Diagram

Description automatically generated

* Canada has a specific shape and area and position which don't change no matter what.
* You can't encode an arbitrary new attribute with shape or area or position, they are taken already (in traditional maps)

Text, letter

Description automatically generated

# **Choropleth Maps**

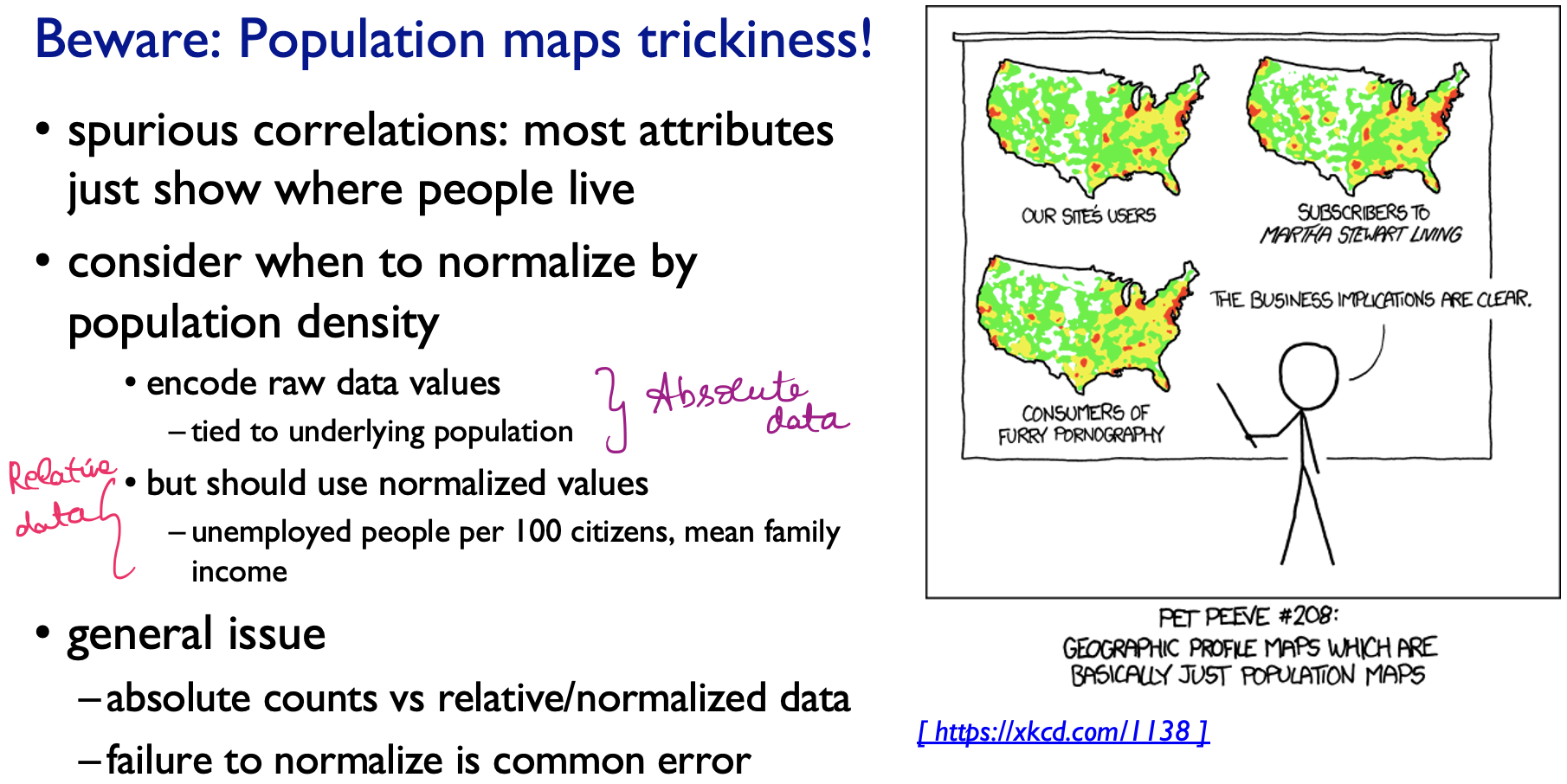
Text

Description automatically generated

Graphical user interface, application

Description automatically generated

So encoding for the position, we were using that given geometry of those area mark boundaries and then we are color coding [sequential segmented (from min to max) ]  
that attribute.



Raw data value 🡪 typically where people live.   
These values are all not be normalized (Absolute data).  
Unemployed people per 100 citizens 🡪 Relative data  
We should very well know what are all the variables must be used as absolute and relative.

## **Where to use ?**

Text

Description automatically generated

Visual salience of that interlocking area mark depends upon the size of the region, and that might not all match up with the attribute value which is the true importance of what we are tyring to encode.

Because of this, large regions appear to be much smaller 🡪 This is not true, but we will get only this perception.

## **Pros and Cons**

Text, letter

Description automatically generated

# **Symbol Maps**

A picture containing chart

Description automatically generated

Point marks for state population Cuter thing of triangles depicting the Christmas trees

The issue is that they can over-lap the boundaries.

Map

Description automatically generated

We can show multiple attributes concept (like pie-charts, histograms) within a spatial region

Text, letter

Description automatically generated

Text, application

Description automatically generated

Text, letter

Description automatically generated

## **Pros and Cons**

Text, application

Description automatically generated

Problem between region size versus salience of data 🡪 solved.   
Since symbol goes according to the attribute value and not according to the region size.

# **Contiguous Cartograms**

Graphical user interface, application

Description automatically generated

Graphical user interface, application

Description automatically generated with medium confidence

Going to have a uniform size shape for each of these geographic regions.  
There is no approximate and relative spatial positions.

## **Grid Cartogram**

Chart

Description automatically generated

Text, application, letter

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

# **Dot Density Maps**

Text, letter

Description automatically generated

Map

Description automatically generated

## **Pros and Cons**

Graphical user interface, text, application

Description automatically generated

# **Topographic Map**

Intersection of Spatial Fields and geographic maps

Instead of associating (in thematic maps) with table, we are now associating with scalar special field.

Iso line / Iso contour is a line of equal value for that scalar attribute.

Too much of contour lines 🡪 steep slope

<https://www.tableau.com/data-insights/reference-library/visual-analytics/geospatial/symbol-maps>

<https://en.wikipedia.org/wiki/Choropleth_map#:~:text=A%20choropleth%20map%20(from%20Greek,density%20or%20per%2Dcapita%20income>.

<https://www.axismaps.com/guide/dot-density>