thematic maps

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outline

classification methods

thematic mapping

variable definitions

- be very clear about what you are measuring
  - put on the map, in description, or into appendix, but have to have it somewhere!
  - eg do we have small breweries that are at some bars? how exactly is a brewery defined?
  - eg what is exactly a bike lane–incl paths in parks? does it have to be designated for bikes only? and paths not for bikes but used by bikes?
  - ideally map them all!

map labeling: clarity and simplicity!

- always have a self explanatory title/caption and legend
- self-explanatory means a random person will understand what it's about
- in other words it will pass "a grandma test"
  - give it to your grandma and she'll get it
  - if she doesn't, then it isn't clear enough

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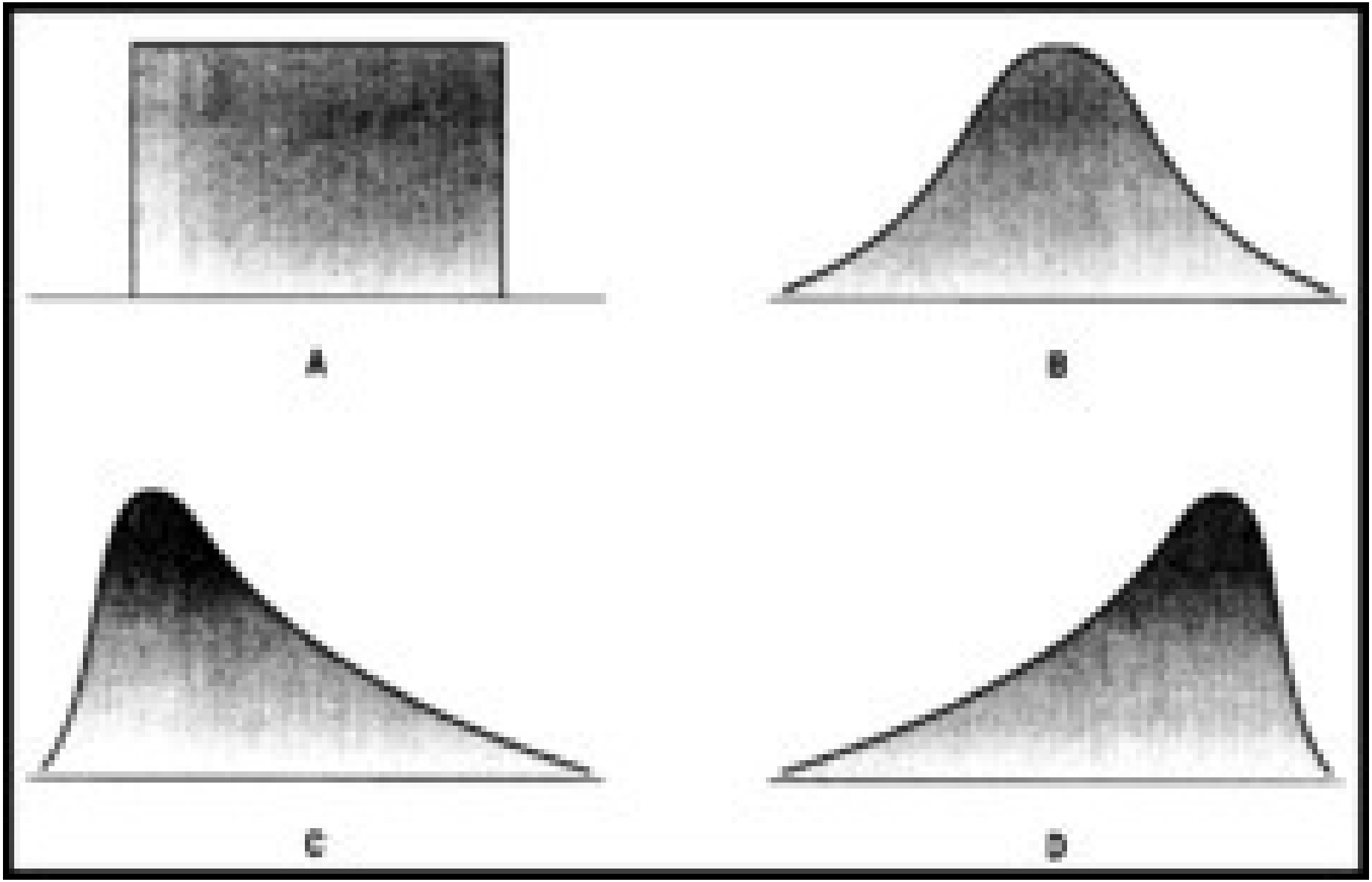
distribution/histogram



reference

- pdf p7: creating classes
  - https://theaok.github.io/gisPy/thematic_map_design.pdf

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always think abt the meaning; interpret!

- always interpret the map, think about what it means
  - usually want to standardize to achieve meaningfullness
- standardize by area ("per sq km") or by pop ("per capita")
- or even: specific (eg habitable) area; specific (eg disadvantaged) pop
  - eg much of area may be water or forest, so hydrants/inhabited sq km
  - similar with populations-they may only work or sleep in some area, (Cherry Hill is a bedroom city) etc
  - eg Cape May has many liquor stores per capita (just because nobody lives there)

classification methods

- always understand the distribution–use hist!
  - have a hist in ps (at least of main var)
  - think about it, discuss and motivate classification meth
  - (i'll cut points)
- i like NATURAL BREAKS/JENKS or QUANTILES
- usually more "truthful" than equal intervals
- start with many, say 7, then shrink it to say 5 or 3 without loosing too much detail
  - make it as parsimonious, clean, and simple as possible

choice of classification method is critical

- be as objective as possible
- never choose classification forcing your story
  - let the data speak, listern carefully, don't force it
- scientist must be objective
- play with it: explore the distribution and categorize differently
- then pick the most parsimonious AND best representing the pattern
  - (put the alternative ones into appendix, so can always compare)
- let the data speak! do not force your story

let the data speak, but you pick the story!

- data have always many stories to tell
  - and you choose which one you want to present
- say may emphasize exteremes with dramatic colors
  - eg purple for values way different from everything else
  - (for intervention, disaster response, etc)
- or paint the gradient, where values raise and level off etc
  - like my urban-rural happiness gradient
- also in space: clusters of happiness: `https://link.springer.com/content/pdf/10.1007/s11205-010-9671-y.pdf`
  - (still using alt classifications for robustness)
  - (and std dev in addition to levels)