

The background features a series of concentric circles in light gray, some solid and some dashed, radiating from the center. Overlaid on this is a large orange speech bubble shape, which is the primary container for the text.

# The Trouble with Maps

Lying with Maps, Data Distortion, Using Maps for Oppression

# Problematic History: Maps and Colonialism

- Maps are not just simple tools used for getting from place to place.
- They are tools used to wield power, creating visual ownership of a place
- During colonial times, the idea of “Terra Nullius” was used appropriate land from Indigenous Peoples

# How Can Maps Deceive Us?

- **False implication that they are “neutral” and always represent the truth**
  - **Association with property and ownership**
- **Projections and scale**
- **The concept of “north”**
- **Data classification choices**
- **Cartographic choices (color, for example)**



# Projections

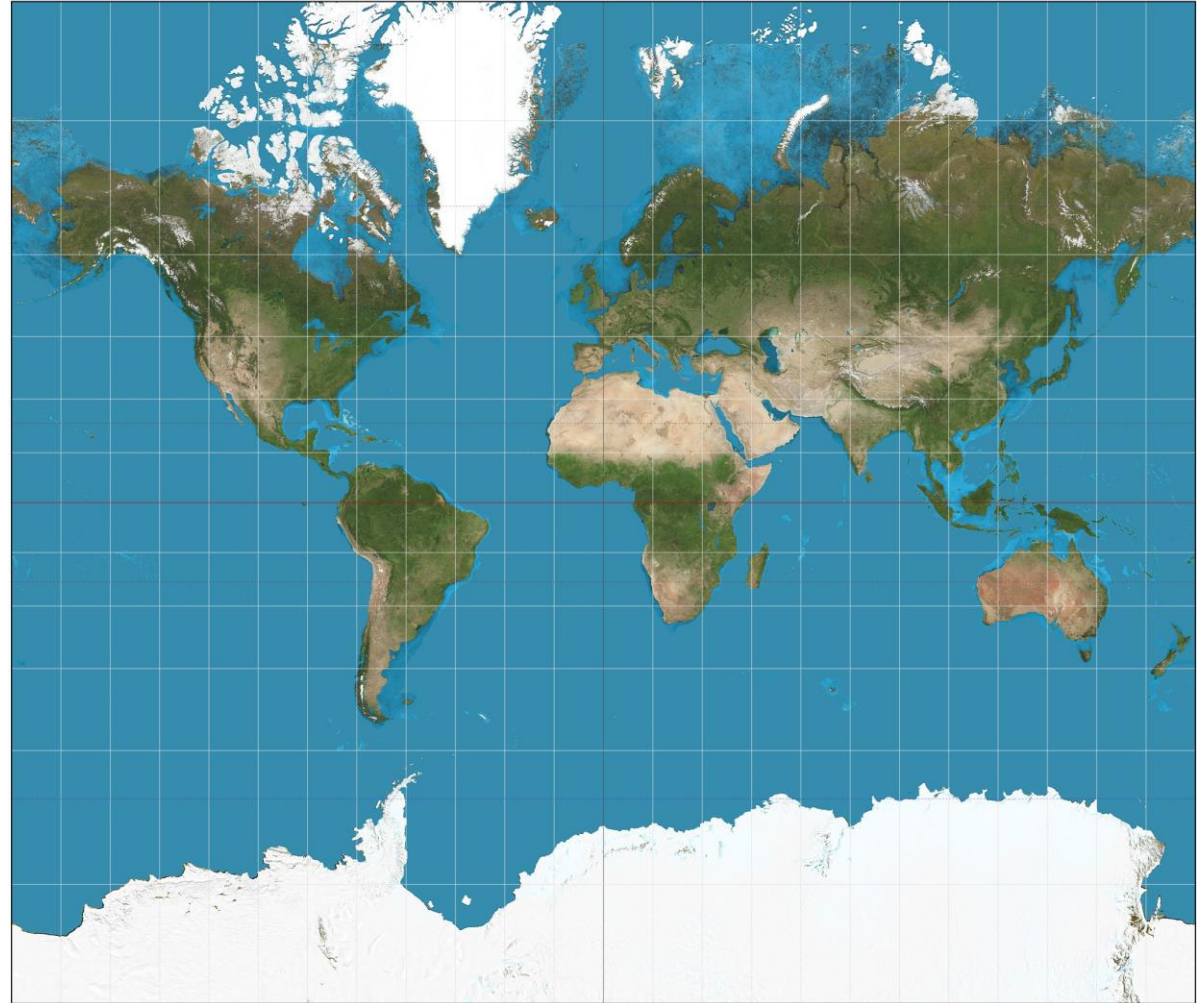
**Making the round flat**

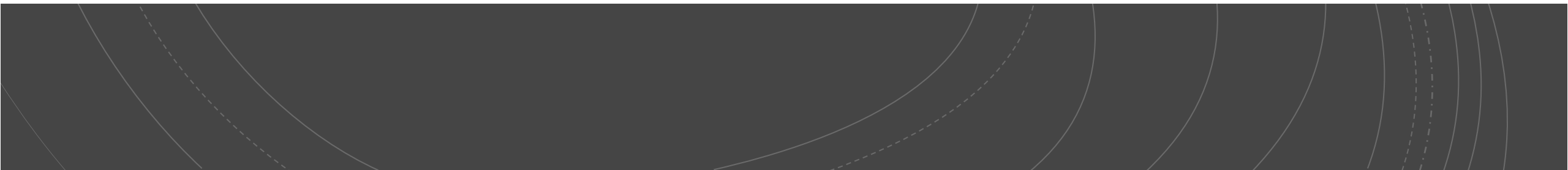
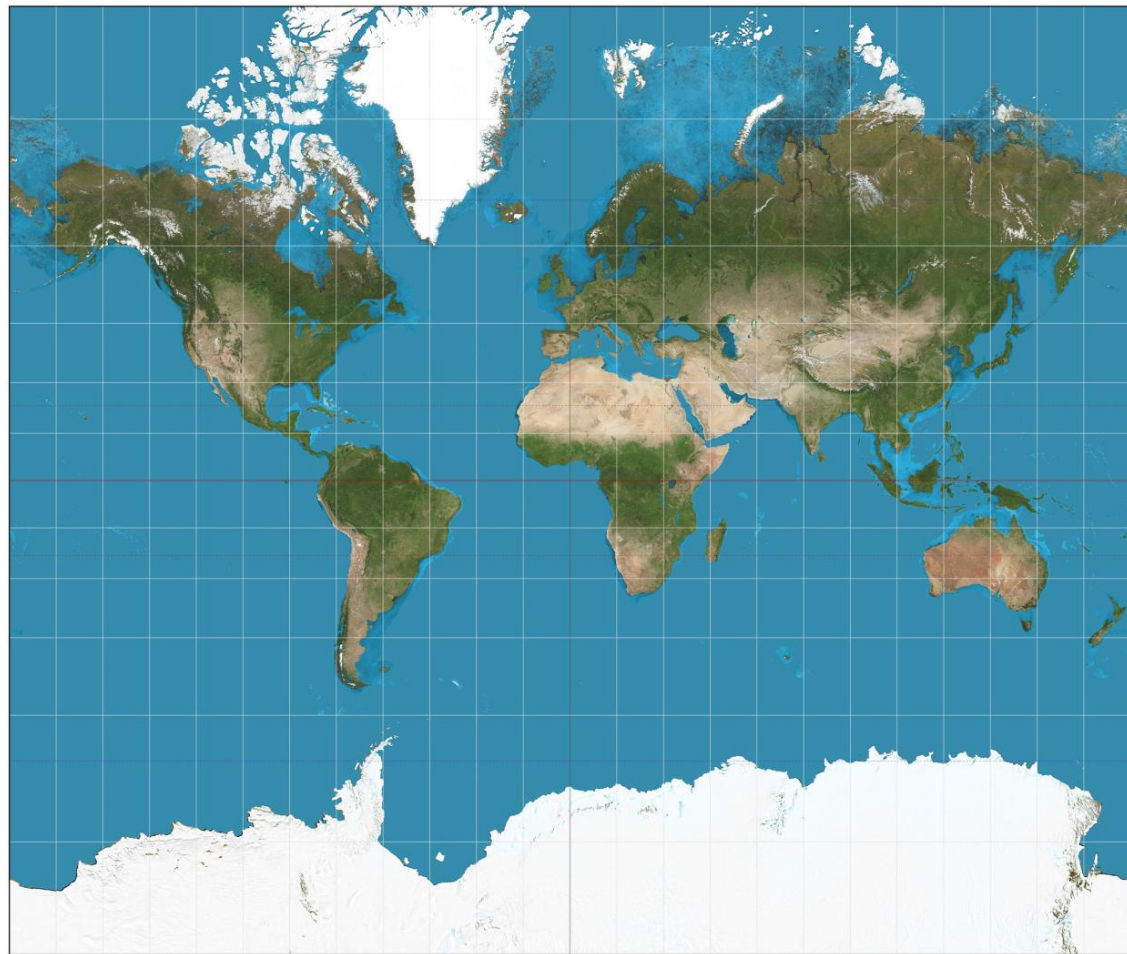
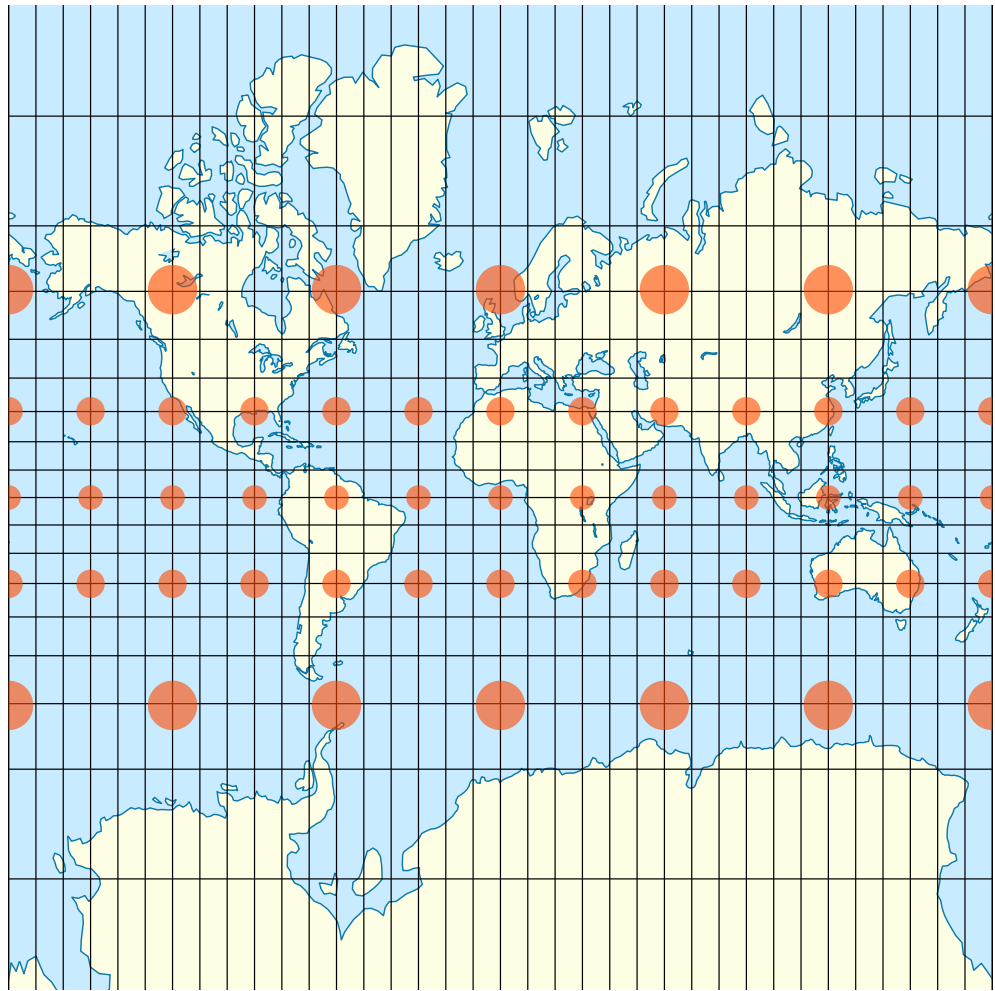
# The “Orange Peel Problem”

## Distortion:

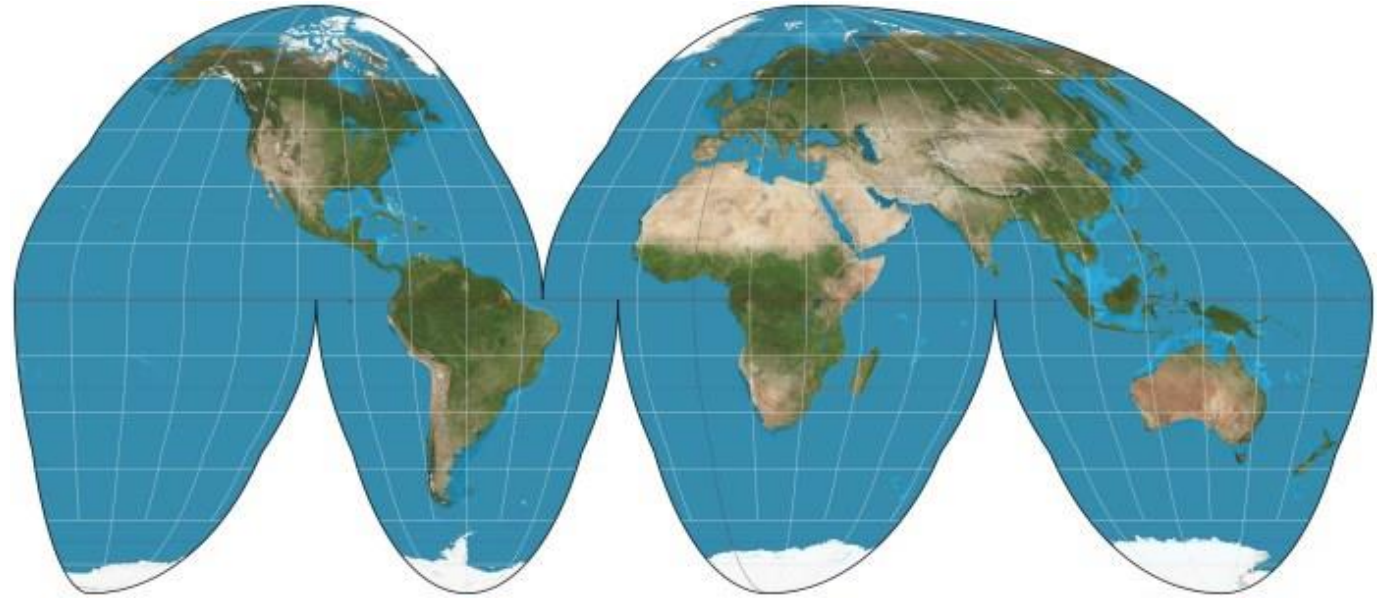
- **Shape**
- **Distance**
- **Land Area**
- **Direction**

Mercator





# Good Homolosine



**The Goode homolosine projection is a pseudocylindrical, equal-area, composite map projection used for world maps.**

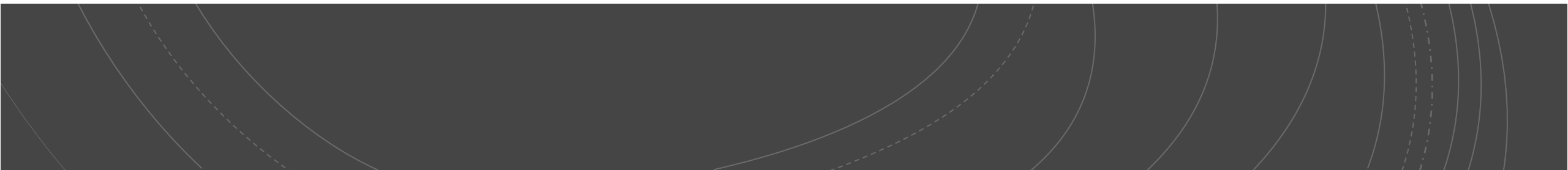
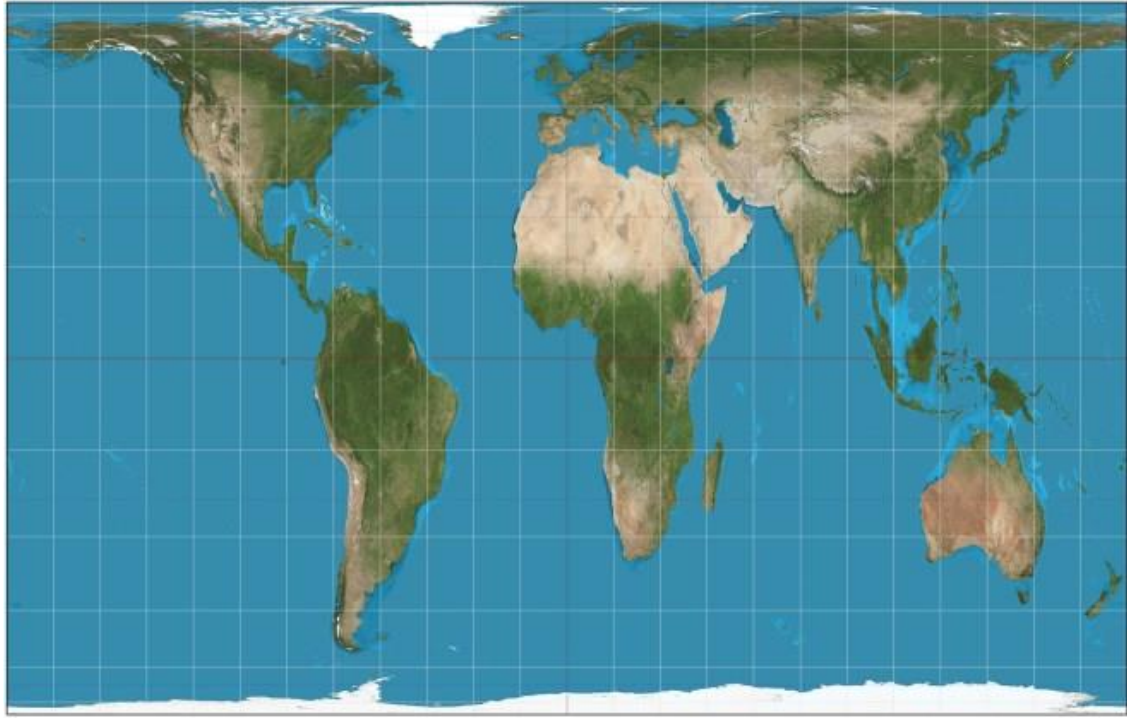
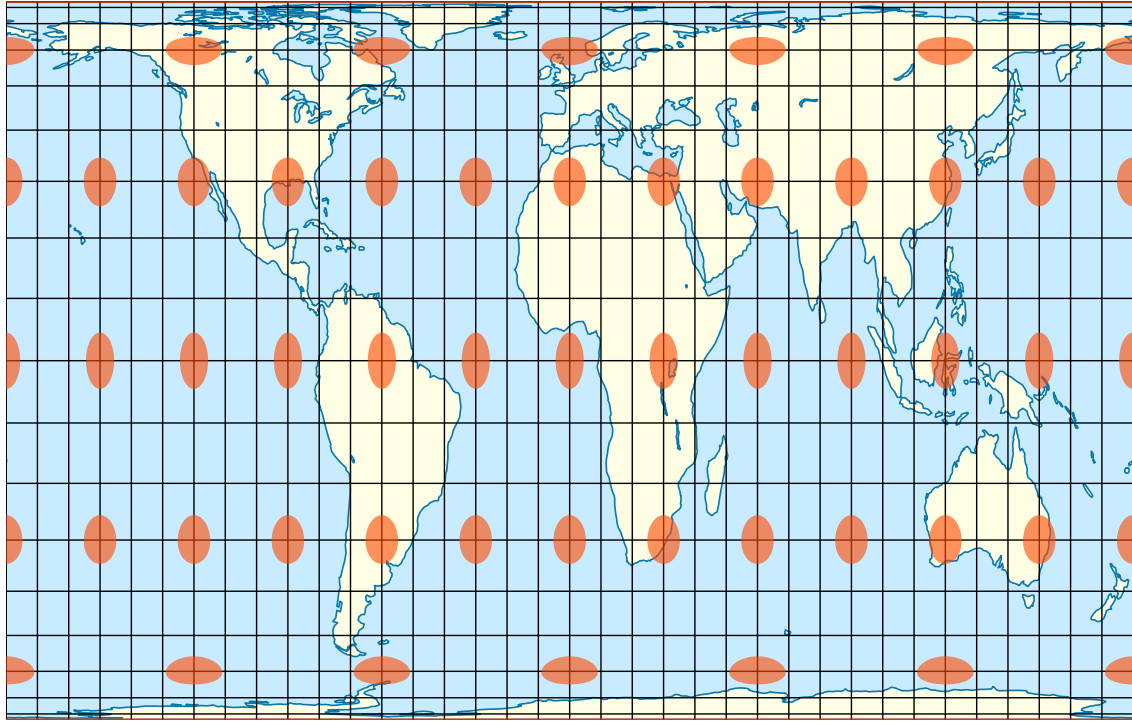


# Gall-Peters

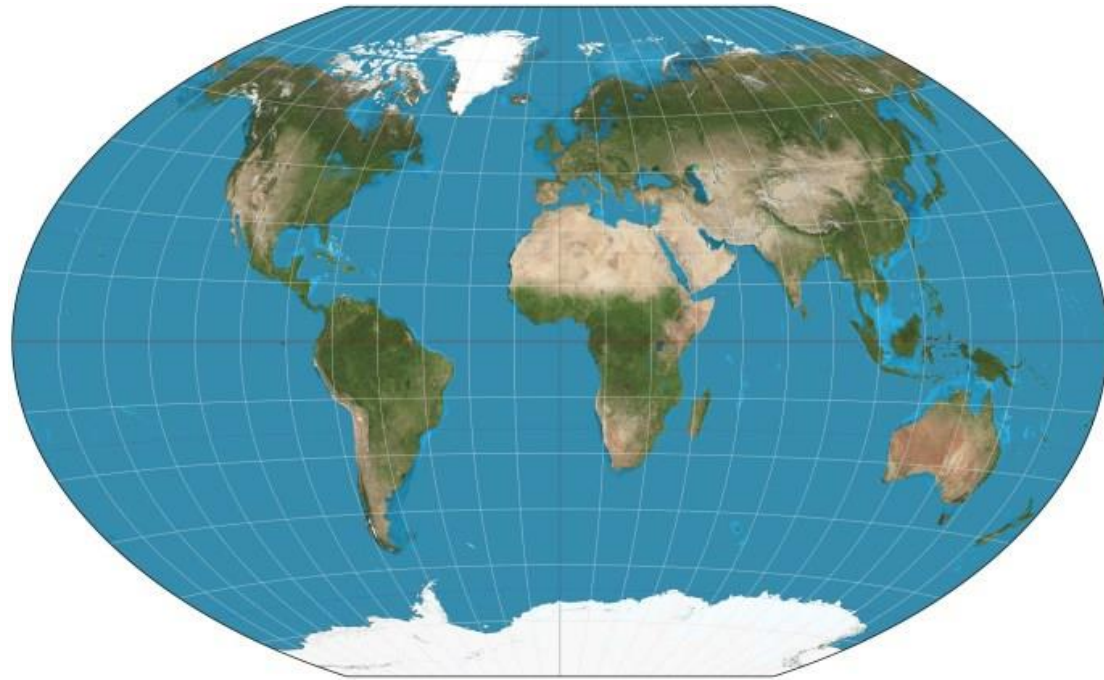
<https://youtu.be/vVX-PrBRtTY>



The Gall-Peters projection is a cylindrical equal area map projection used for world maps.

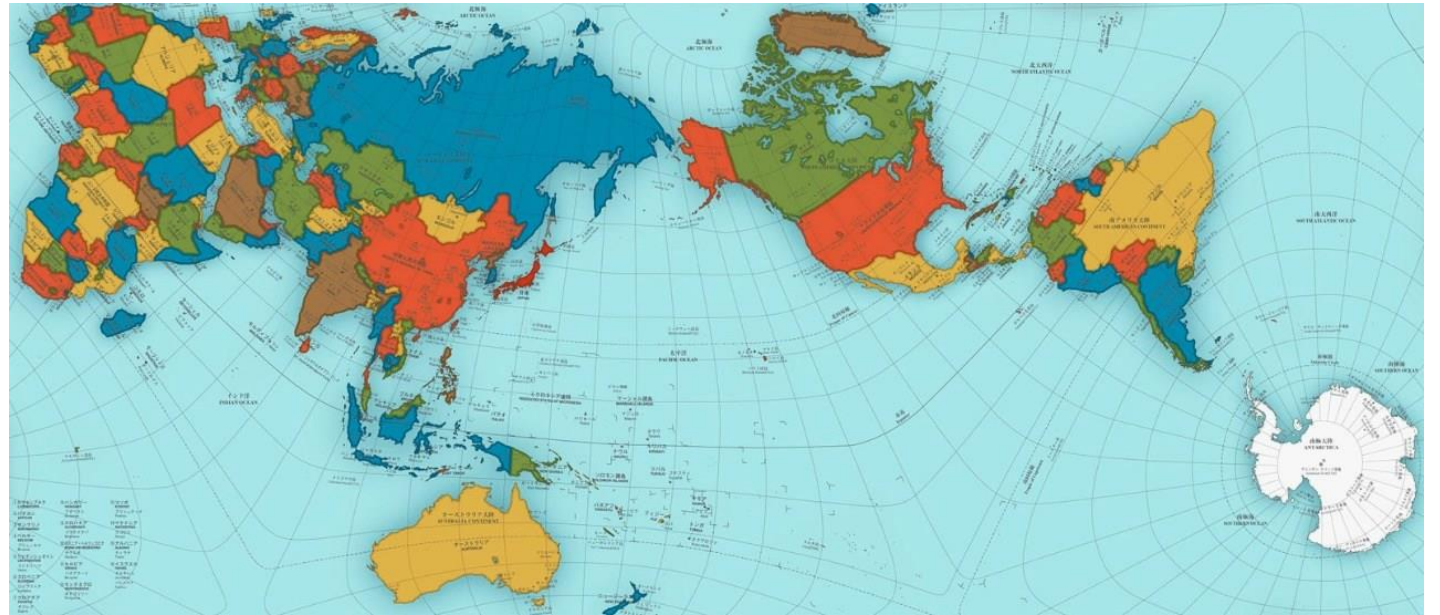


# Winkel-Tripel

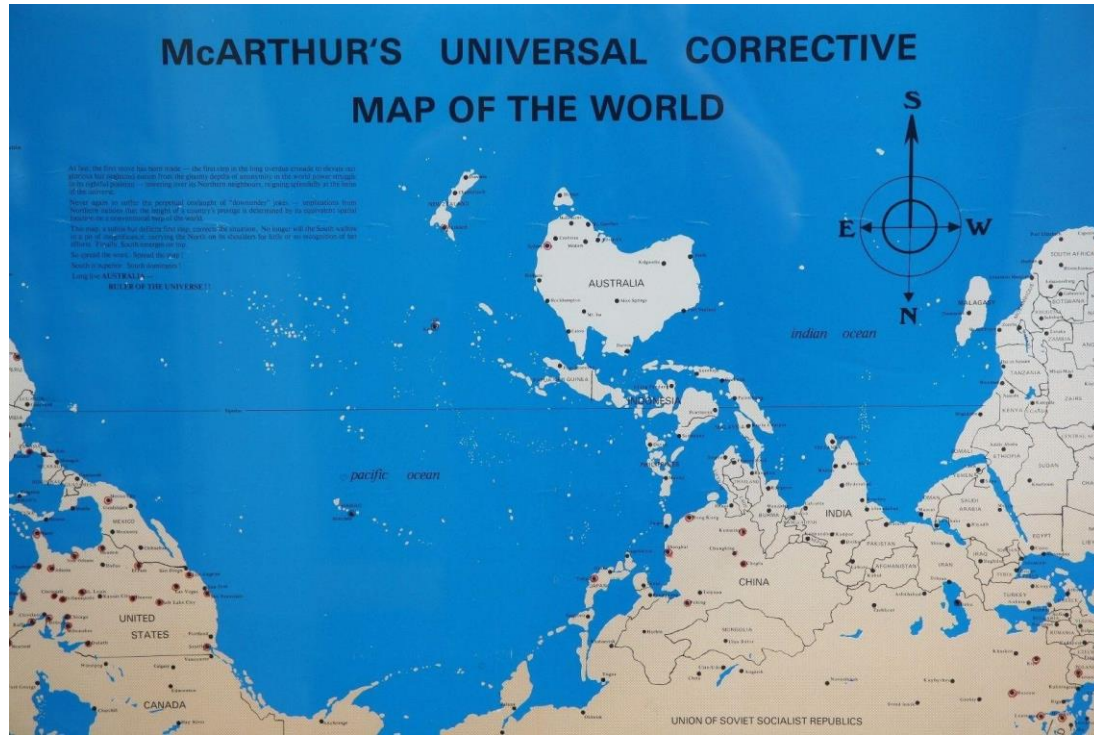


**The Winkel- Tripel is a modified azimuthal projection that preserves direction, distance, and some area. Land masses and poles are still enlarged.**

# Authagraph



**The Authagraph the most accurate map projection in existence. In fact, it is so proportionally perfect, it magically folds it into a three-dimensional globe.**



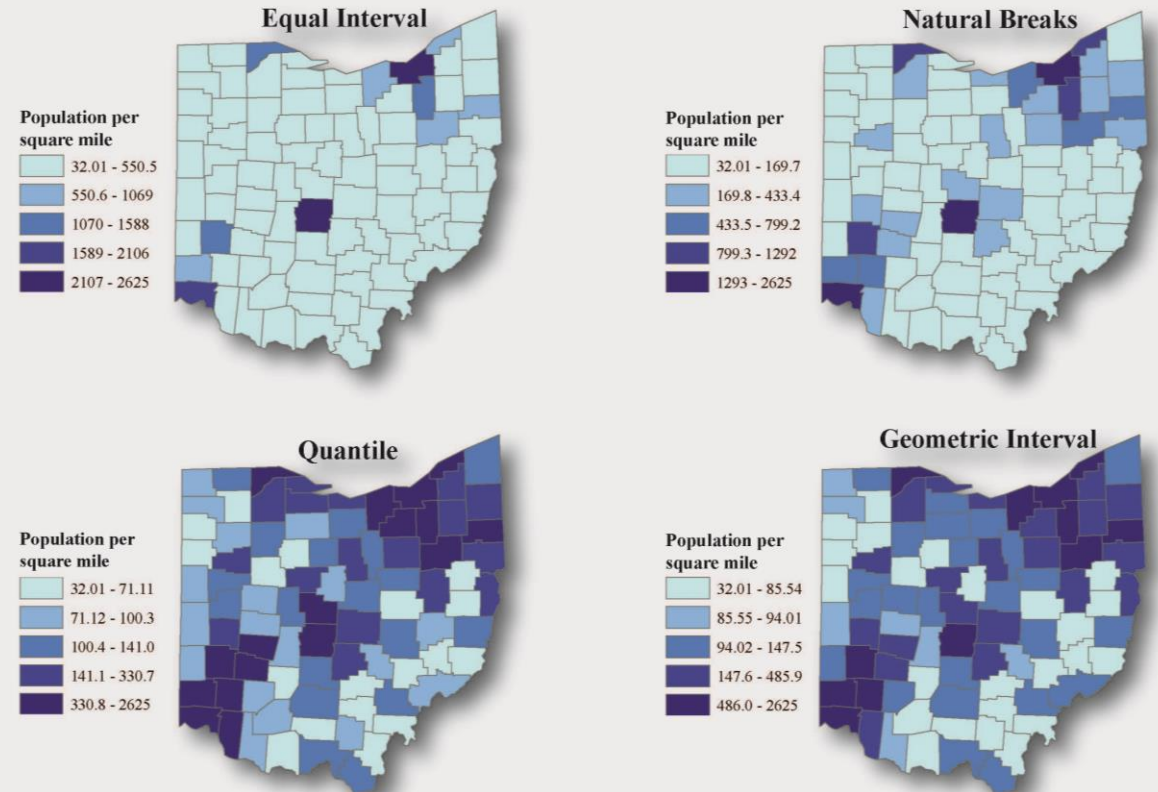
- The concept of north being “up” or “above” is a construct.
- Maps can be oriented different ways depending on cartographer’s preference
- Religion, politics, navigational needs, and other social and cultural preferences influence how maps are oriented

What even like IS north, man?

# Data Classification

## A Comparison of Data Classification Schemes

### Population Density of Ohio Counties 2014



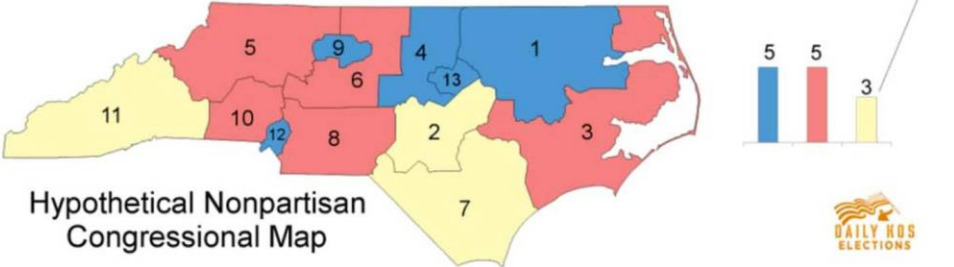
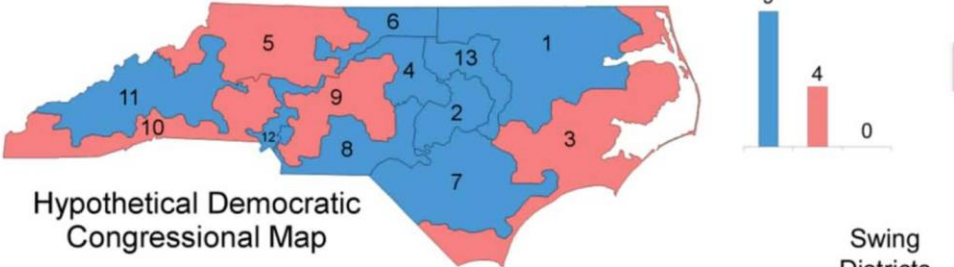
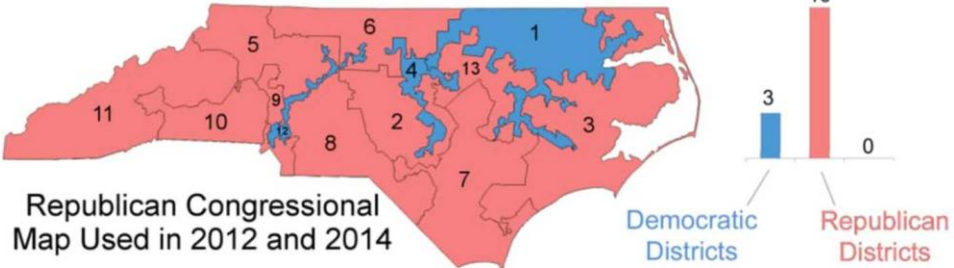
Projection: USA Contiguous Albers Equal Area Conic  
Source: U.S. Census Bureau, Census 2014, Population Estimates

# Other cartographic choices that create bias

- Color choices
- Icons (often gendered, normative)
- Place names (toponyms)
- Others...?

# Gerrymandering

## How Gerrymandering Can Swing Elections



attribution: Daniel Donner, Stephen Wolf

<https://projects.fivethirtyeight.com/redistricting-maps/>



# Redlining

<https://youtu.be/mBQE5rrWDfA>

