

In Search of the Perfect Bubble Map

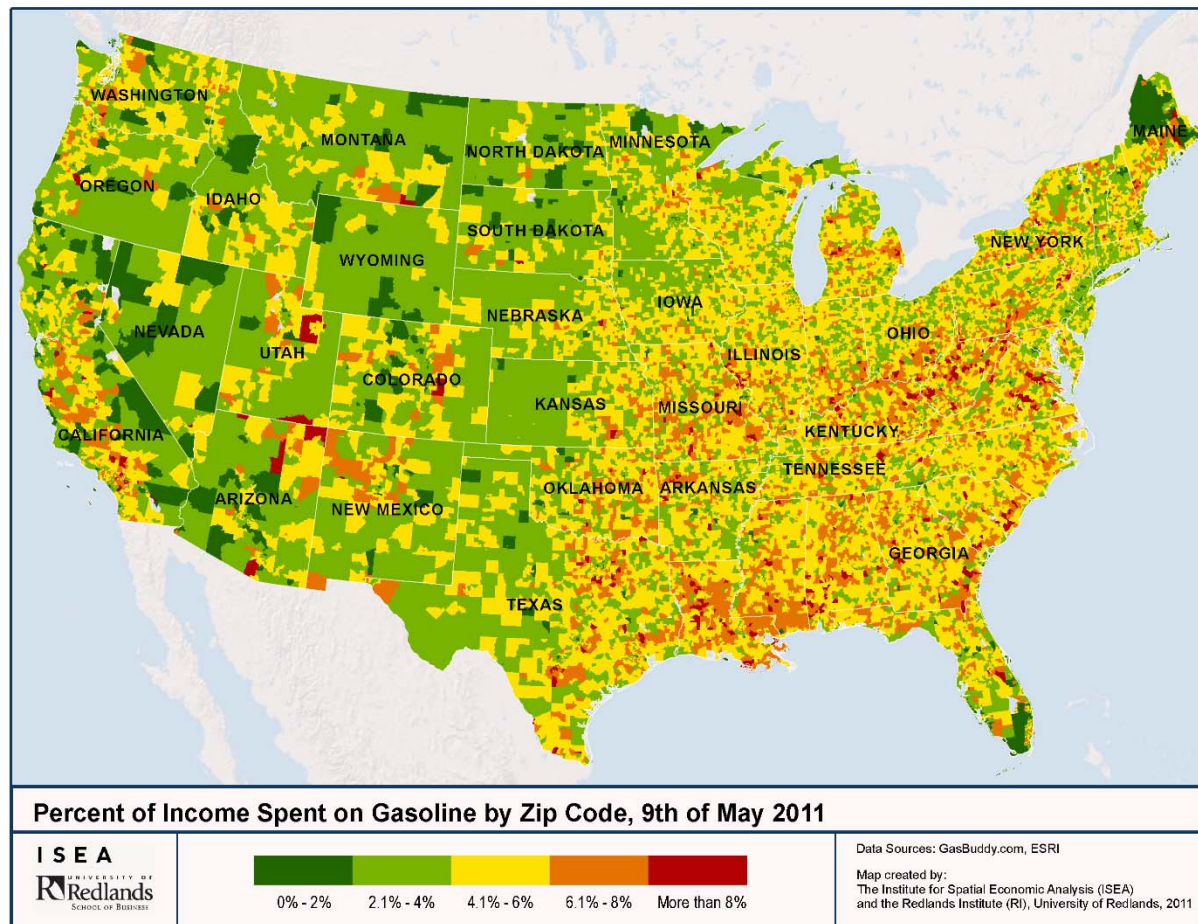
A Performance in Four Acts

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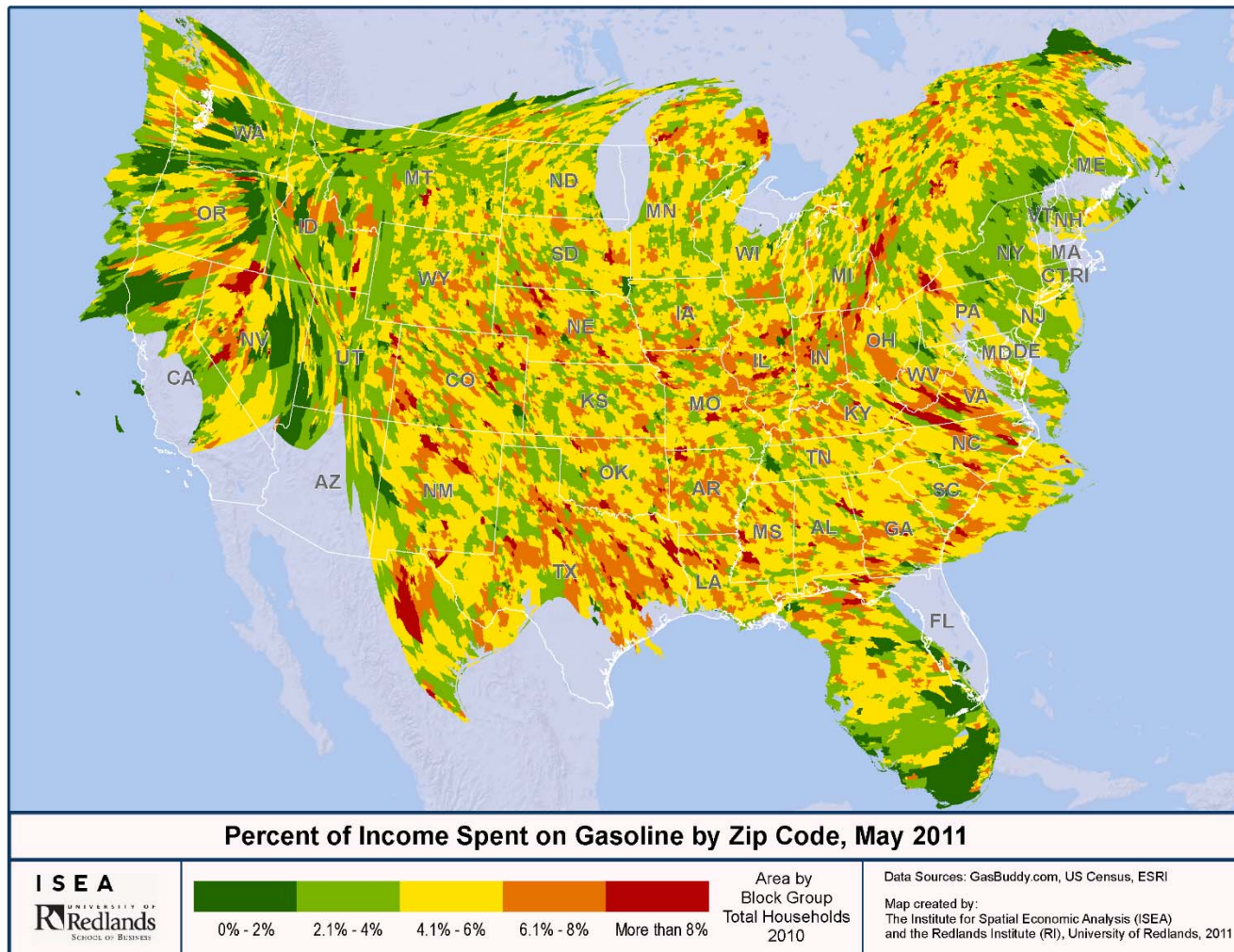


Act 1: The Representation Problem

Areas do not reflect importance well: compare a regular map of oil price dependency



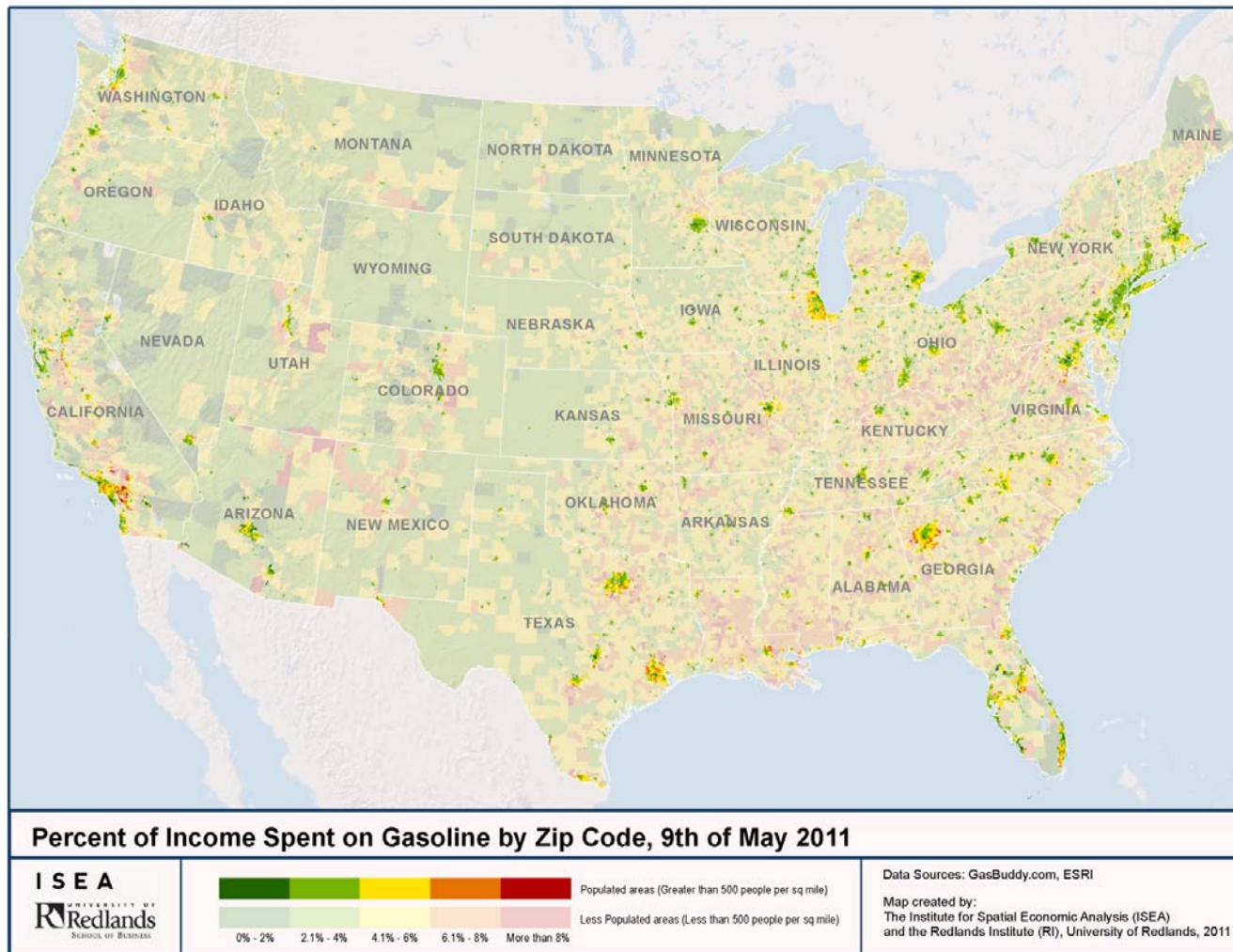
... with one that weighs (and thus distorts) each zip code with the number of households who live there. This is called a cartogram. Try finding your zip code!





Act 2: Choosing the Right Type of Thematic Map

Finding a zip-code in a cartogram can be hard. Here we compromise to show relative importance: populated places in solid colors, all others translucent ...



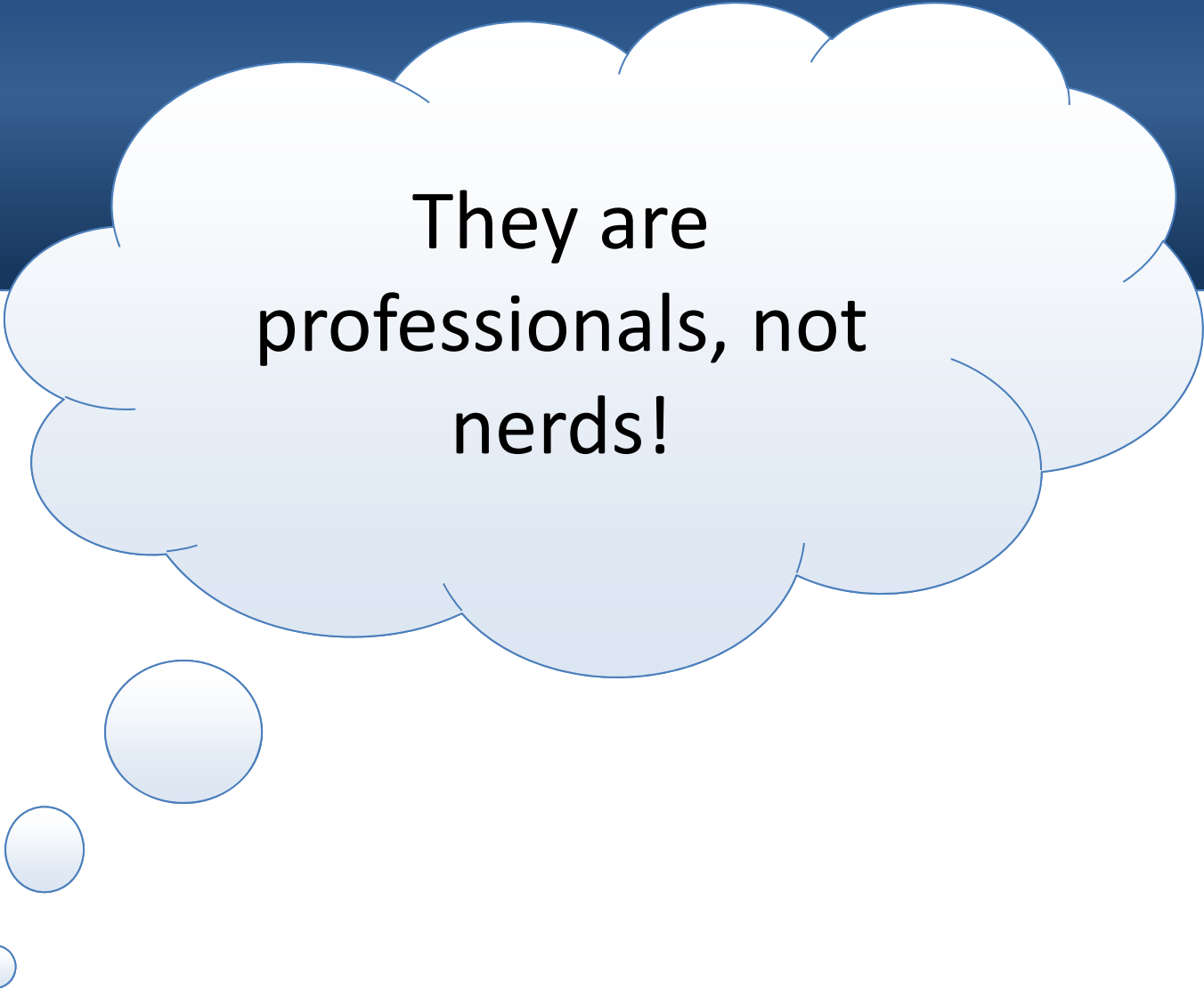
Types of Thematic Maps (we considered)

- Choropleth
- Cartogram
- Dot
- Dasymetric
- Graduated or Proportional Symbol

Act 3: The Perception Issue

Bubble map with diameter proportionality

Map with area proportionality at two
Different Zoom levels without zoom
correction (using animation)



They are
professionals, not
nerds!

Formulas for calculations of area
proportionality and scale proportionality or
excel table with scale proportional info

Map with area proportionality at two
Different Zoom levels **with** zoom
correction (using animation)

Act 4: The color issue

??#💣☠️😞★!!

Map with area proportionality and transparency

Final map

Final map – compared to very first
one in animation





Sigh!



Job growth map

Logistics map

Rich vs poor map



**One more
comment and
I quit!!**

The Steps

- **Always** ask yourself **first**: does this map tell the story?
- Correctness of representation ... is message correct?
- Choose size proportional type, e.g. bubble, if bubble:
- Choose diameter versus area proportional representation (read perception literature)
- Make scale dependent adjustments
- Make it readable for the color blind