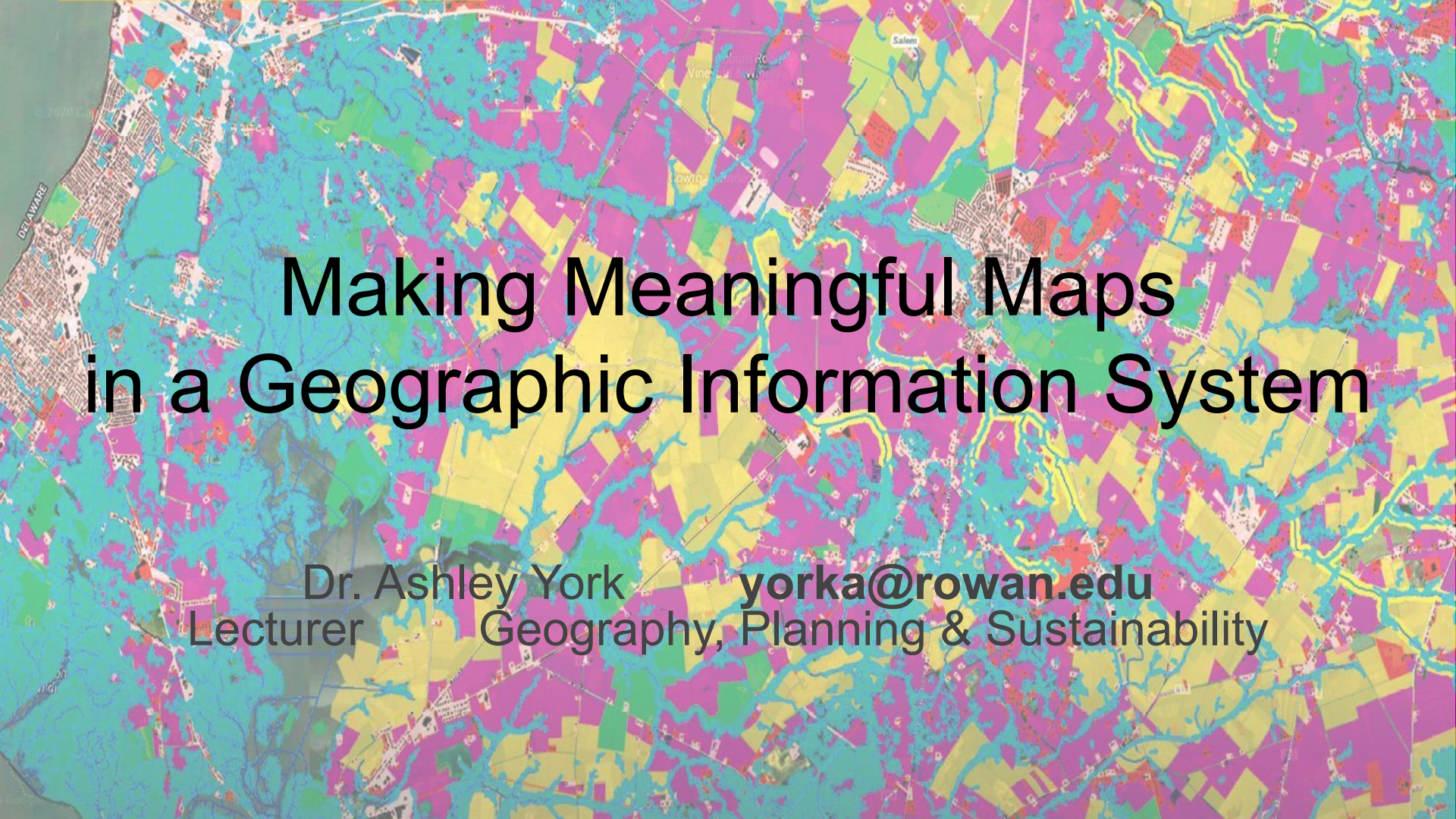

Making Meaningful Maps in a Geographic Information System

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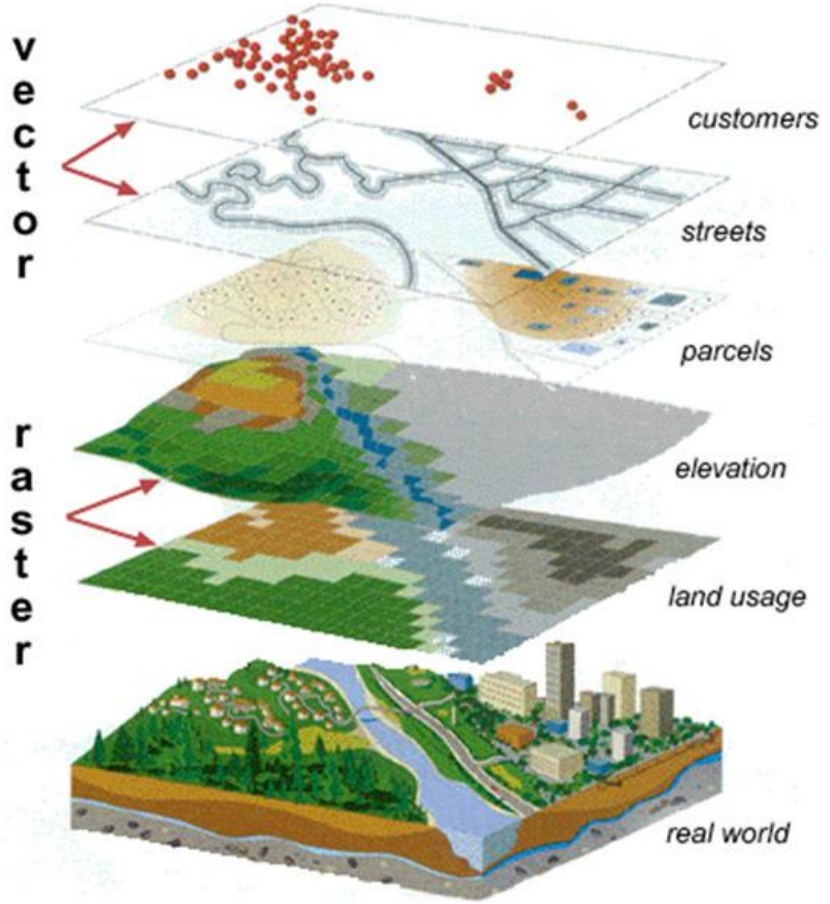
Lecturer Geography, Planning & Sustainability

Some quick definitions

Geographic **I**nformation **S**ystem or
Geographic **I**nformation **S**cience

Features - the real world things you want to map the location and unique non-spatial attributes of - *where* and *what* you are mapping

Layers - the separation of the real world into separate spatially coincident **features** of different shapes (point, line, polygon)



How to make a meaningful map

1. Do I know what my map's story is?
2. Am I using the right map projection?
3. Am I using data at the right level of generalization?
4. Is my symbology clear?
5. Do my symbols match my data?
6. Have I used the right text symbols?
7. Does my map have figure-ground organization?
8. Does my map have good visual hierarchy?
9. Do I need to add anything else to my map?
10. Have I asked for a critique?

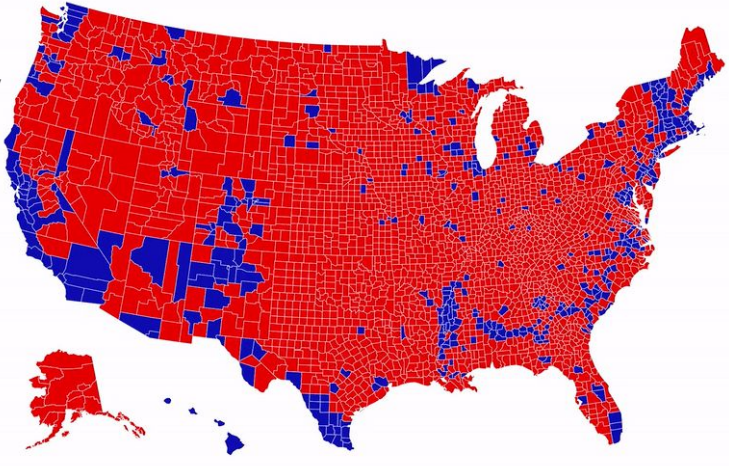
Inspiration

1. Do I know what my map's story is?

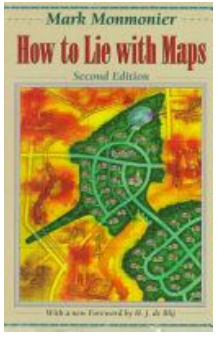
All maps are models or simplified versions of reality (point, line, polygon)

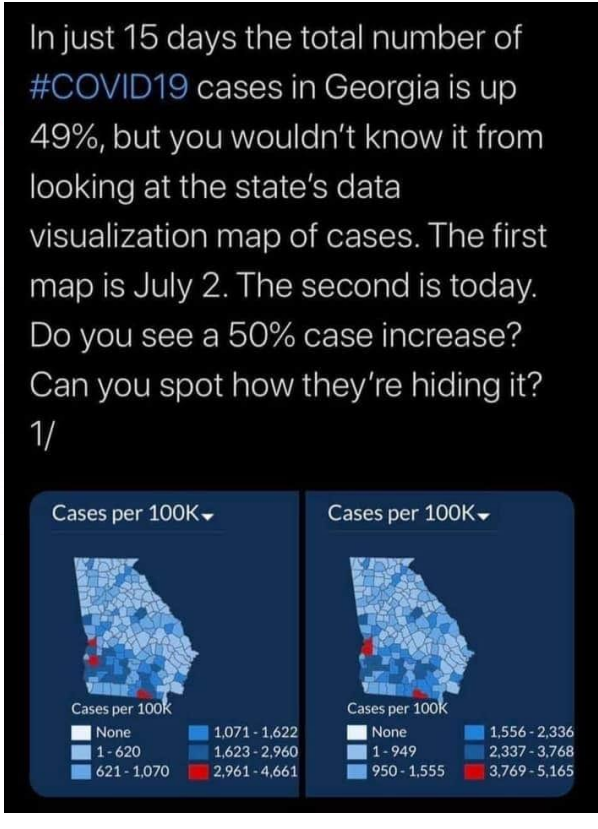
This means mapmakers have the ability (or ***responsibility***) to choose which (or whose) realities are shown on the map and tell a *story* with their map

What is the data you want to map, what does the data tell you, who is your audience, what is the utility of the map, how will the map be distributed…



Land Doesn't Vote, People Do



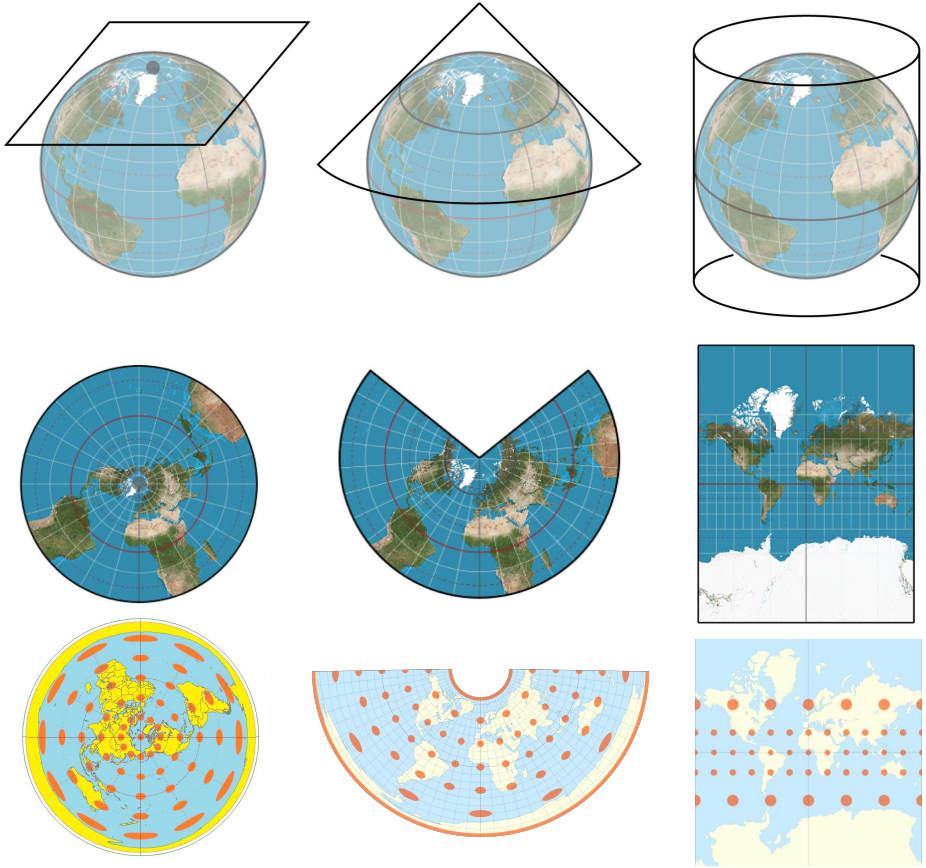


2. Am I using the right map projection?

In order to get the 3D world onto a 2D flat map screen, there will have to be distortion of features

Different map projections are designed to maintain different map properties (shape, area, distance, direction) or minimize distortion for particular places

[The True Size]



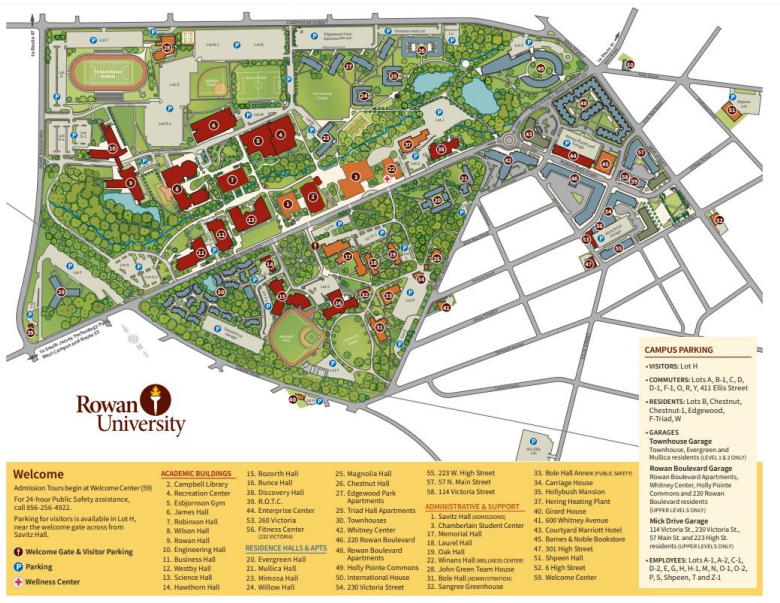
3. Am I using data at the right level of generalization?

How much of your real-world features are you generalizing, or what is the scale of your map, and what does this mean for your feature shape type (point, line, polygon)?

Small-scale maps cover larger area in less detail

Large-scale maps cover smaller area in more detail

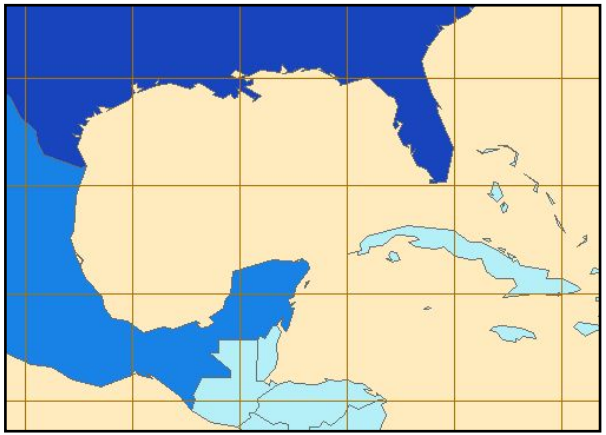
Think about how the same real-world features may be represented differently depending on your “zoom”



4. Is my symbology clear?

Symbol (and color) psychology - “intuitive” or familiar symbols or colors

Explanations or a way to interpret your symbols (a legend)



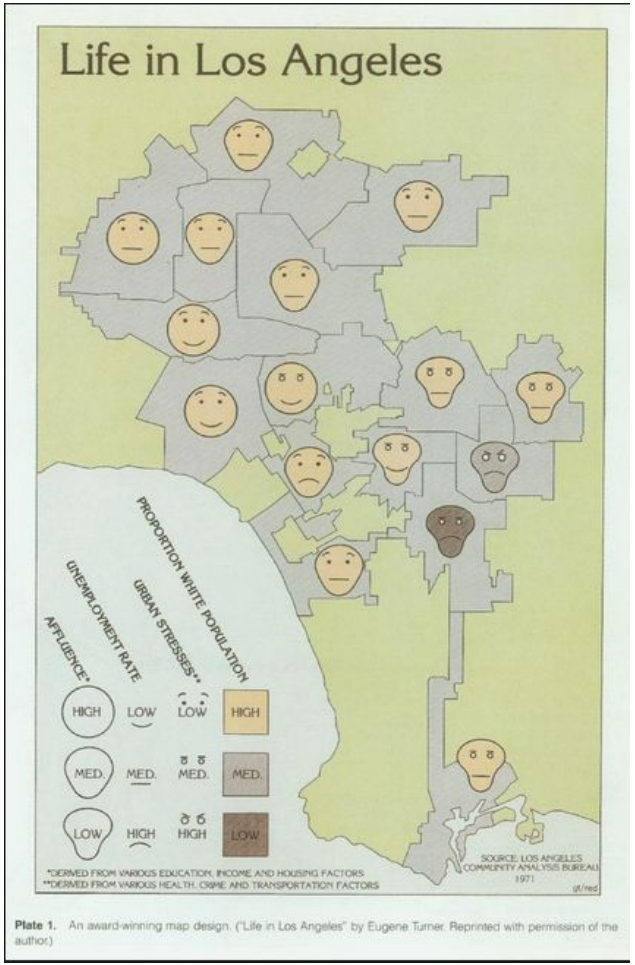
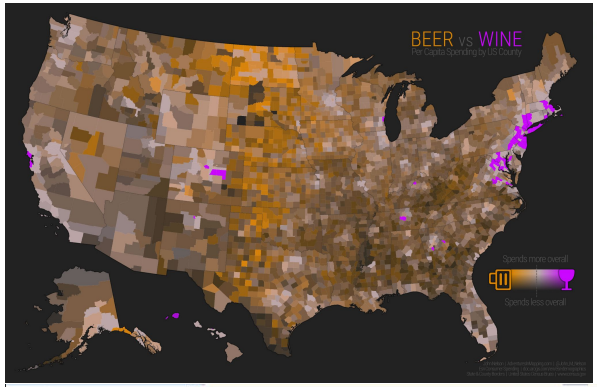


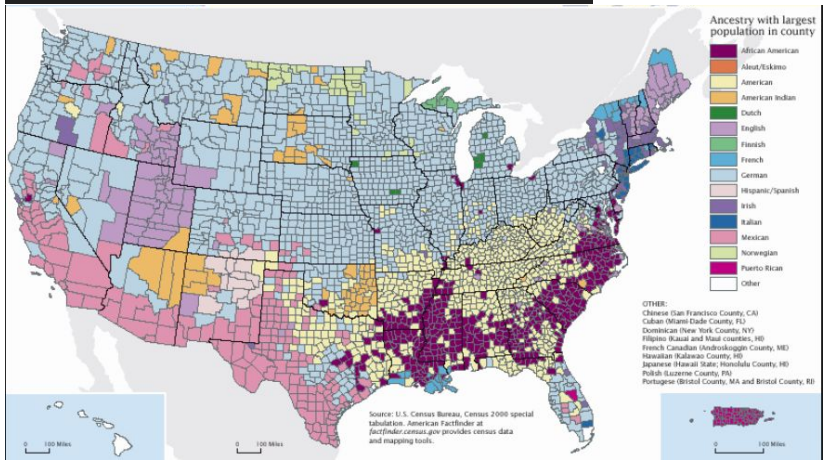
Plate 1. An award-winning map design. ("Life in Los Angeles" by Eugene Turner. Reprinted with permission of the author.)

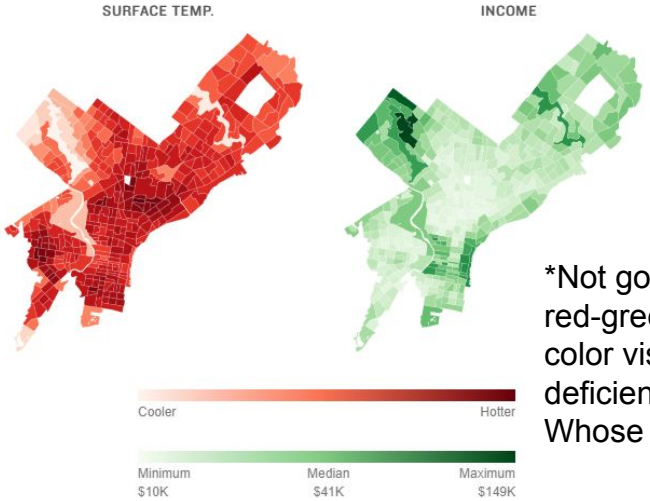
5. Do my symbols match my data?

Different symbol or color psychology is more appropriate for qualitative vs. quantitative data

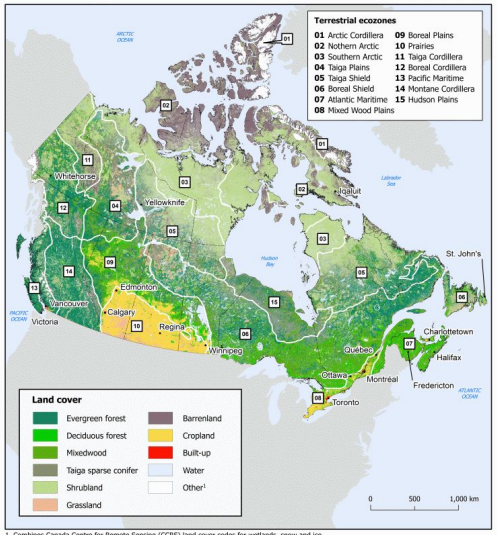
Do you need to distinguish between unique characteristics of your features, or are you trying to show numeric magnitudes of difference?







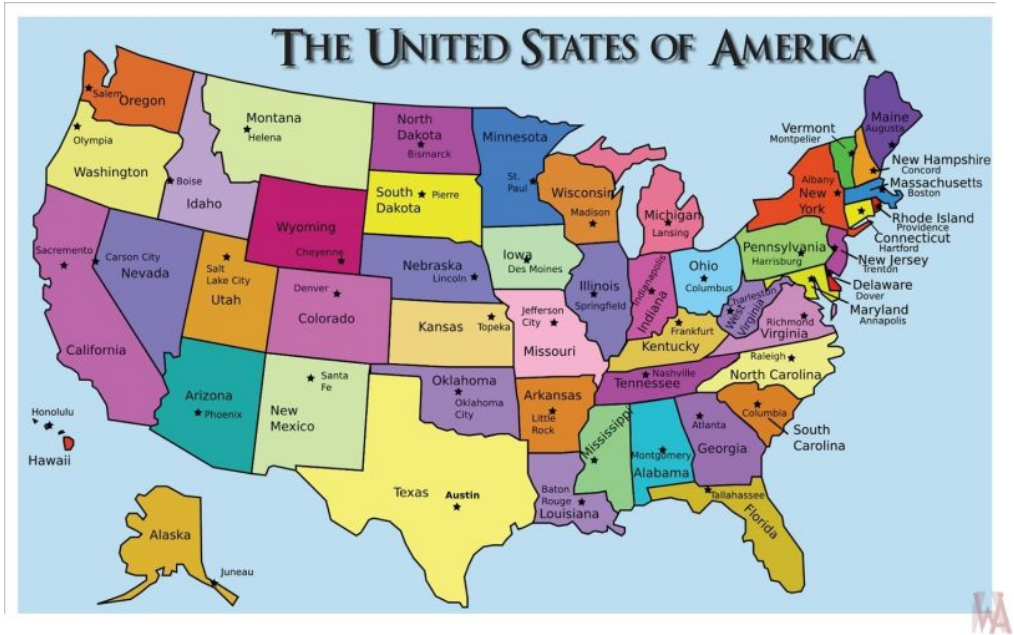
*Not good for red-green color vision deficiency! Whose reality?



6. Have I used the right text symbols?

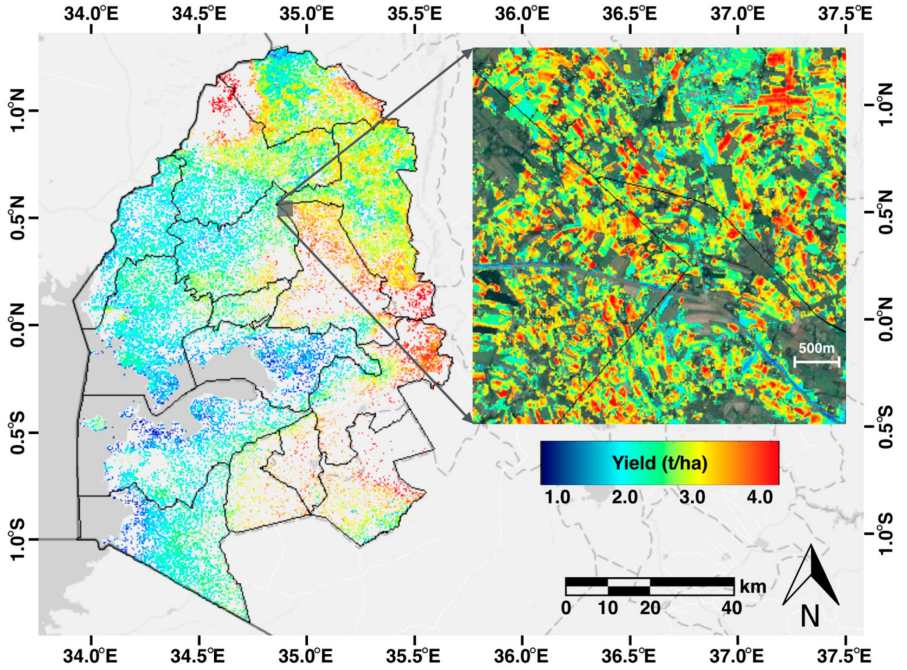
Text or labeling is also a symbol on the map and can be included in some of the same ideas as symbol (color) psychology

Placement of text can also aide in the interpretation of your map and potentially remove the need for a feature in the legend



7. Does my map have figure-ground organization?

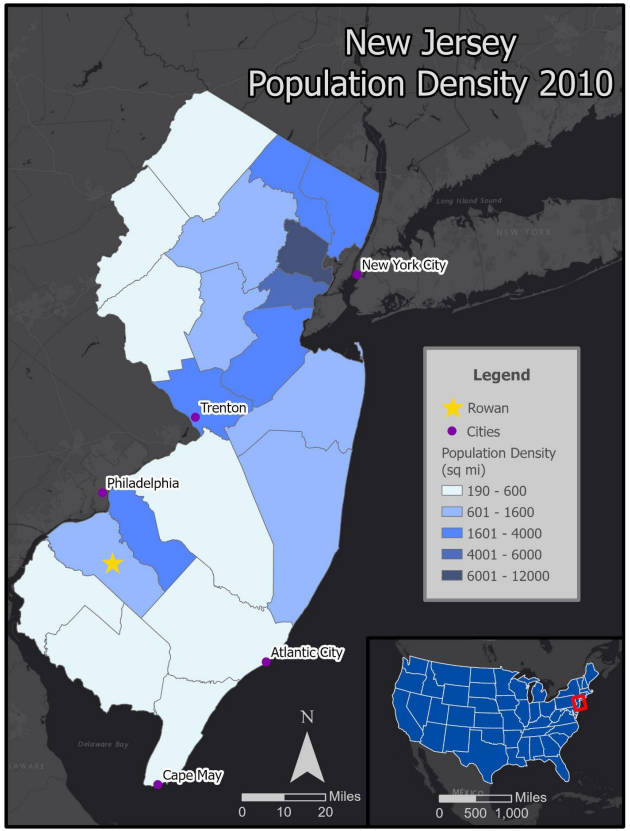
Figure-ground organization is the separation of the map into a figure that draws the eye away from a more neutral background to help readers focus on a particular part of the map



8. Does my map have good visual hierarchy?

Visual hierarchy is the separation of the map layers into planes of information so as to distinguish between features and interpret their relative importance

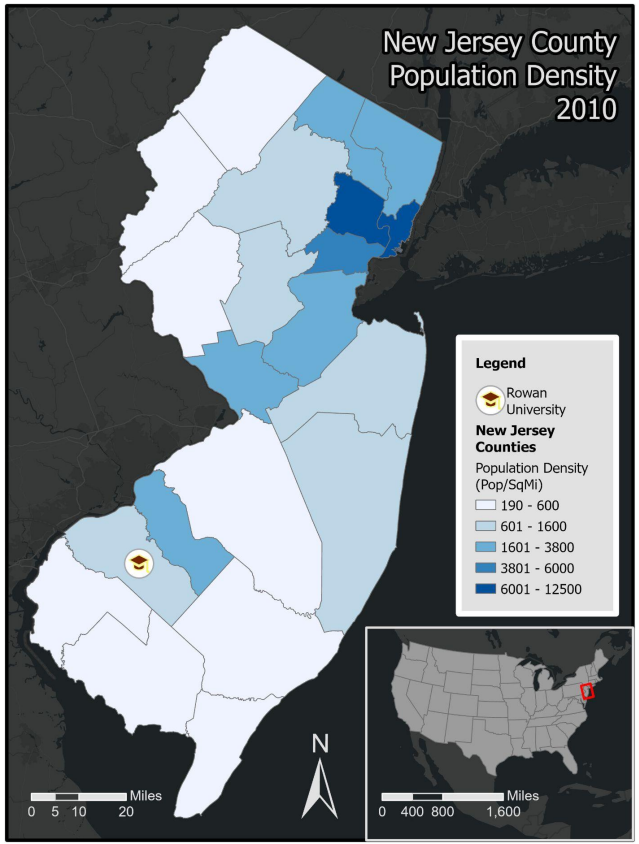
Rearranging drawing order of your layers in combination with varying symbology can help with this



9. Do I need to add anything else to my map?

Do I have all my map elements (legend, scale bar, north arrow, title)?

Is there non-label text or figures to add that would help with interpretation?



10. Have I asked for a critique?

Ask a friend! How does my map look?

How do you interpret the *story* of the map?

Insert our final map here