How to handle complexity: 3 more strategies

- Partition into views

- Facet

- Partitioning: List alignment

- Superimpose

- Filter

- Aggregate

- Embed

- Change

- Select

- Navigate

- Juxtapose

- Superimpose

- Embed

- Coordinate Multiple Side By Side Views

- Share Encoding/Same/Different

- Linked highlighting

- Share Data: All/Subset/None

- Share Navigation

- Linked highlighting

- system: EDV

- system: Google Maps

- Coordinate views: Design choice interaction

- Encoding

- Data

- All

- Subset

- None

- Same

- Different

- Overlap

- Small Multiple

- Multiform

- Multiform, Overview/

- Detail

- Redundant

- No Linkage

- Small multiples

- system: cerebral

- Partitioning: List alignment

- single bar chart with grouped bars

- split by state into regions

- compare: easy within age, harder across ages

- small multiple bar charts

- split by age into regions

- see chart per region

- compare ease within age, harder across states

- manual

- system: Cerebral

- Partition into views

- how to divide data between views

- -emotional associations between items using spatial proximity

- -major implications for what patterns are visible

- -split according to attributes

- design choices

- -how many splits

- -all the way down one mark per region?

- -stop earlier for more complex structure within region?

- -order in which attributes used to split

- -how many views

- animated transitions

- smooth transition from one state to another

- -alternative to jump cuts

- -support for item tracking when amount of change is limited

- example: multilevel matrix views

- -scope of what is shown narrows down

- -node blocks stretch to fill space, additional structure appears within

- -other blocks squash down to increasingly aggregated representations

- linked highlighting

- change over time

- -most obvious & flexible of the 4 strategies
Static visual layering

- foreground layer: roads
  - hue, size distinguishing main from minor
  - high luminance contrast
- background layer: regions
  - desaturated colors for water parks, land areas
  - user can selectively focus attention
  - "get it right in black and white"

Superimposing limits

- few layers, but many lines
  - hue, size distinguishing main from minor
  - high luminance contrast from background
- second-level regions
  - choropleth maps

Dynamic visual layering

- interactive, from selection
- very lightweight, hover
- ex: 1-hop neighbors

System: HIVE

Partitioning: Recursive subdivision

- split by neighborhood
- then by type
- then time
  - years as rows
  - months as columns
- color by price
  - neighborhood patterns
  - where it’s expensive
  - where you pay much more for detached type

System: Cerebral

Further reading