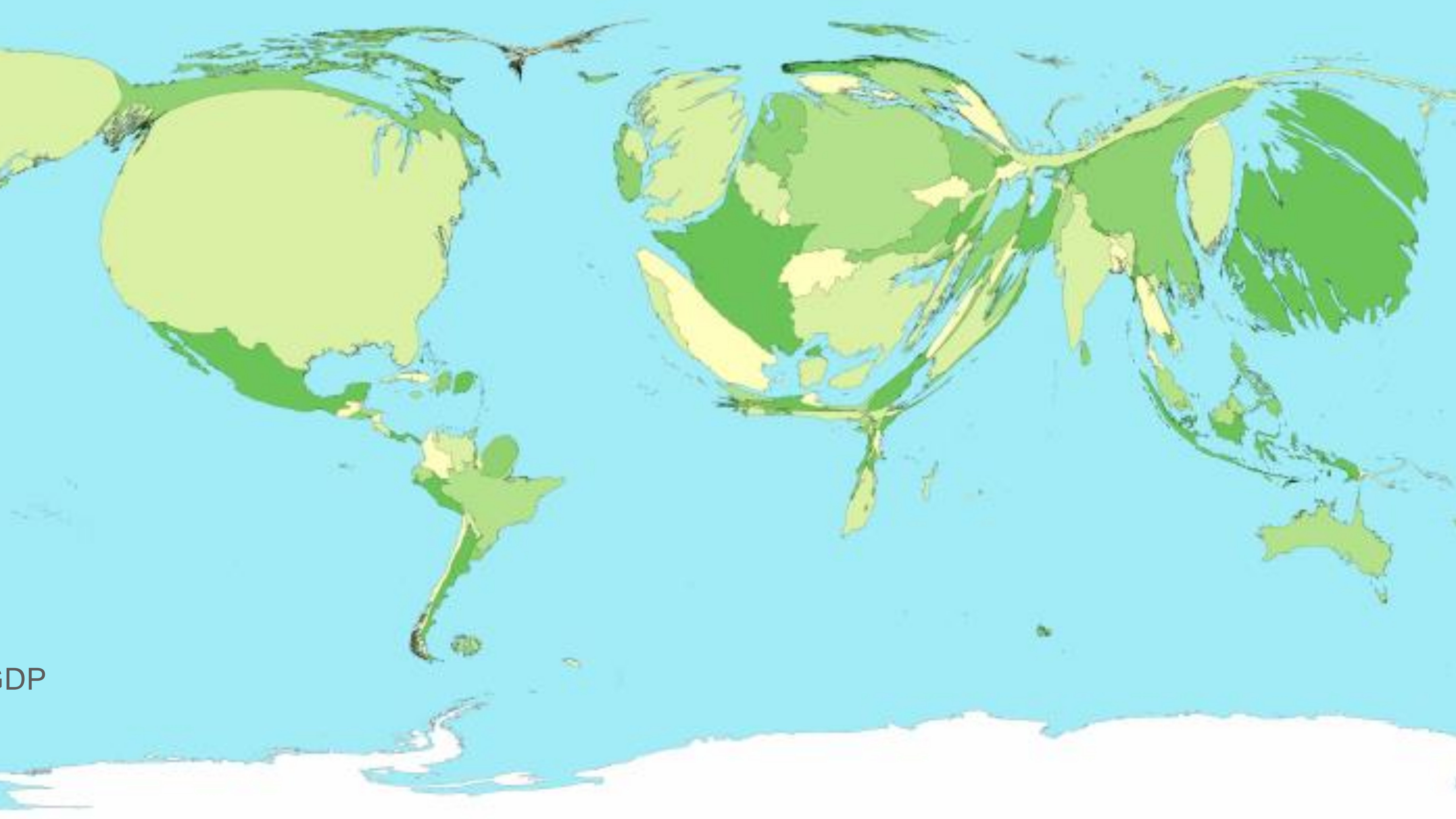






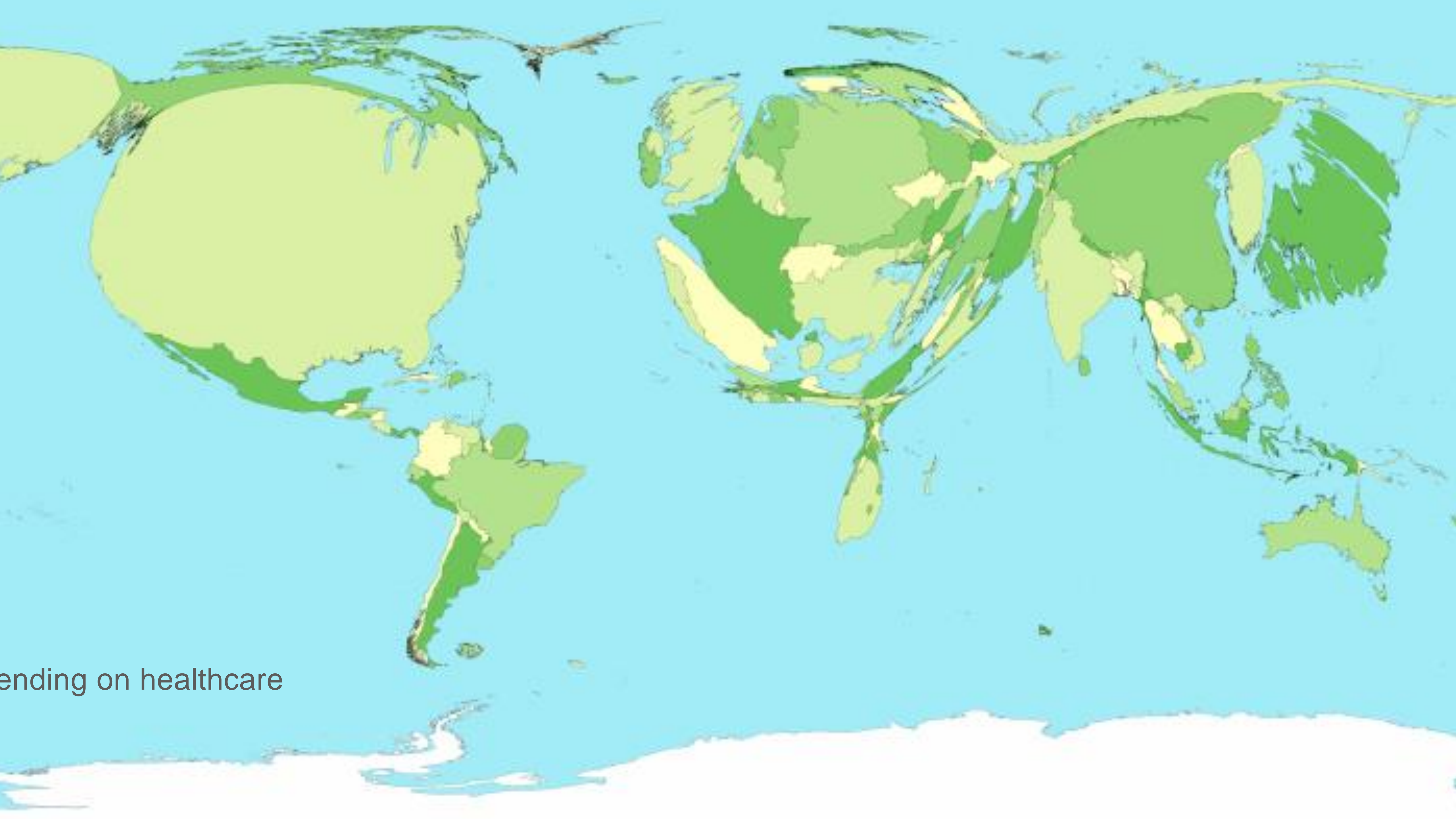
population based





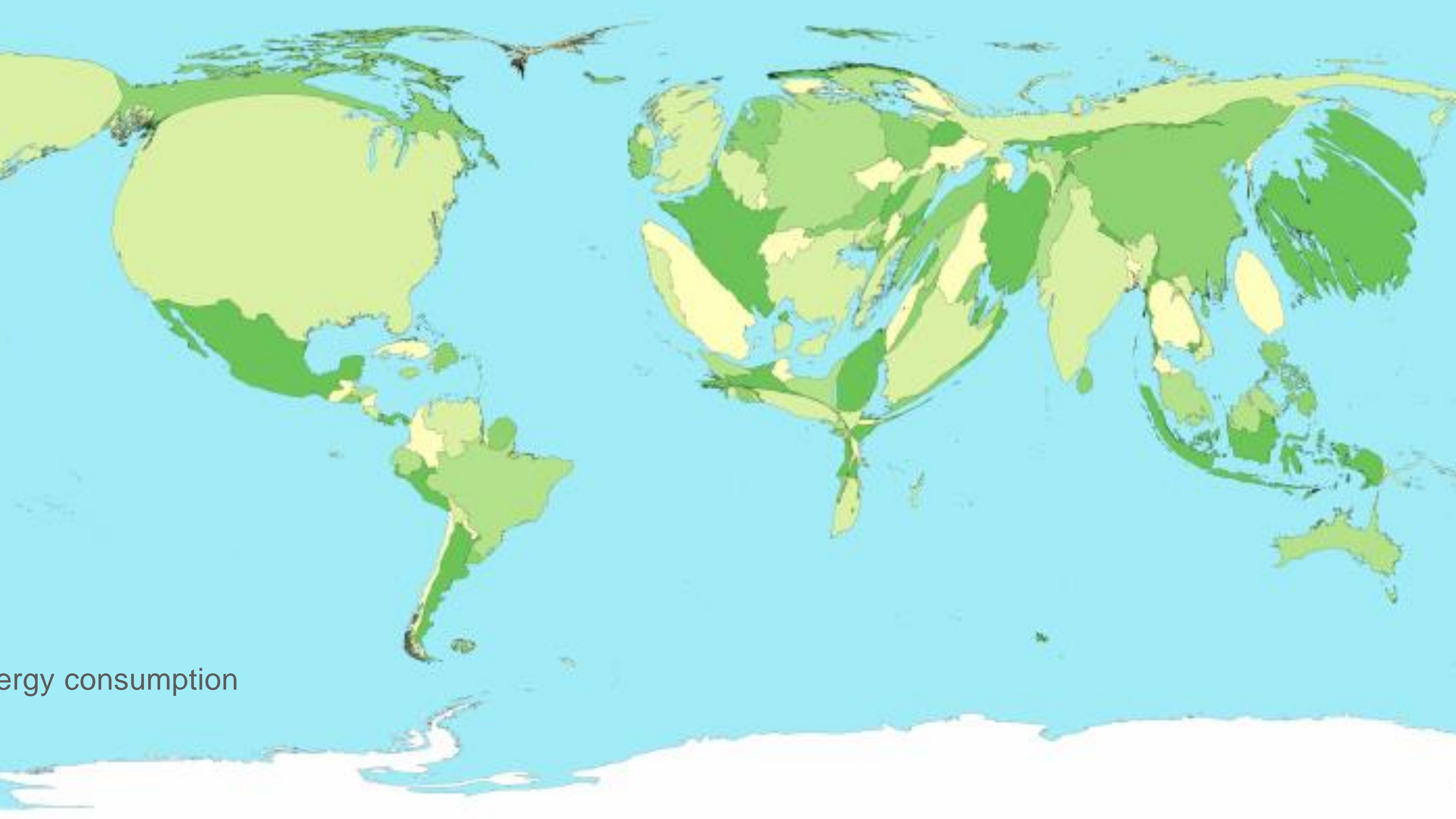
GDP





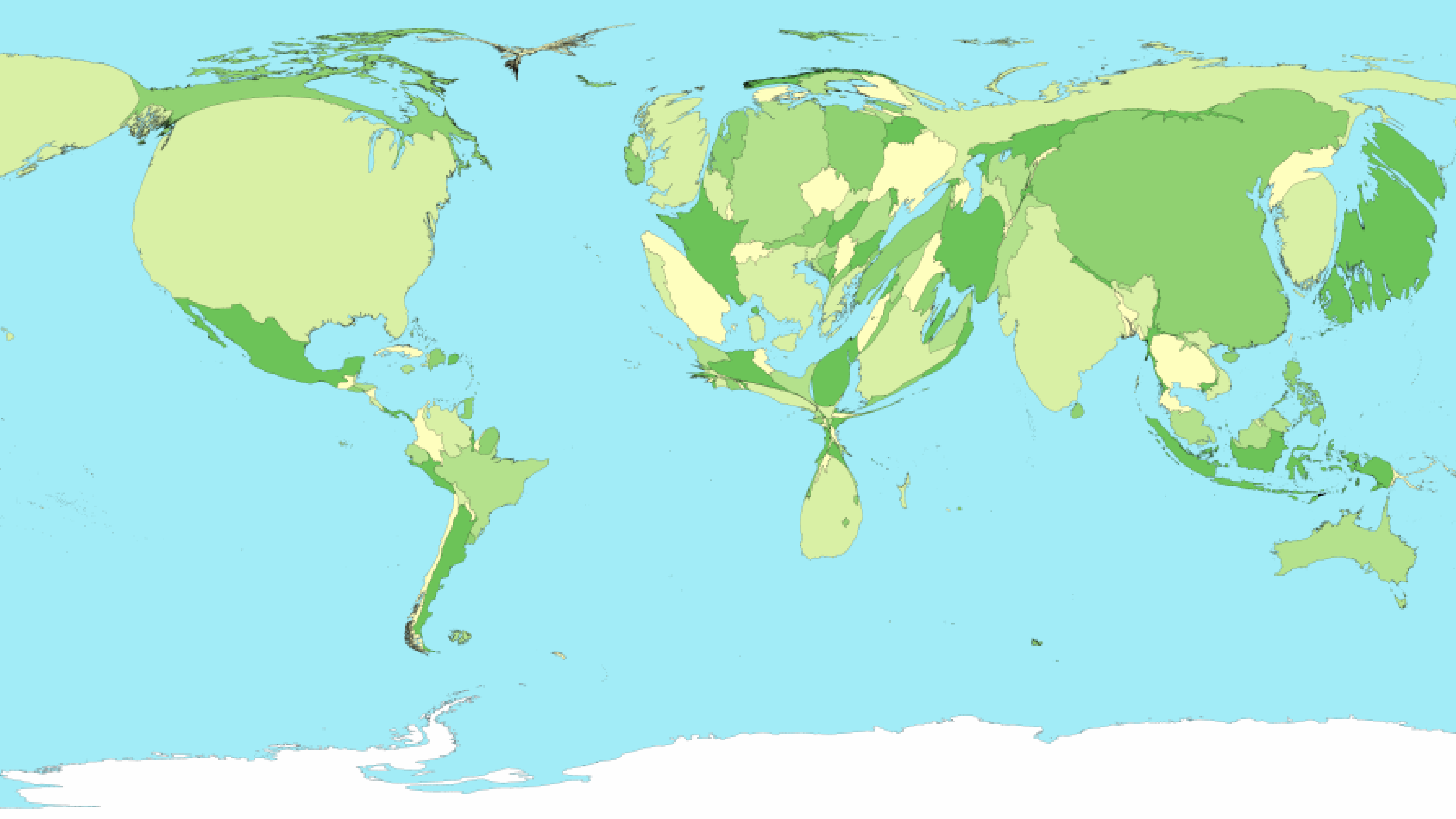
ending on healthcare





Energy consumption

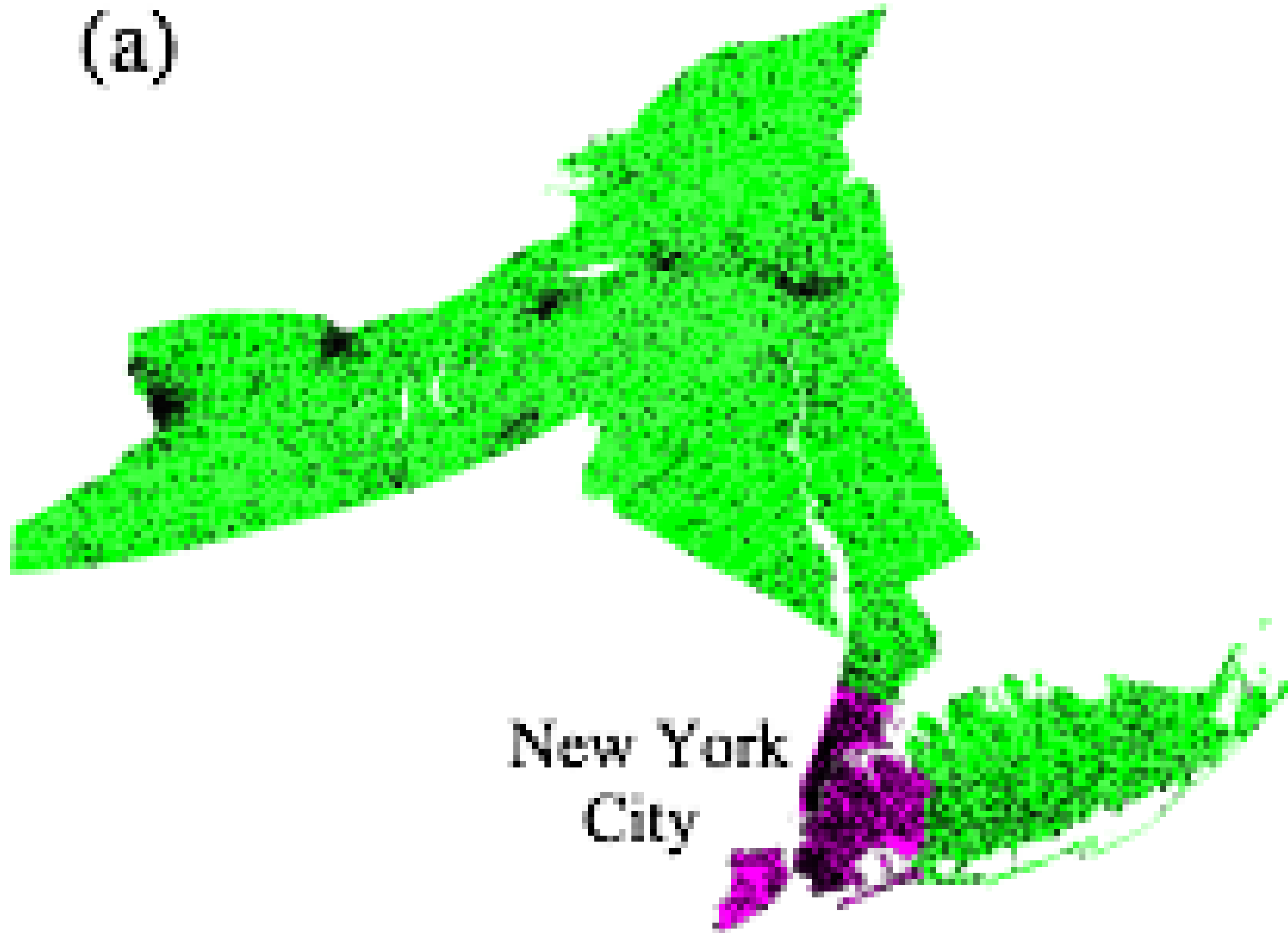




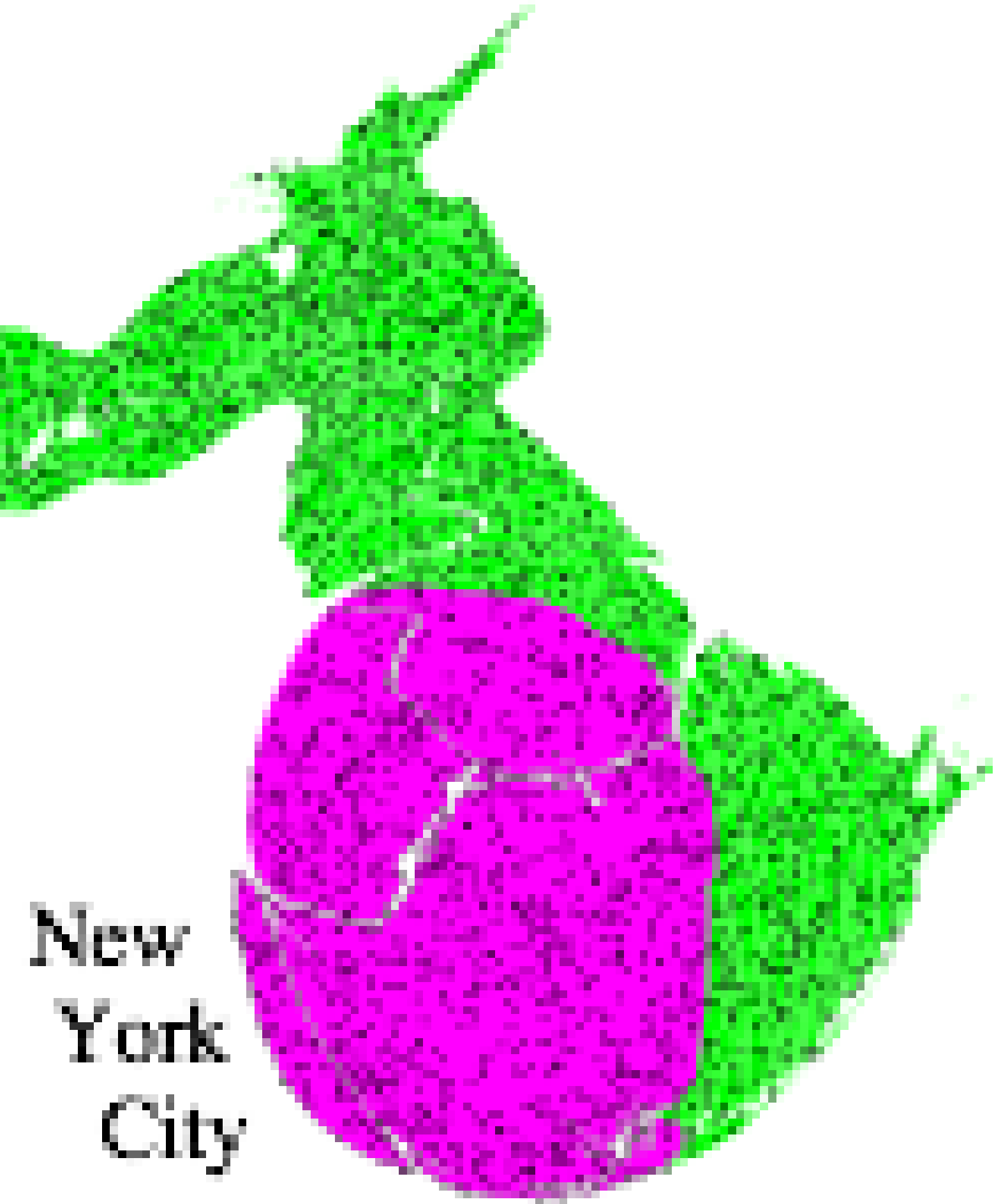


# DENSITY-EQUALIZING MAP PROJECTION (2004)

(a)



(b)





**Figure 1.8 Airlines' view of the United States.**

Maps can be scaled to units other than distance. In this case, airline fares are used instead of miles or other linear units.

*(Map copyright by the author.)*



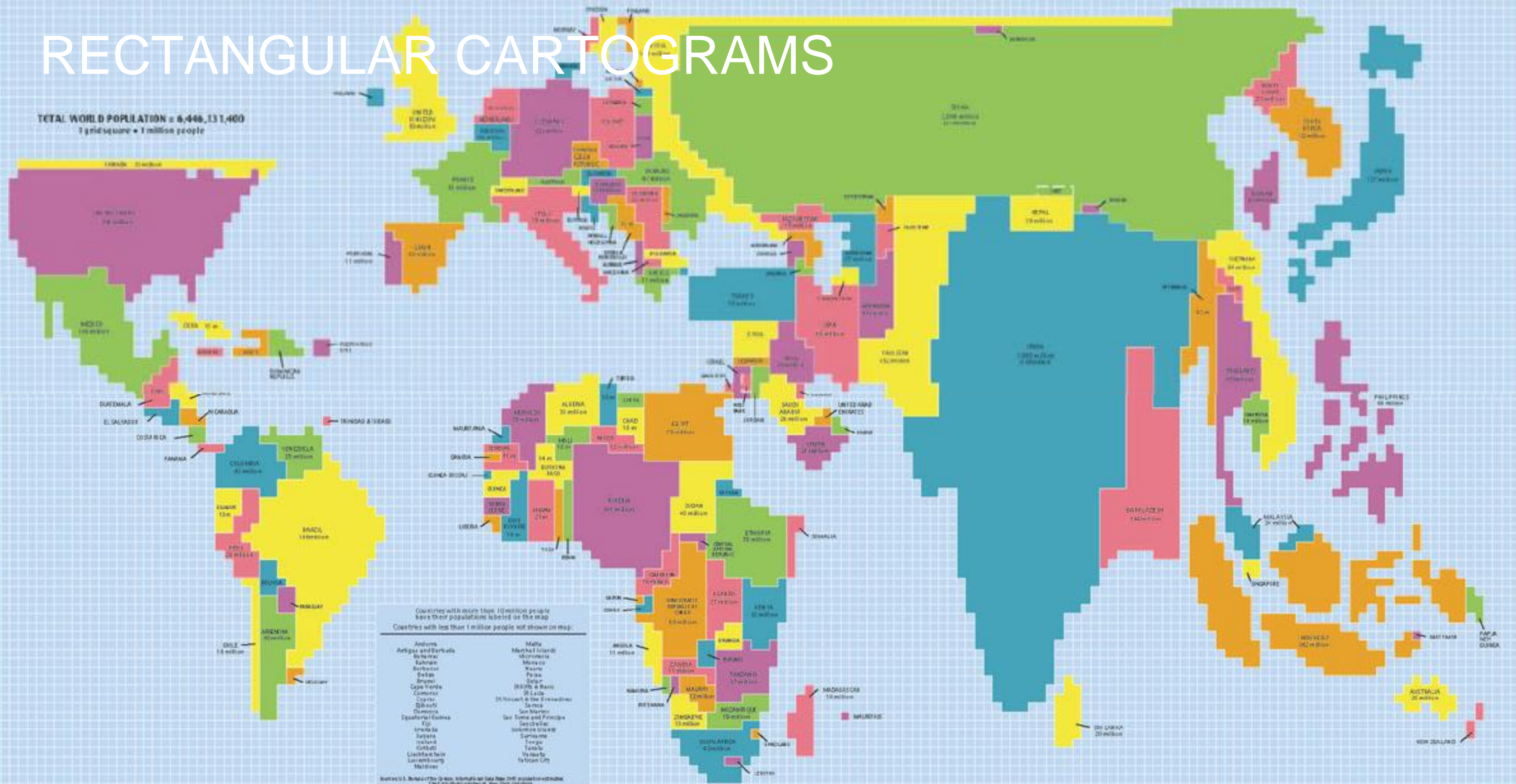


# TRAFFIGRAM (2014)



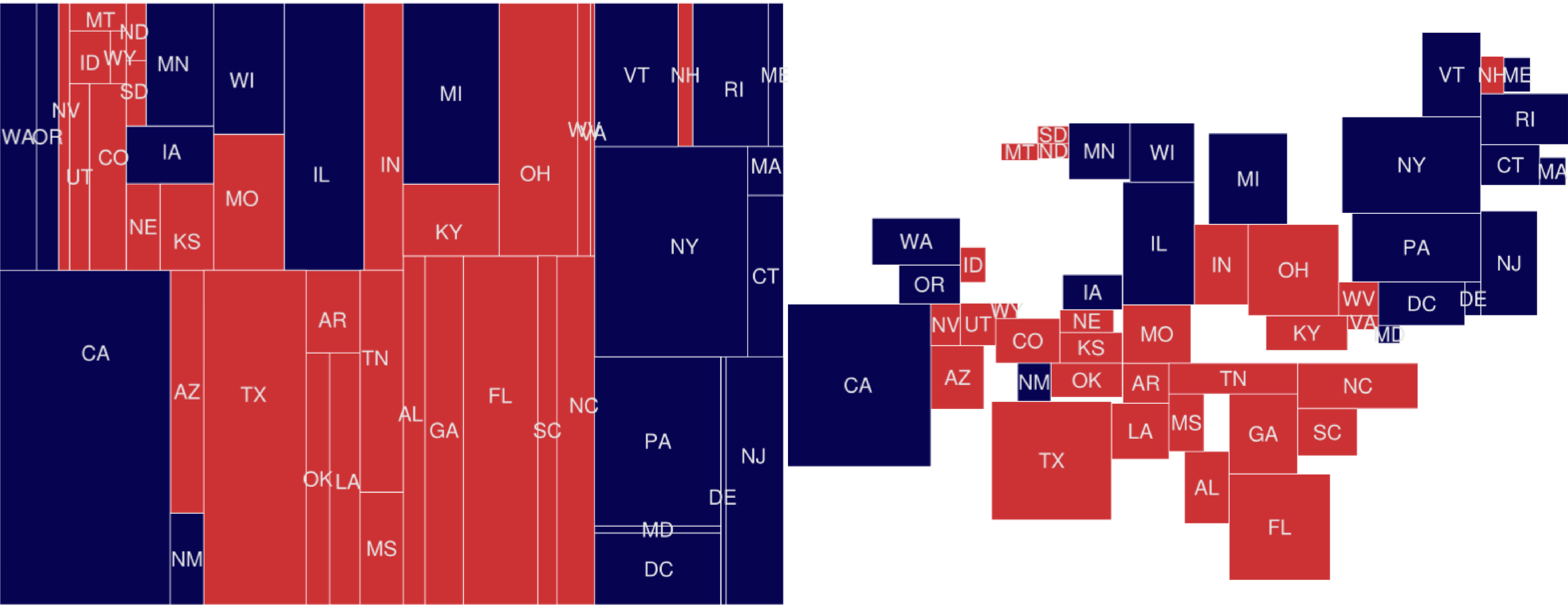


**TOTAL WORLD POPULATION = 6,446,131,400**  
1 grid square = 1 million people





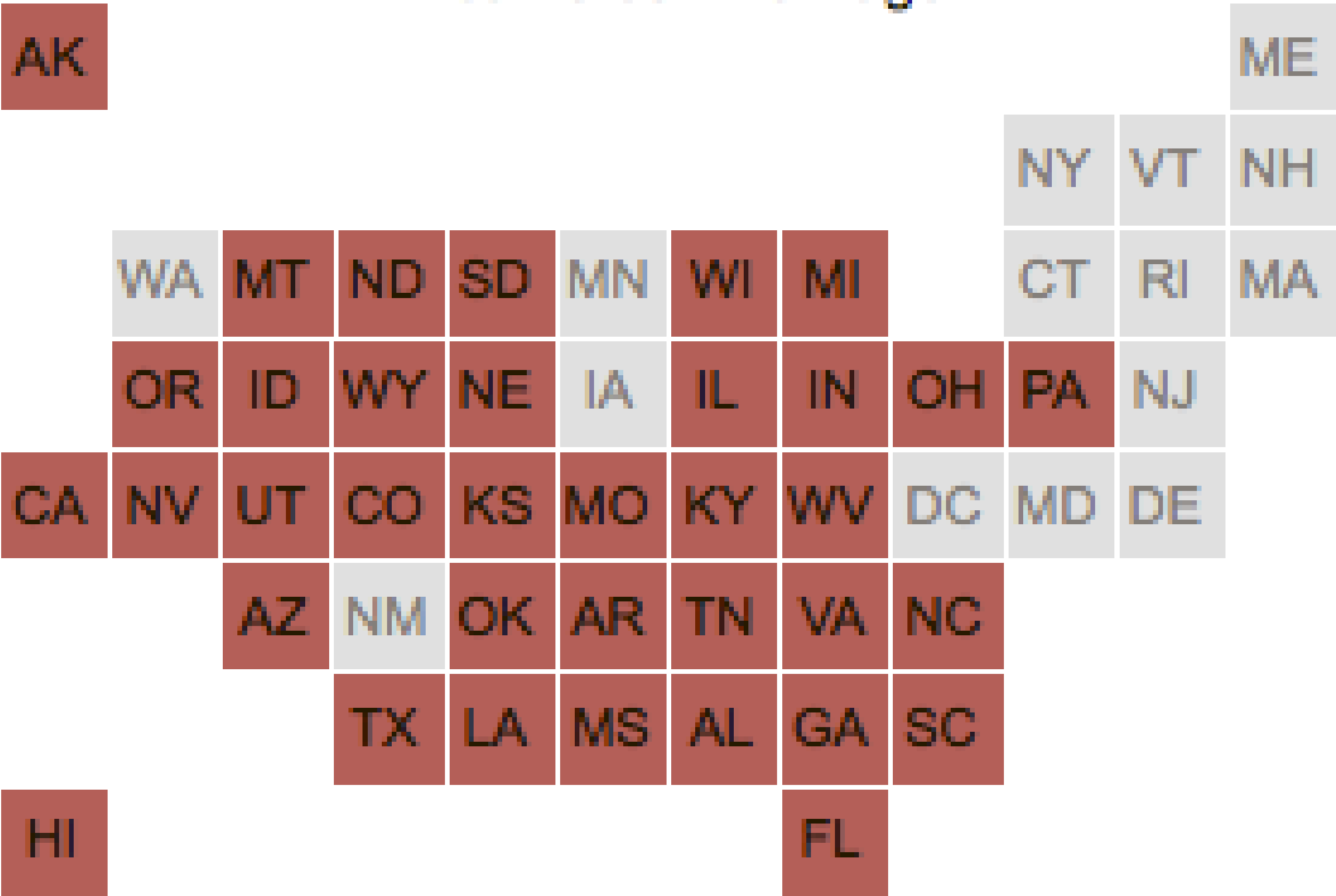
# RECMAP (2004)



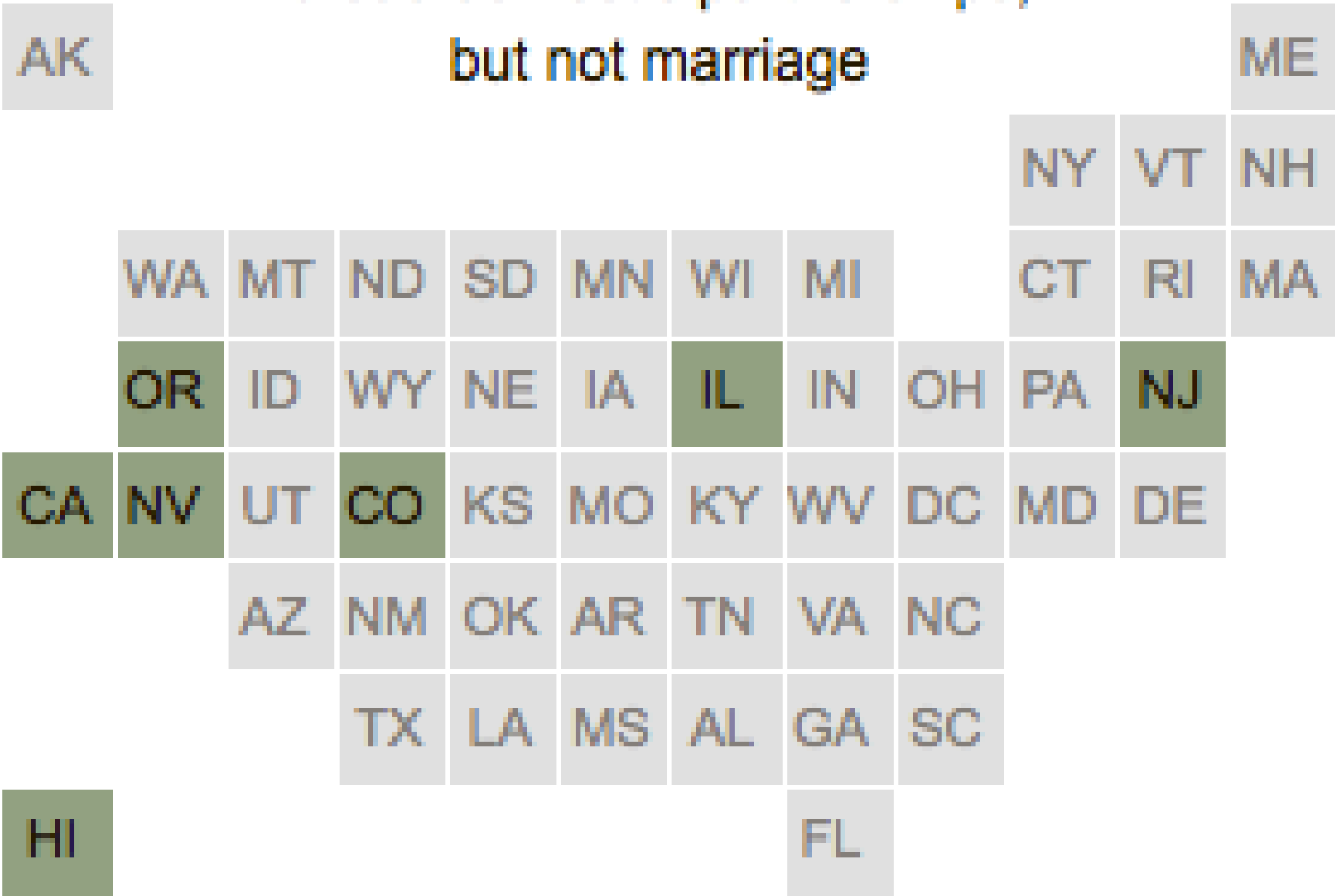


# GRID MAP

States with bans on  
same-sex marriage\*

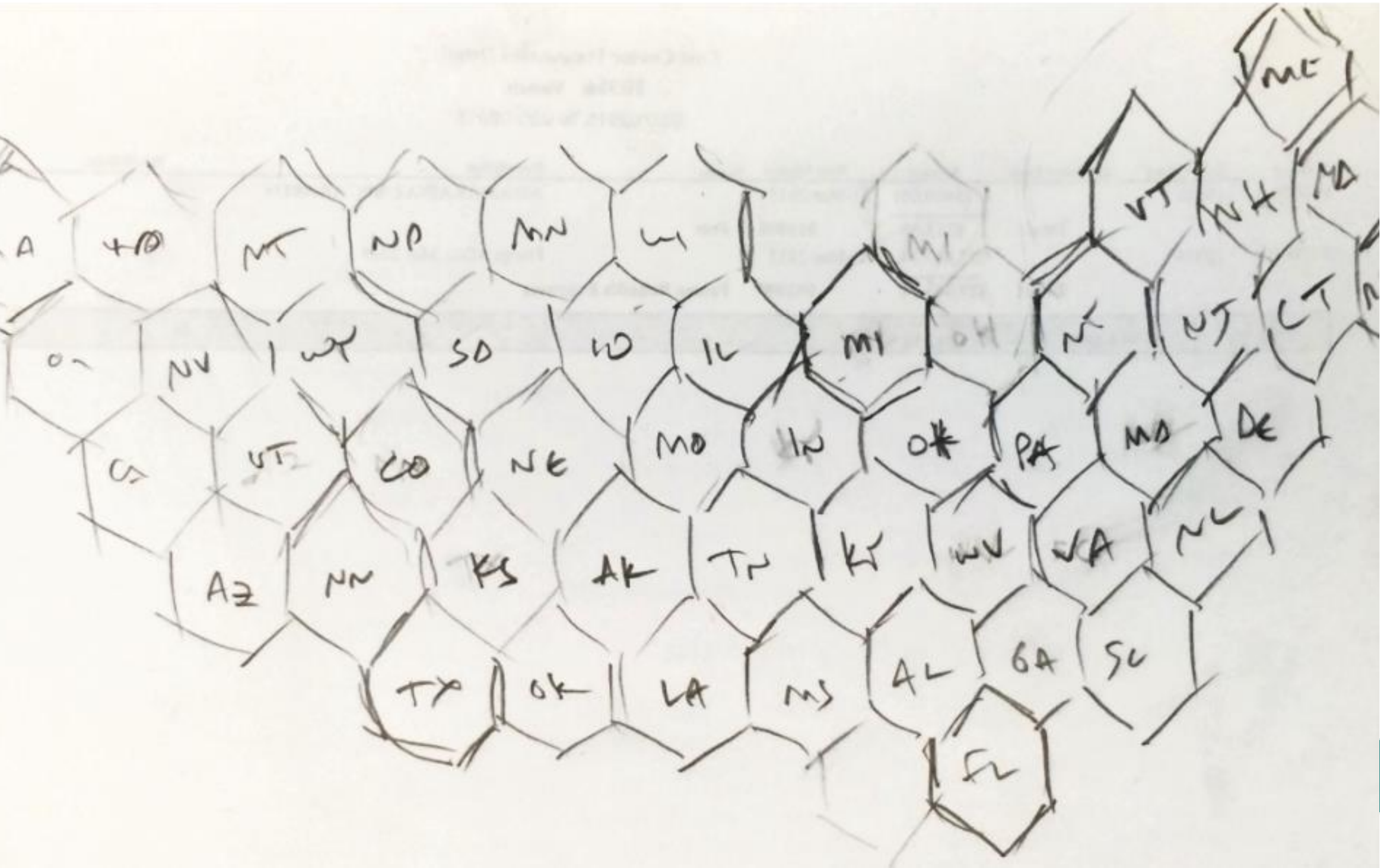


States that allow civil unions or  
broad domestic partnerships,  
but not marriage



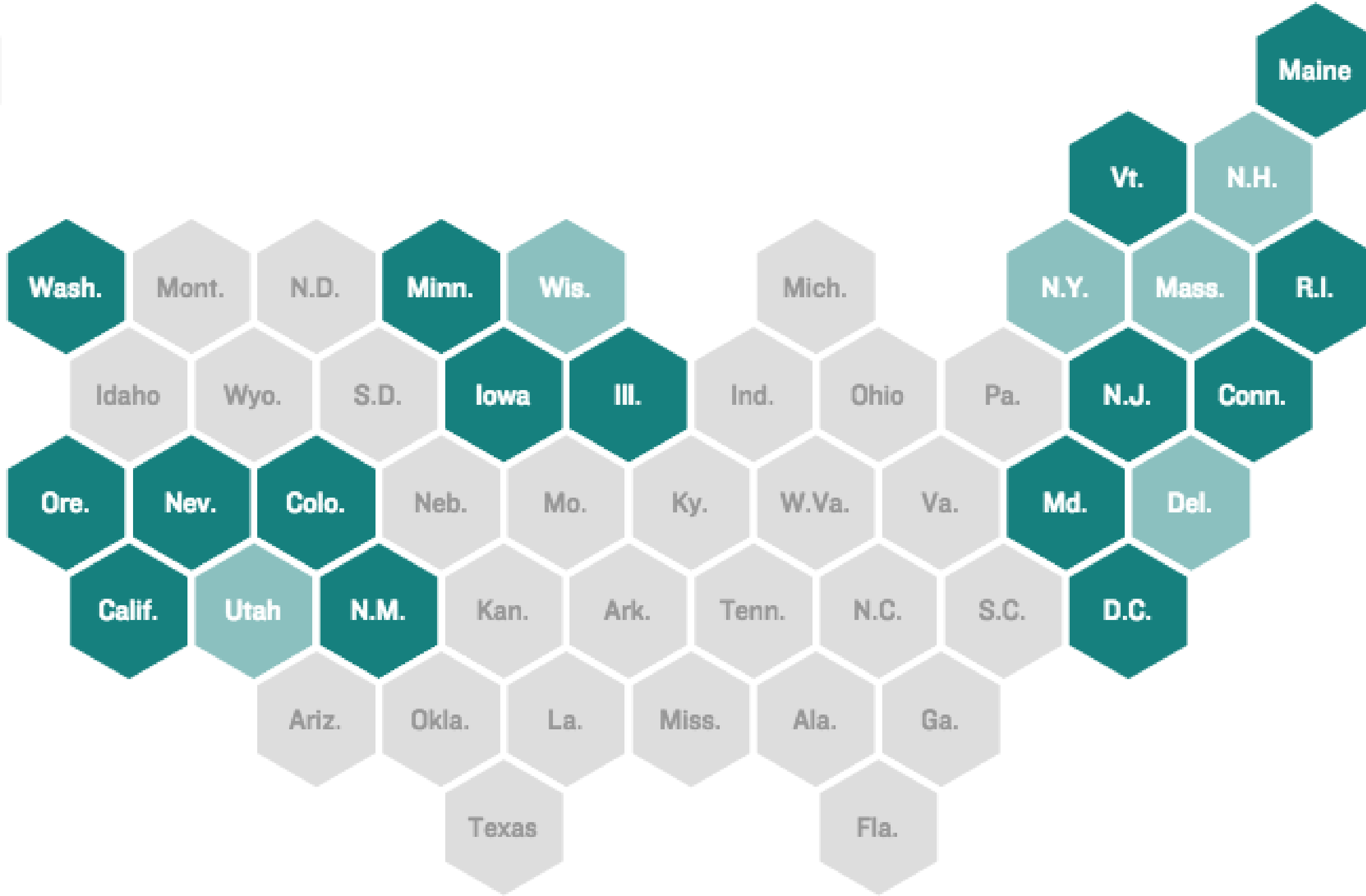


# GRID MAP



Alaska

Hawaii





Obama **243** Needs 27  
ELECTORAL VOTES to win

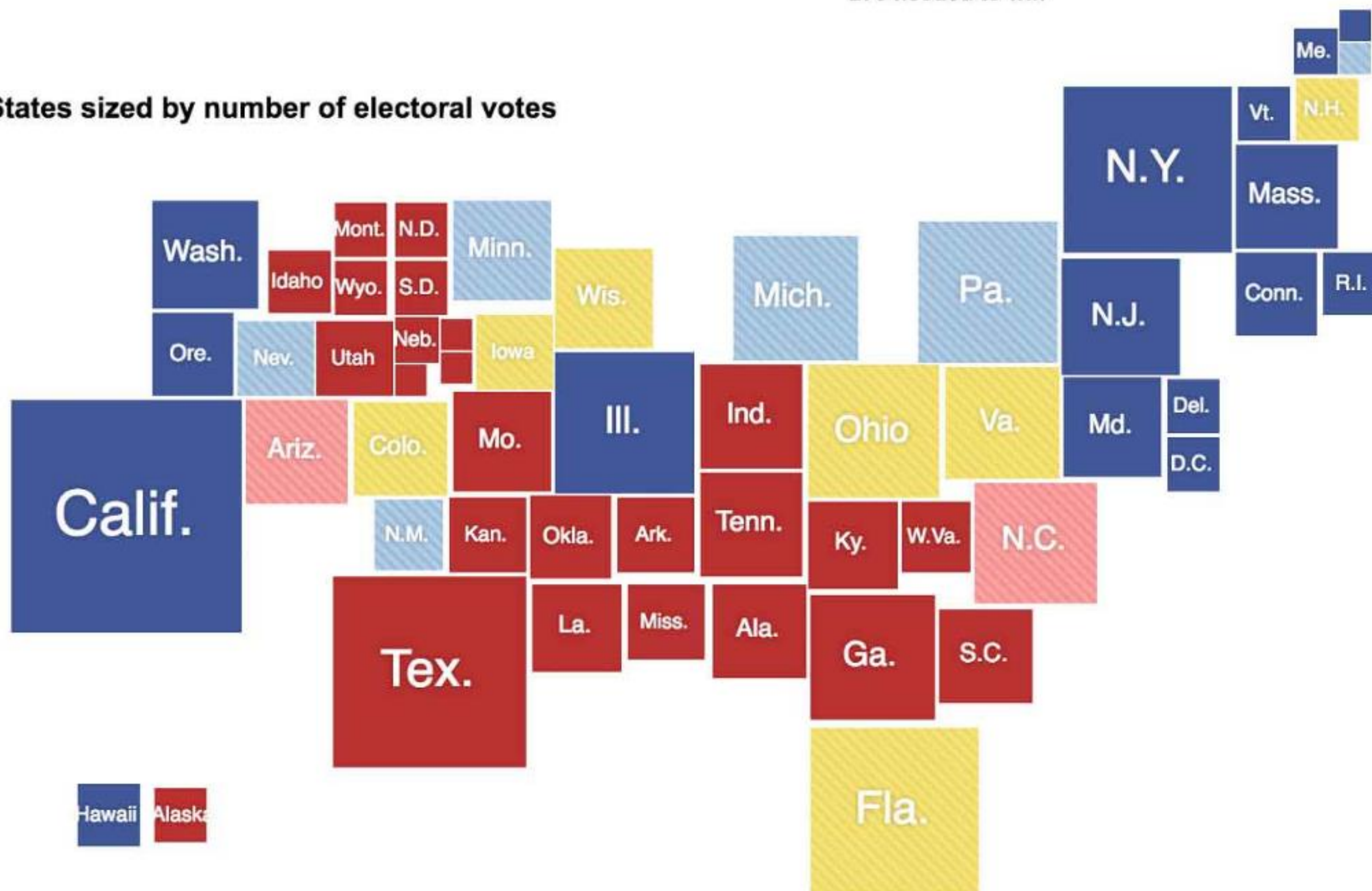
Needs 64  
to win

**206**

Romney  
ELECTORAL VOTES



### States sized by number of electoral votes

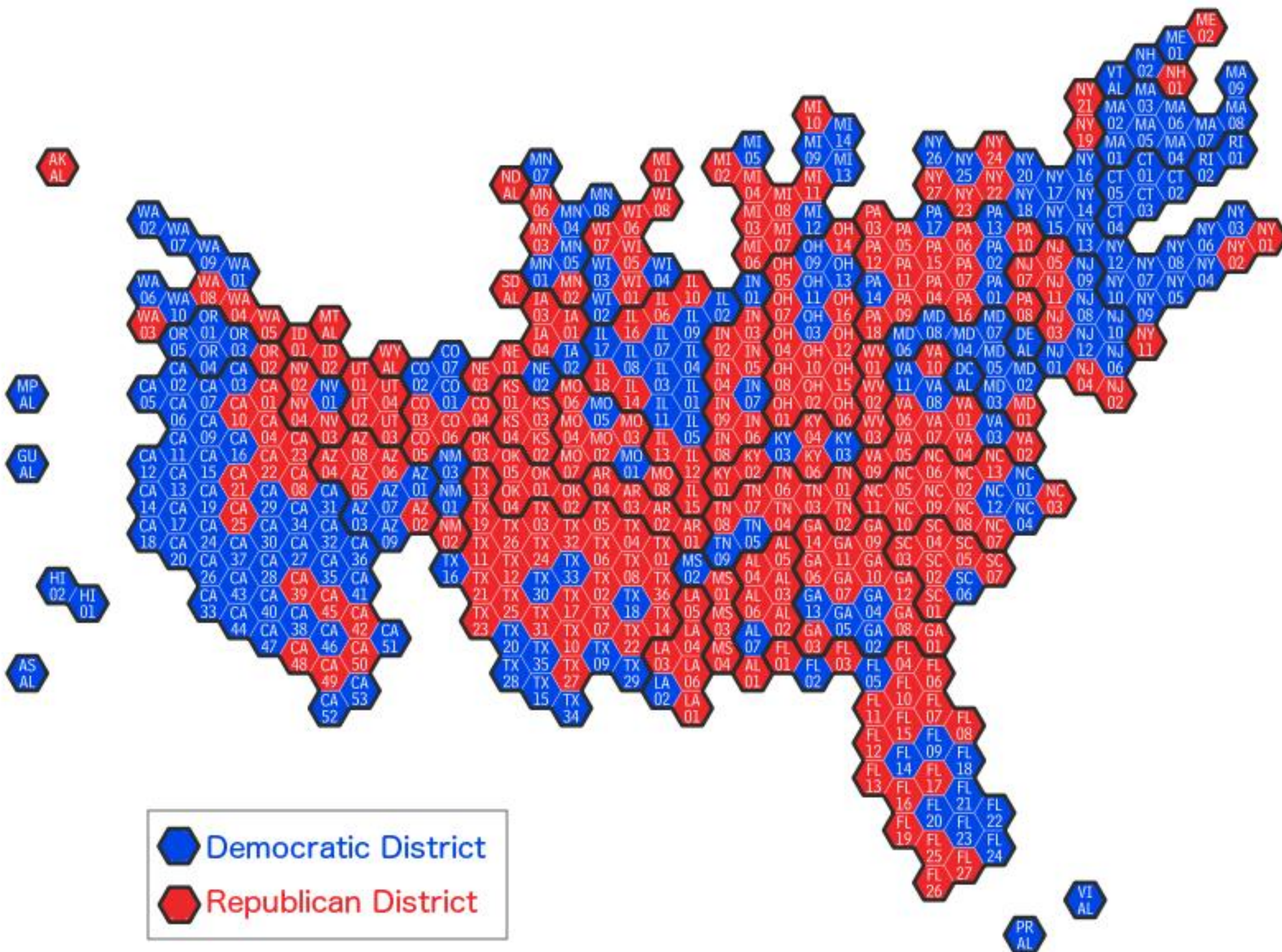


Maine and Nebraska give two electoral votes to the statewide winner and allocate the rest by congressional district.

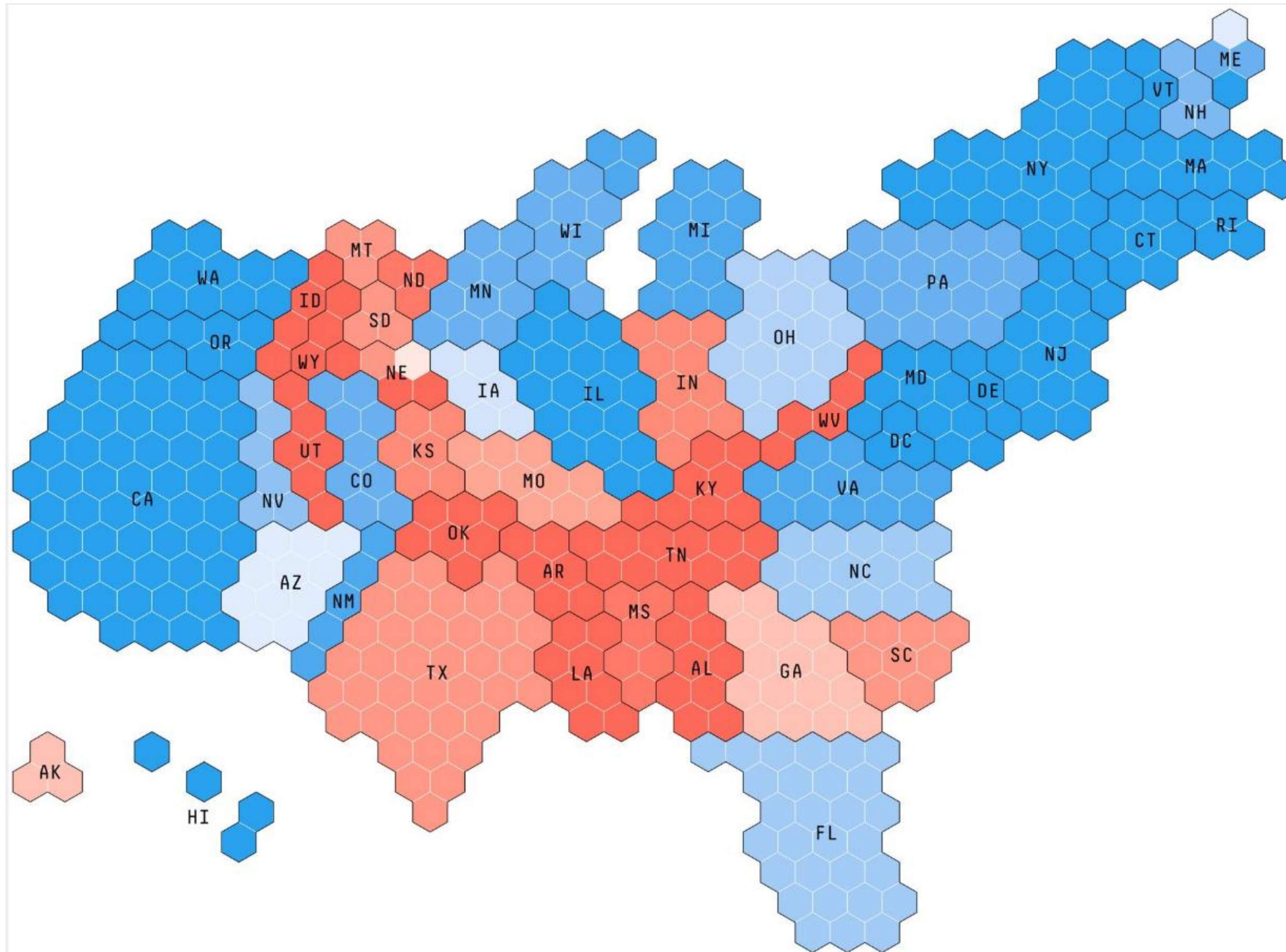
### Geographic View













# KERRY VS. BUSH (2004)

**LARGEST VOTE MARGIN FOR KERRY**  
Cook County, IL  
+205,557 votes

**2ND LARGEST MARGIN FOR KERRY**  
Los Angeles Co., Calif.  
+714,771 votes

**LARGEST MARGIN FOR BUSH**  
Orange Co., Calif.  
+155,010 votes

**SECOND LARGEST VOTE MARGIN FOR BUSH**  
Tarrant County, Tex.  
+113,186 votes

**NEW YORK CITY**  
Taken together, the five counties that make up New York City have a margin for Kerry of +1,103,406 votes

**COUNTY WON BY ...**

**BUSH**

**VOTE MARGIN**

**KERRY**

Results as of 2 p.m. yesterday

... LARGEST VOTE  
MARGIN FOR KERRY  
Cook County, IL  
+205,557 votes

2ND LARGEST  
MARGIN FOR KERRY  
Los Angeles Co., Calif.  
+714,771 votes

**LARGEST MARGIN FOR BUSH**  
Orange Co., Calif.  
+ 55,010 votes

Alaska  
shown by  
electoral  
district

New York City

Taken together, the five counties that make up New York City have a margin for Kerry of +1,109,408 votes.

COUNTY WON BY ...

BUSH

KERRY

VOTE MARGIN

+500,000

+100,000

+50,000

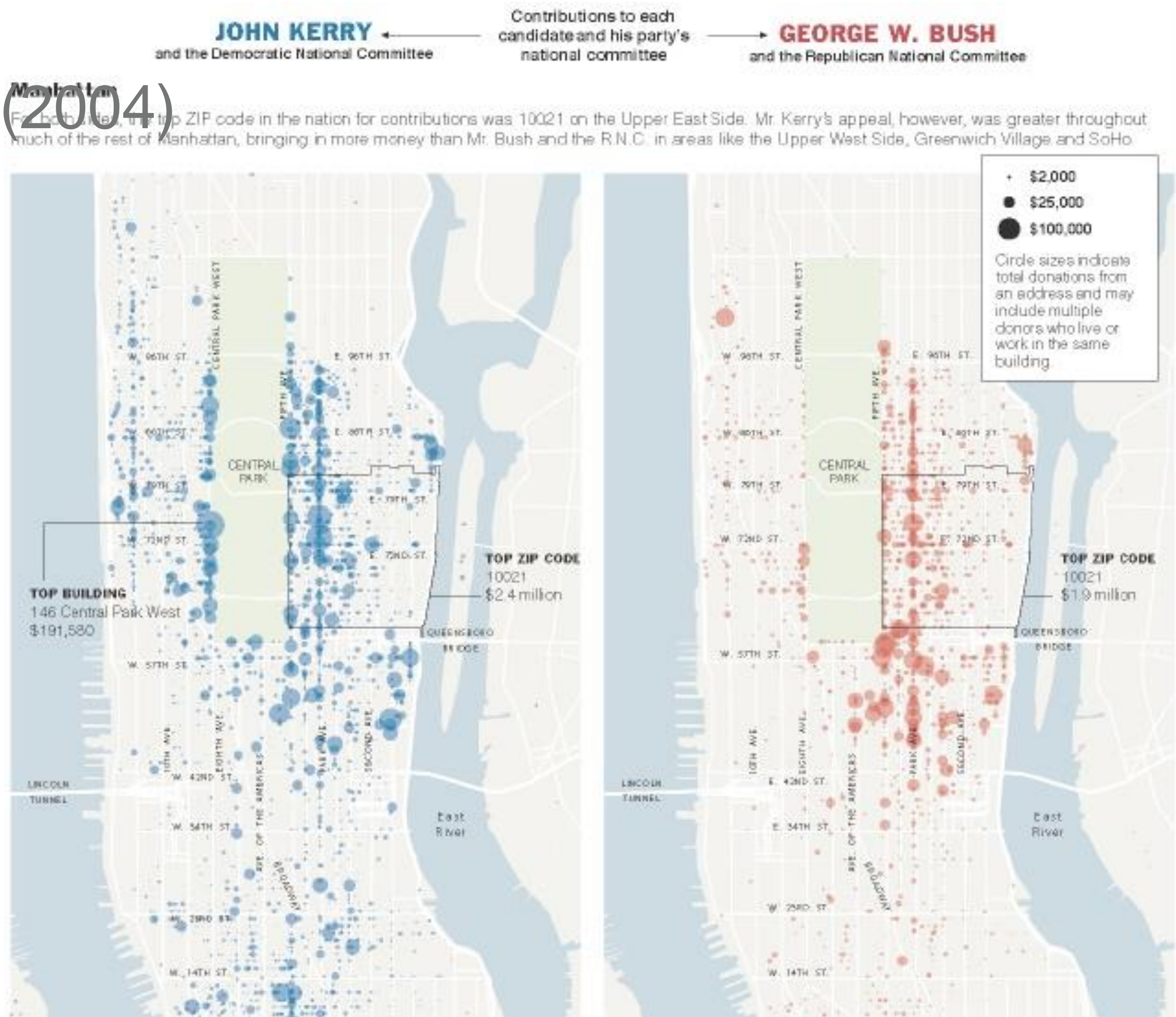
+10,000

-1,000

Results as of 2 p.m. yesterday.



# KERRY VS. BUSH (2004)





# Twitter Chatter During the Super Bowl

As the Steelers and Cardinals battled on the field, Twitter users across the nation pecked out a steady stream of "tweets." The map shows the location and frequency of commonly used words in Super Bowl related messages.









# Mapping America: Every City, Every Block

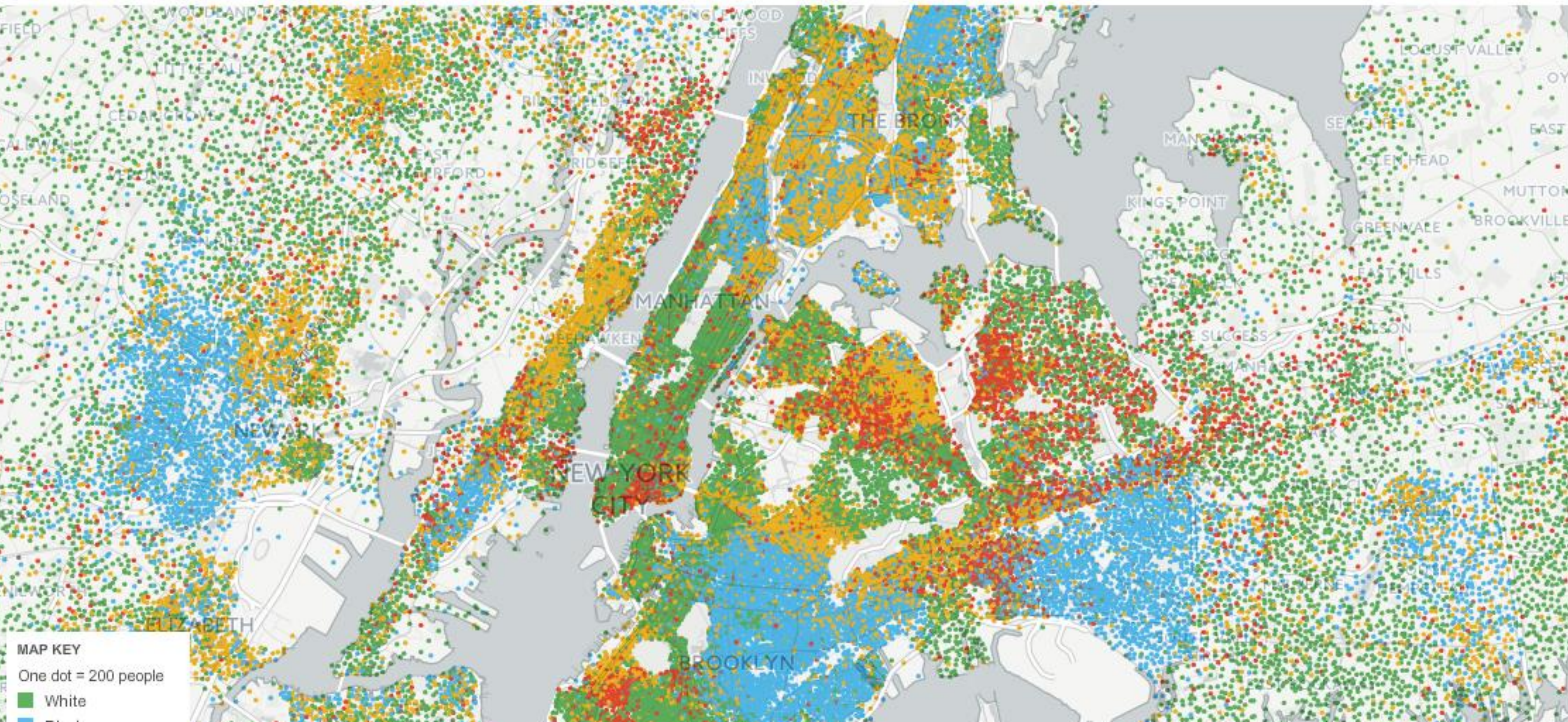
Find something interesting? Share this view on [Twitter](#) or [Facebook](#)

Browse local data from the Census Bureau's American Community Survey, based on samples from 2005 to 2009. Because these figures are based on samples, they are subject to a margin of error, particularly in places with a low population, and are best regarded as estimates.

[View Readers Maps \(49\)](#)

## Distribution of racial and ethnic groups

[View More Maps](#)



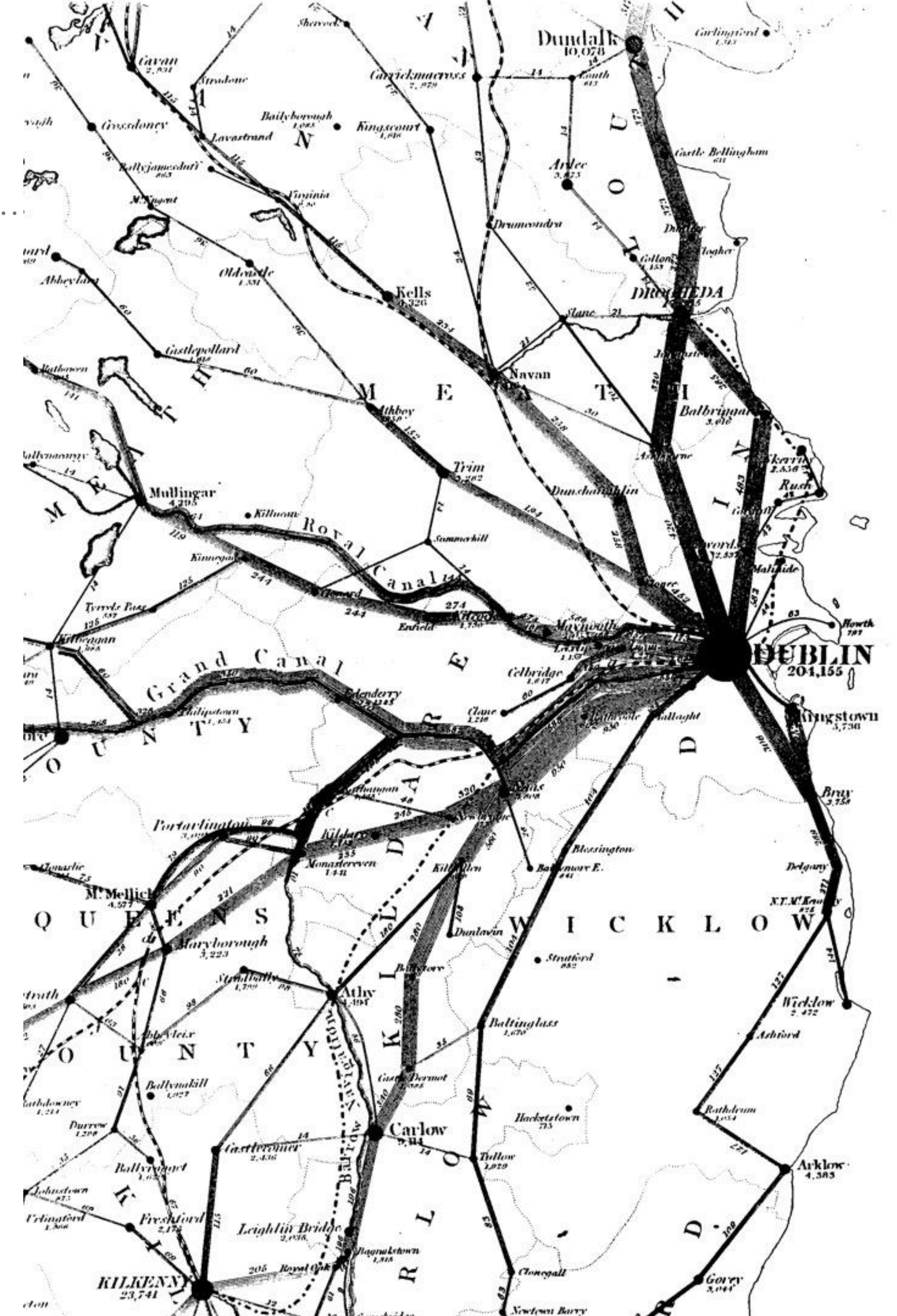
MAP KEY  
One dot = 200 people  
■ White  
■ Black  
■ Hispanic



# FLOW MAPS

---

- First in 1837
- Transportation of Passengers in Ireland

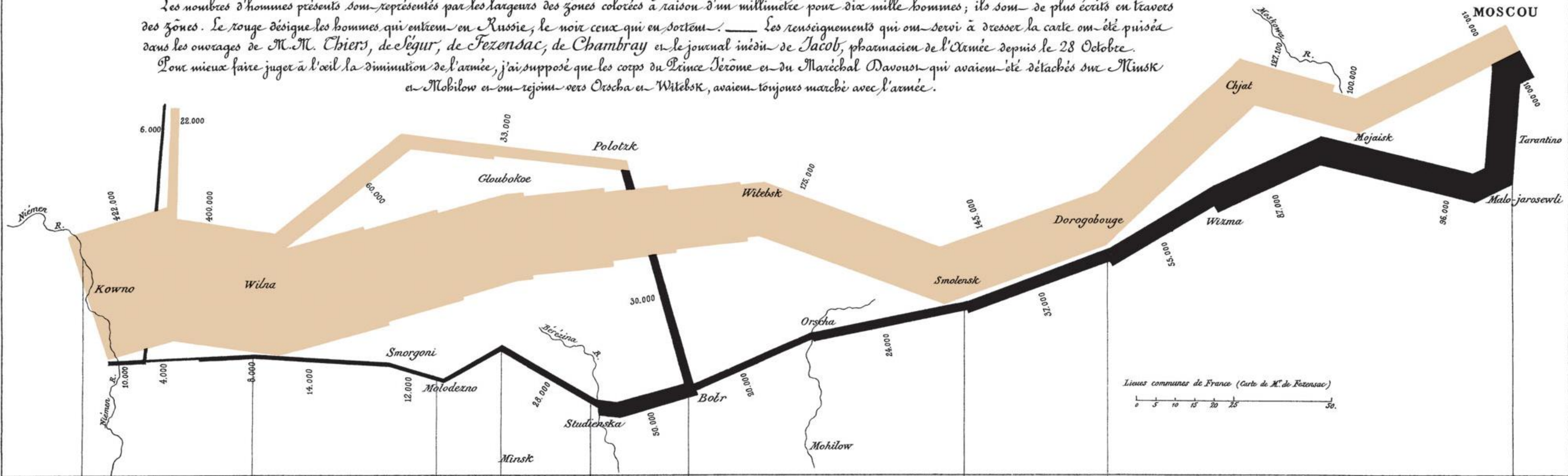




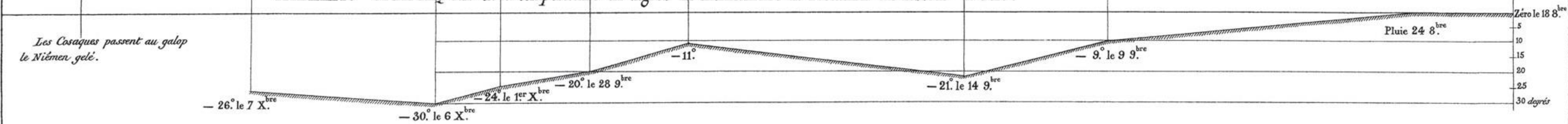
# Carte Figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.

Dressée par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite Paris, le 20 Novembre 1869.

Les nombres d'hommes présents sont représentés par les largeurs des zones colorées à raison d'un millimètre pour dix mille hommes; ils sont de plus écrits en travers des zones. Le rouge désigne les hommes qui entrent en Russie, le noir ceux qui en sortent. — Les renseignements qui ont servi à dresser la carte ont été puisés dans les ouvrages de M.M. Chiers, de Ségur, de Fezensac, de Chambray et le journal inédit de Jacob, pharmacien de l'Armée depuis le 28 Octobre. Pour mieux faire juger à l'œil la diminution de l'armée, j'ai supposé que les corps du Prince Jérôme et du Maréchal Davout qui avaient été détachés sur Minsk et Mohilow et qui rejoignent vers Orscha et Witebsk, avaient toujours marché avec l'armée.



## TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.



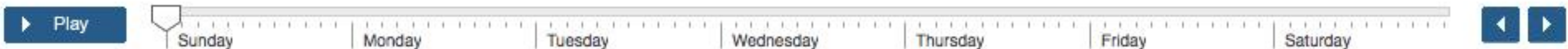


# FLOW MAP LAYOUT (2005)





# TIME-VARYING MAPS



## Penn Station

One of the busiest train stations in the world, and the busiest cab stand in the city.



## Columbus Circle

Central Park, Whole Foods and Lincoln Center nearby.



## Lower East Side

Comes alive after work, and throbs until well after midnight.



## Bloomingdale's

Midday center for shopping.

## Grand Central Terminal

## Meatpacking District



# PERSONALIZED SPATIAL ANALOGIES (2016)

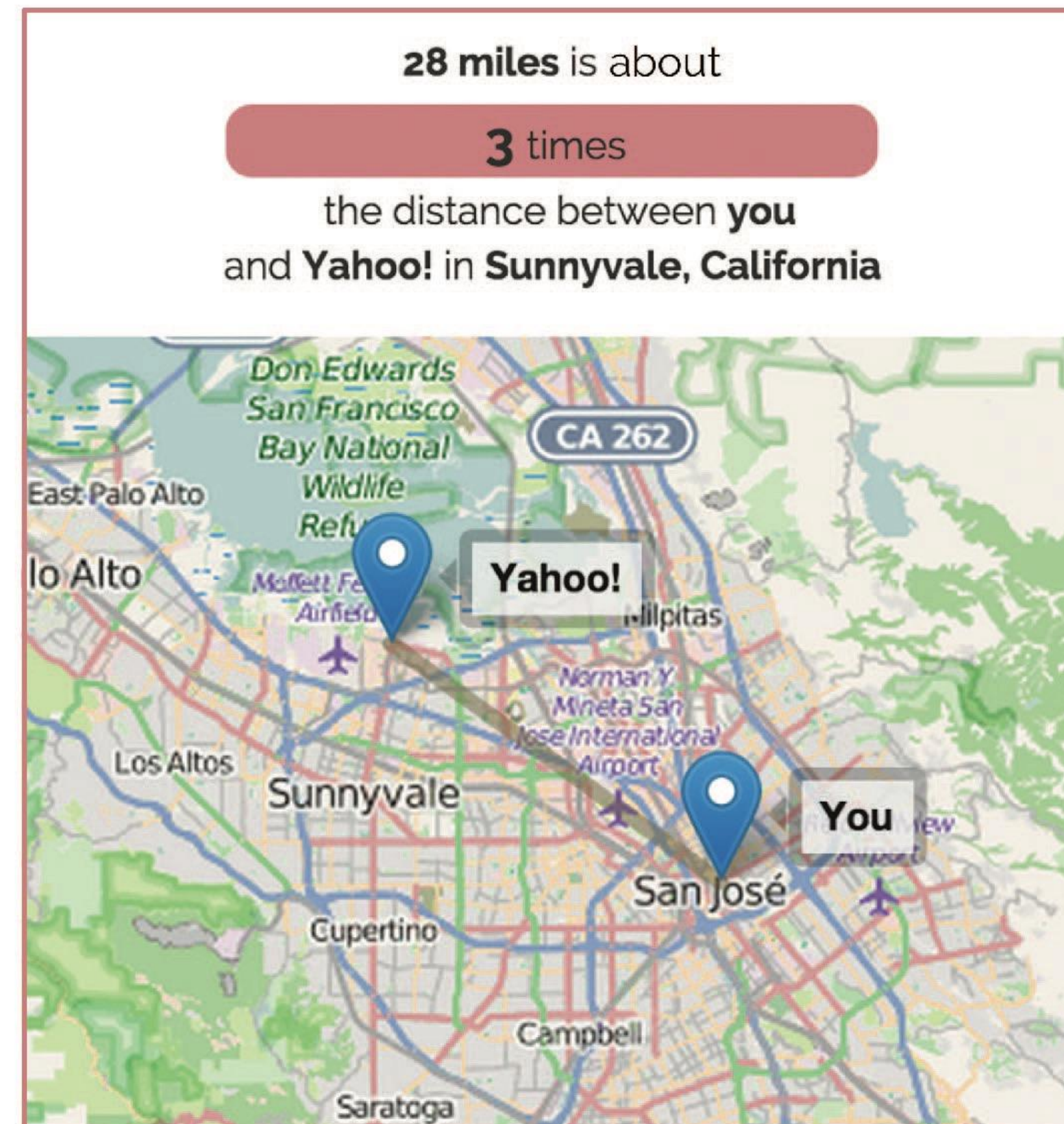
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## Some Say New Wal-Mart Intrudes on Historic Mexican Pyramids

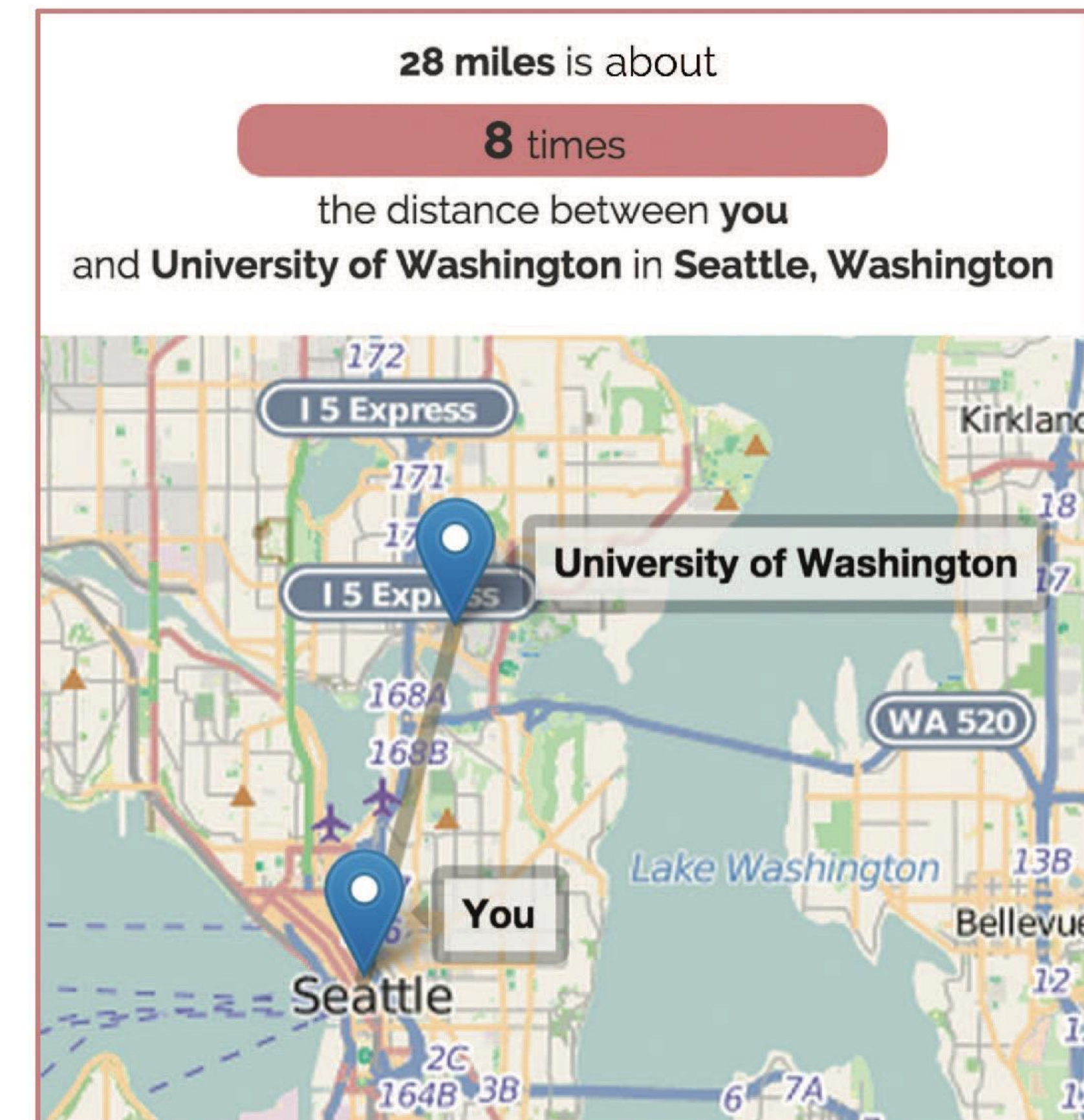
Oct 5, 2004, Mexico

The multinational retailer is building a discount supermarket **28 miles** from one of Mexico's most treasured ruins. The pre-Columbian city's mighty pyramids, dedicated to the sun and moon, tower within view of the Bodega Aurrera, a Wal-Mart subsidiary.

**User location:**

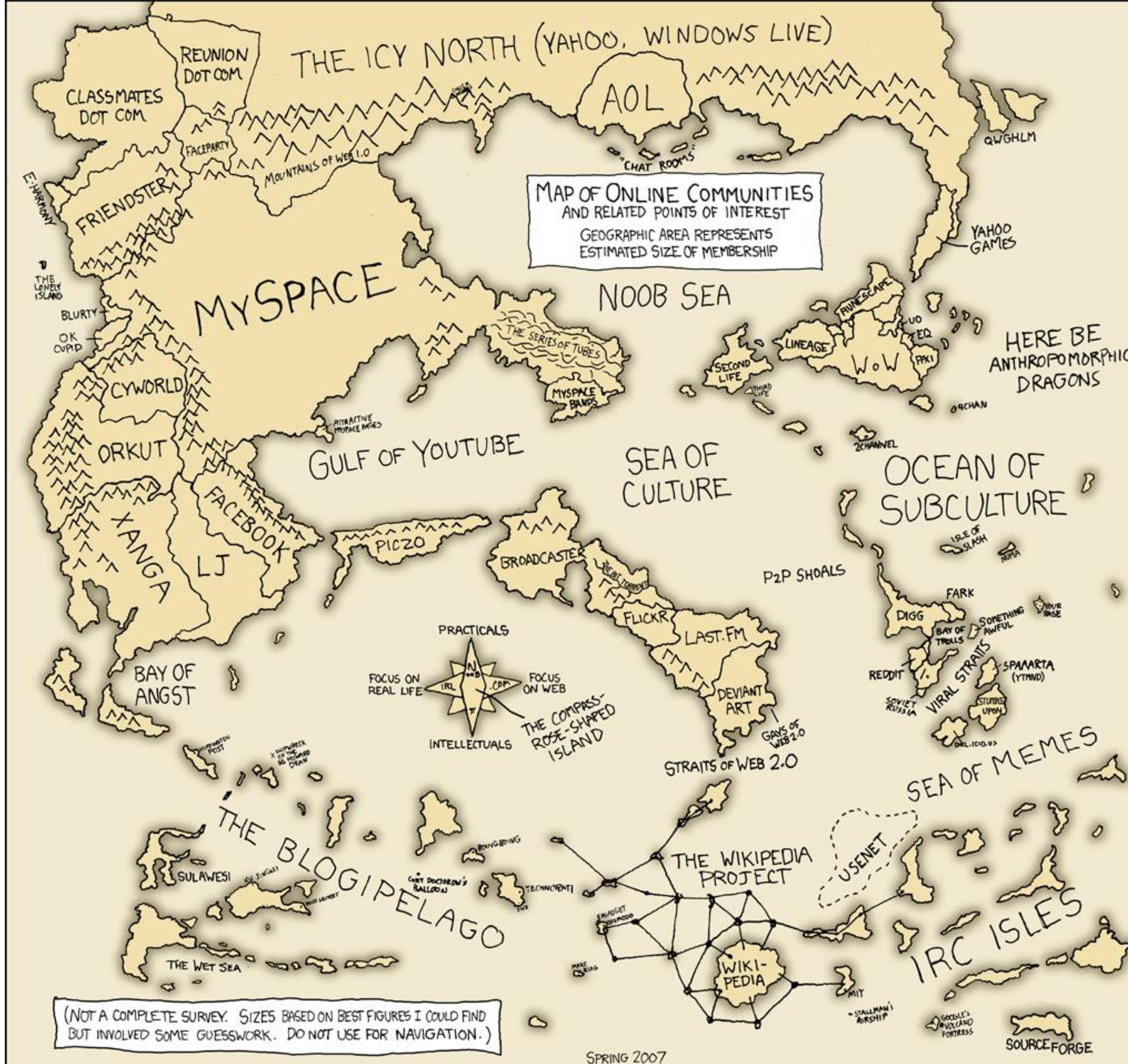


**San Jose** (37.338208 -121.886328)

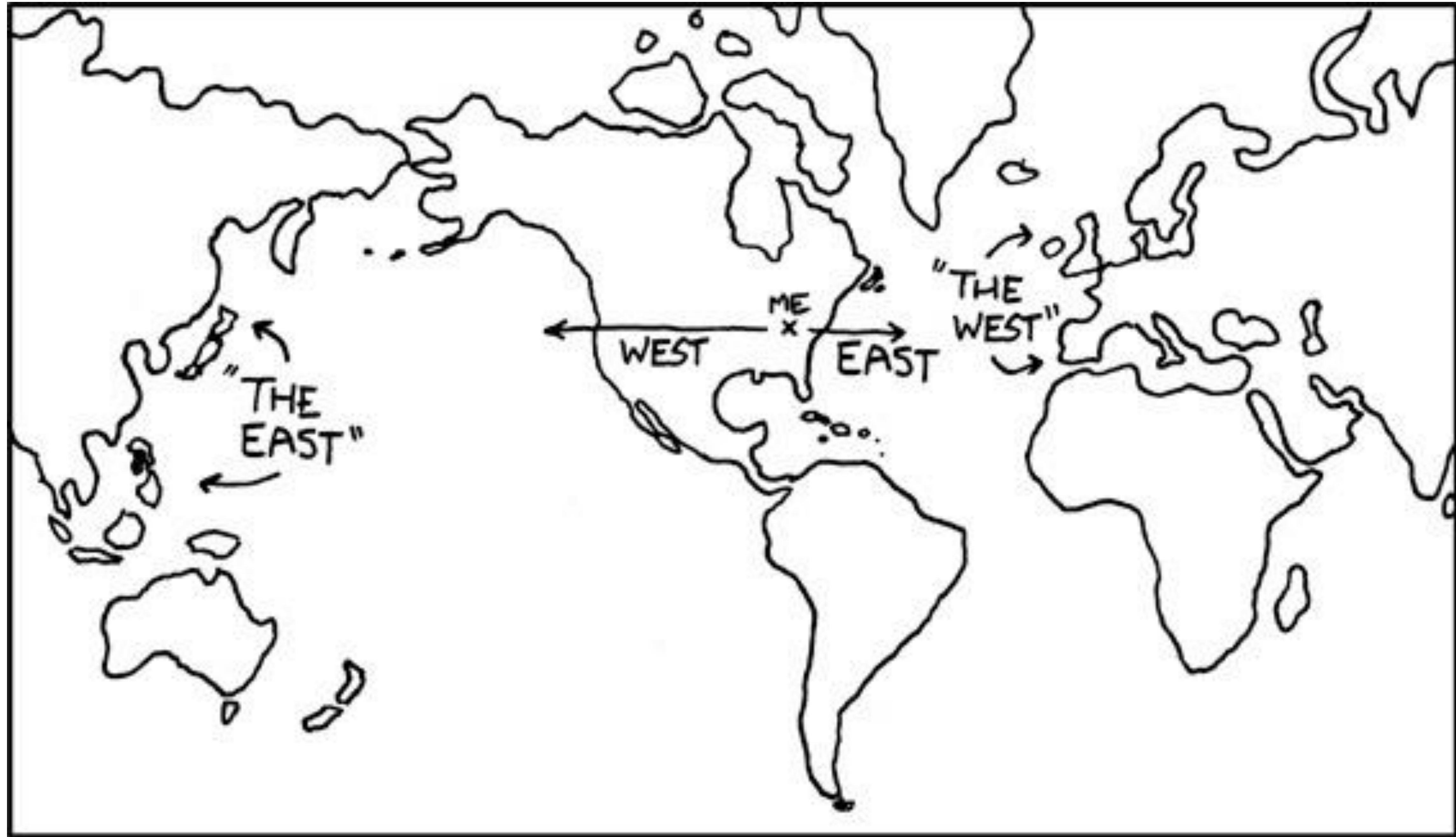


**Seattle** (47.603961, -122.329887)









THIS ALWAYS BUGGED ME.