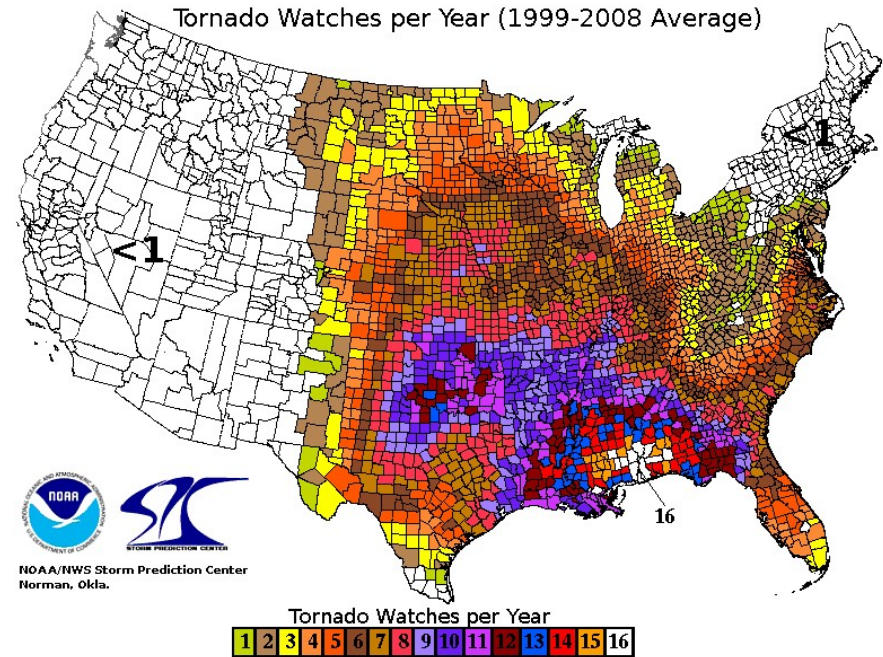


# Cartographic Basics



# Goals of Cartography

- Communicate geographical information graphically
- Maximize both:
  - Information presented
  - Ease of understanding

# Map Design

## Harmony:

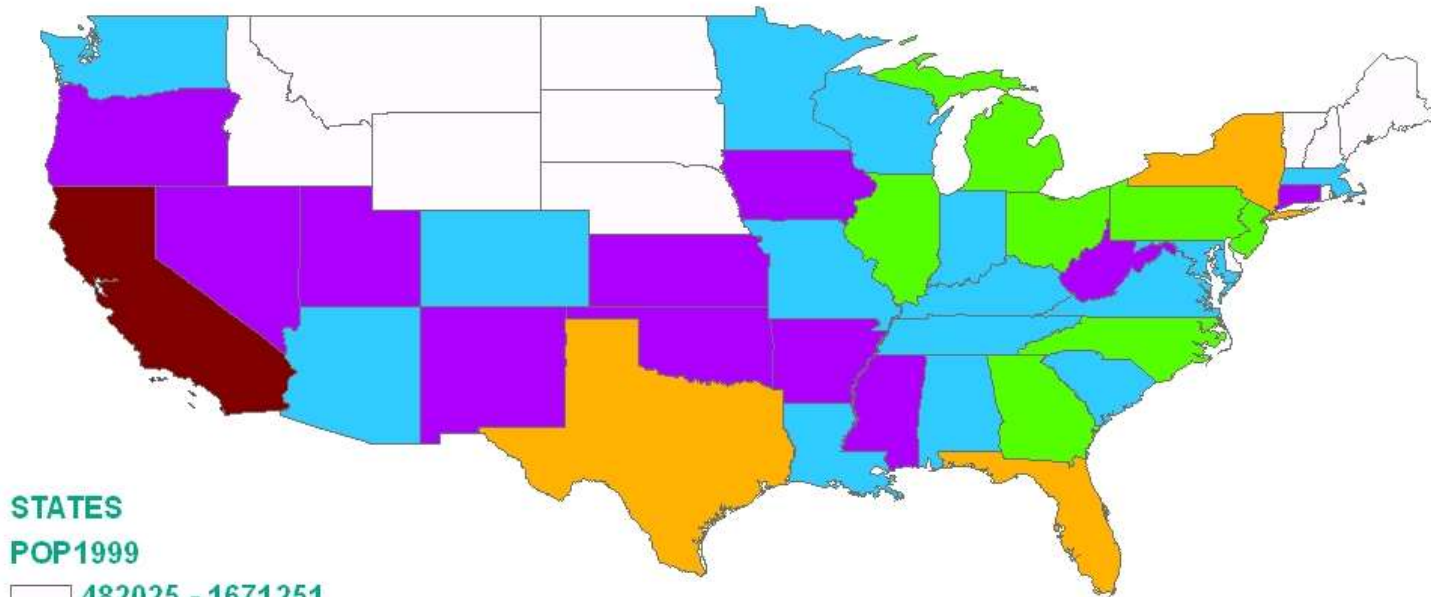
- Color, texture

Composition:

Clarity:

# Population Trend

## Bad Harmony Map



### STATES

### POP1999

	482025 - 1671251
	1671252 - 3374955
	3374956 - 6858858
	6858859 - 12110024
	12110025 - 20127338
	20127339 - 33090214

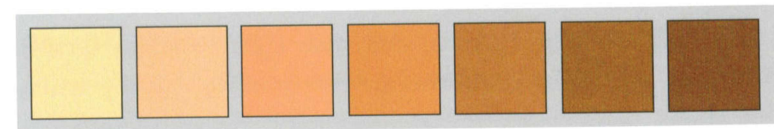
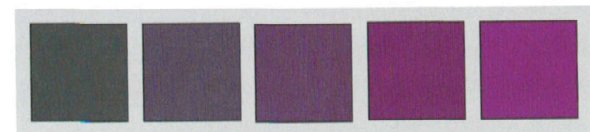
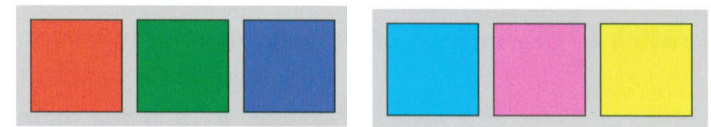
0 350 700 1,400 Miles



# Harmony: Color Choices

## HSV

- Hue
- Saturation
  - aka 'vividness'
- Value
  - aka Light/Dark

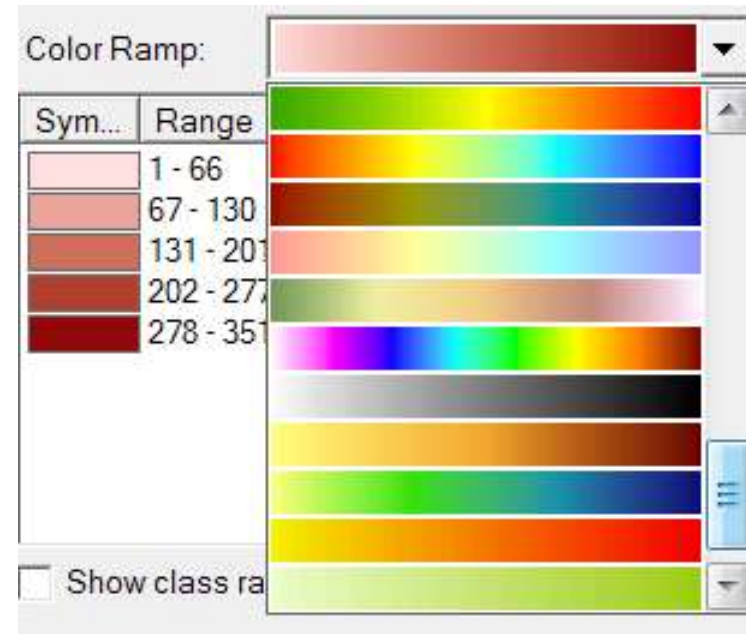


# Harmony: Color Choices

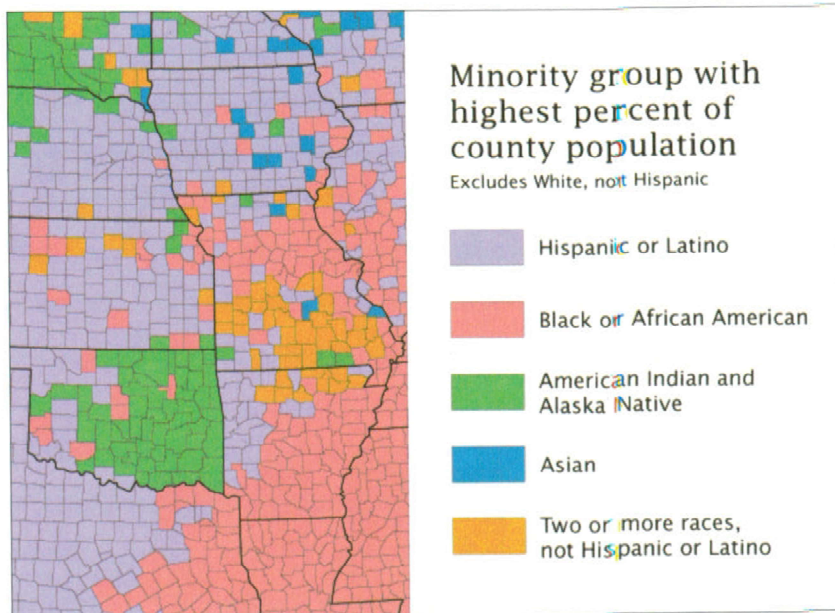
## HSV

- Hue
- Saturation
  - aka 'vividness'
- Value
  - aka Light/Dark

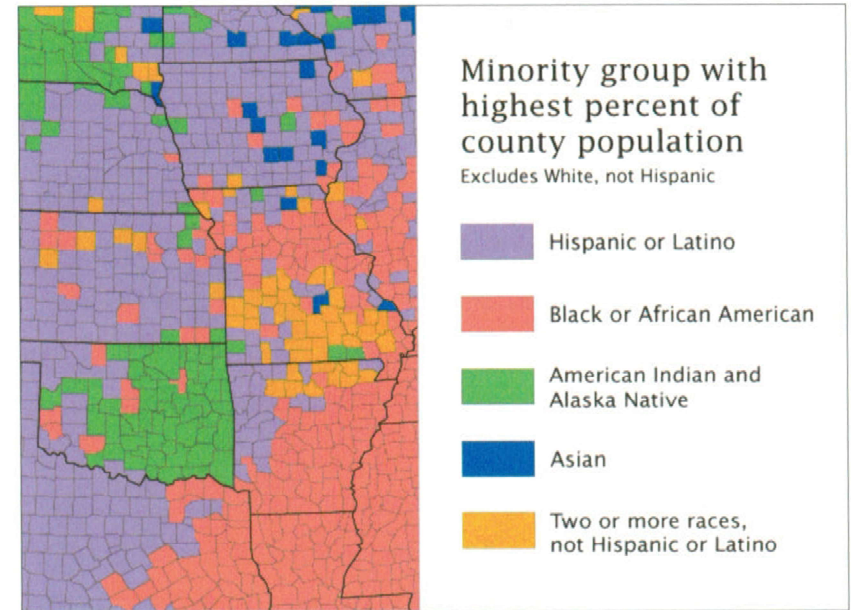
## ArcMap Symbology Tab:



# Harmony: Color for emphasis



Constant lightness & saturation



Symbology for:  
"Asian" is darker  
"Two or more races" is more saturated

# Map Design

## Harmony:

- Color, texture

## Composition:

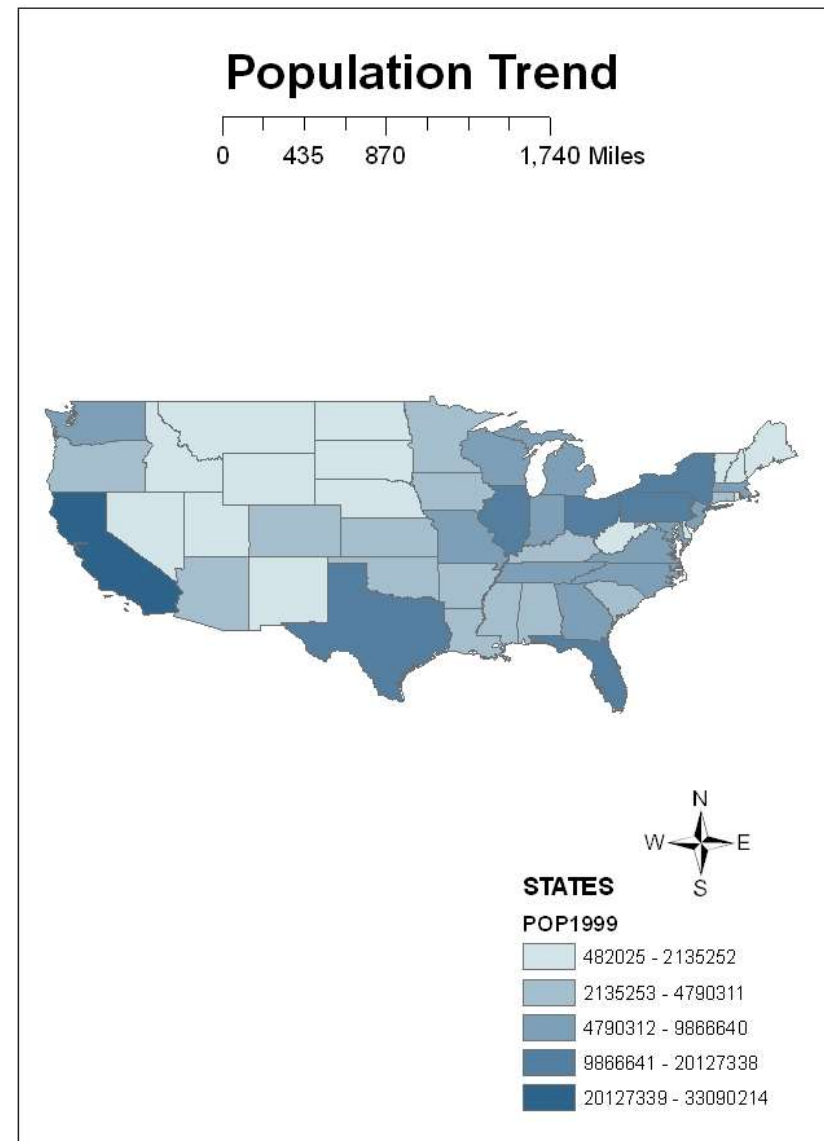
- Objects/layers on your map

## Clarity:

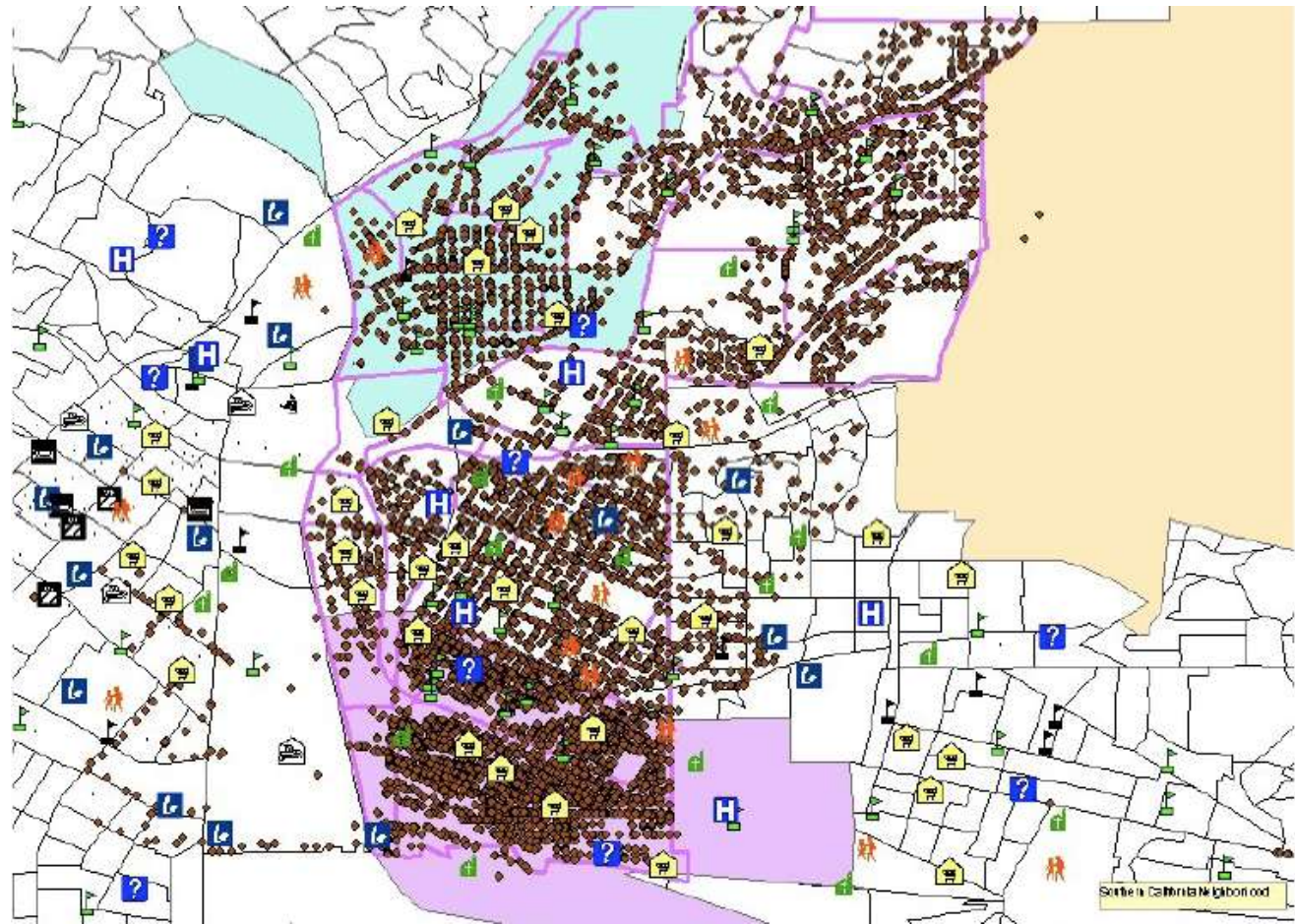


# Composition:

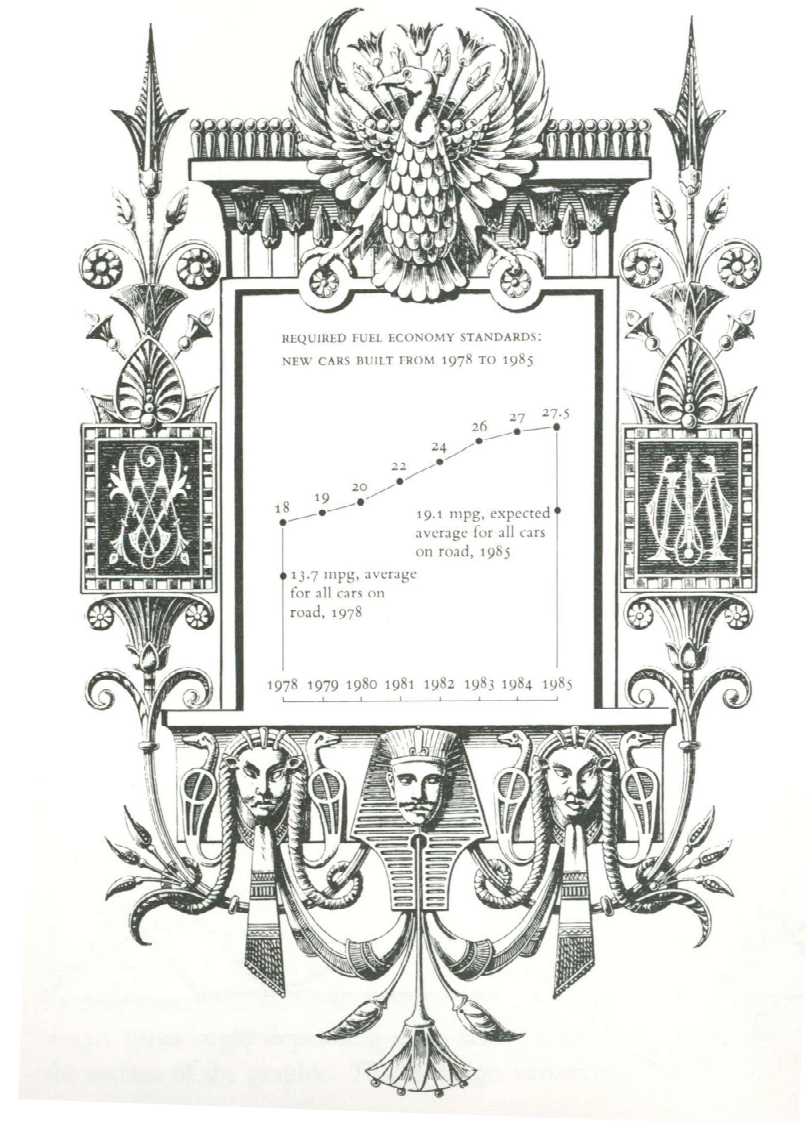
# Avoid Excess White Space



# Composition: Reduce Complexity



# Composition: Reduce Distractions



# Map Design

## Harmony:

- Color, texture

## Composition:

- Objects/layers on your map

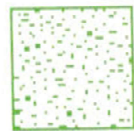
## Clarity:

- Intuition, ease of reading

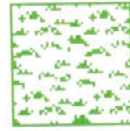
# Clarity: Choose Intuitive Color Schemes



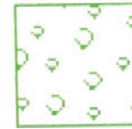
# Clarity: Use Intuitive Patterns



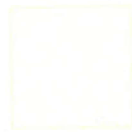
Scrub 1



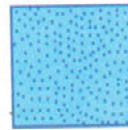
Grassland



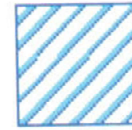
Scattered Trees 1



Sand



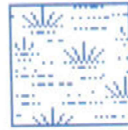
Water Intermittent



Reservoir



Wetlands



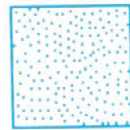
Swamp



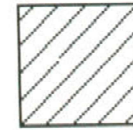
Mangrove



Glacier



Snowfield/Ice



10% Simple hatch

# Clarity: Highlight Importance



# Clarity: Font Choices

- Serif (e.g., Times New Roman)
  - The quick brown fox jumped over the lazy dogs
- Sans-serif (e.g., Arial, Calibri)
  - The quick brown fox jumped over the lazy dogs
- Display (e.g., Impact, Forte)
  - The quick brown fox jumped over the lazy dogs



# Clarity: Font Choices II

- Never Use This (Comic Sans)
  - The quick brown fox jumped over the lazy dogs
- Some stuff isn't readable (Old English)
  - The quick brown fox jumped over the lazy dogs
- Forrest prefers Sylfaen

# Resources to Help You

- <http://colorbrewer2.org/#type=sequential&scheme=BuGn&n=3>
  - Color Brewer is the best
- <https://learn.arcgis.com/en/arcgis-book/>
  - ArcGIS-focused overview