

# Session 2e

## Sketching



Online Course  
**Data Visualization  
for Professionals**



THE UNIVERSITY  
of EDINBURGH

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May 2022

<http://benjbach.me>

<https://datavis-online.github.io>

-- Not for external use --

# In a nutshell

1. What sketching is about?
2. Why do we need sketching for visualization?
3. What do we sketch?
4. How do we sketch?

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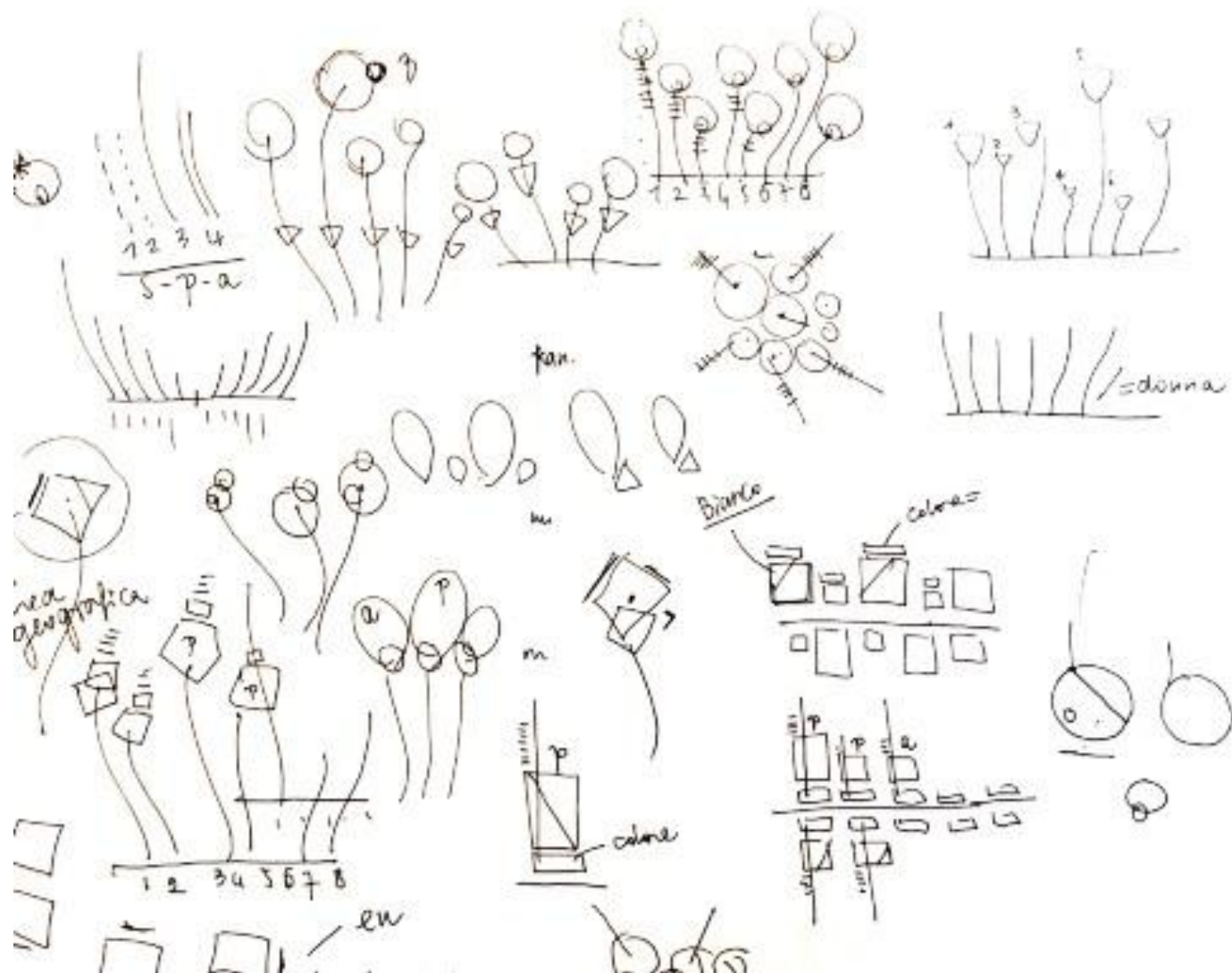
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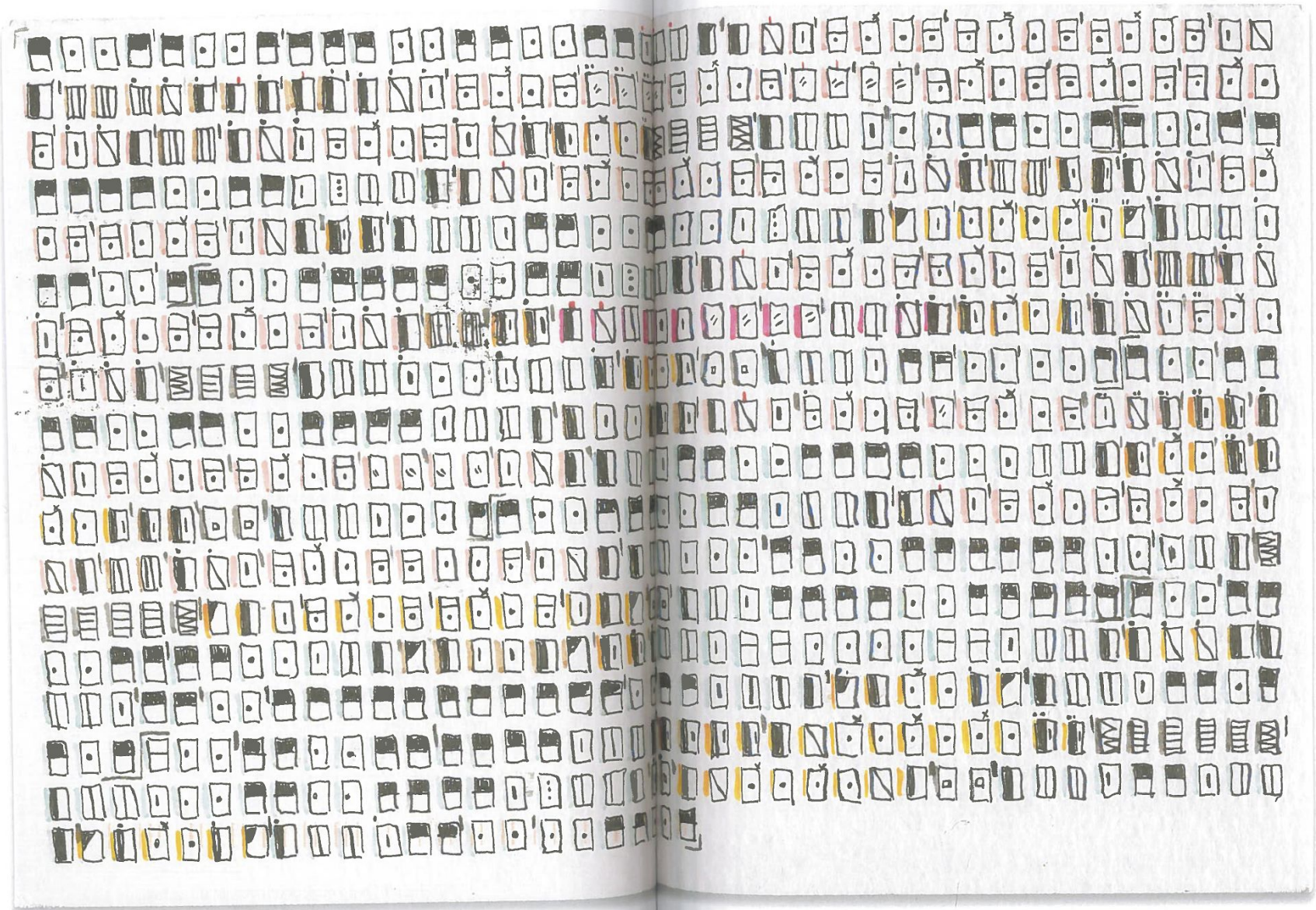
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# Idea Generation *Doodles*



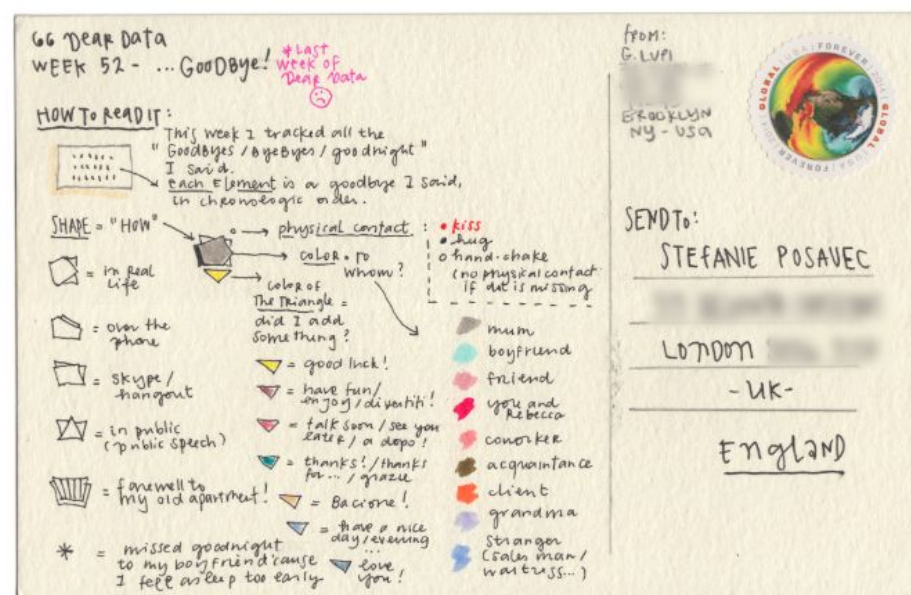
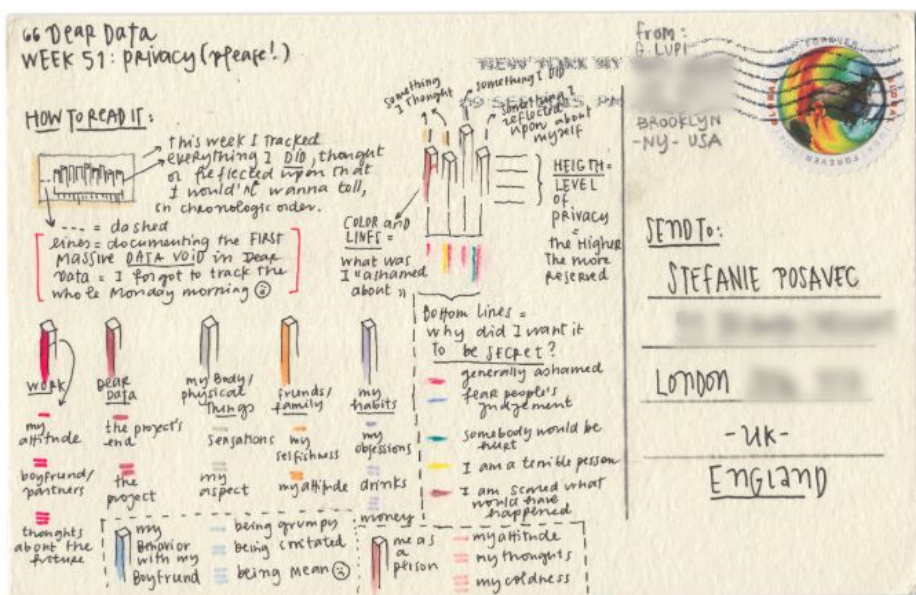
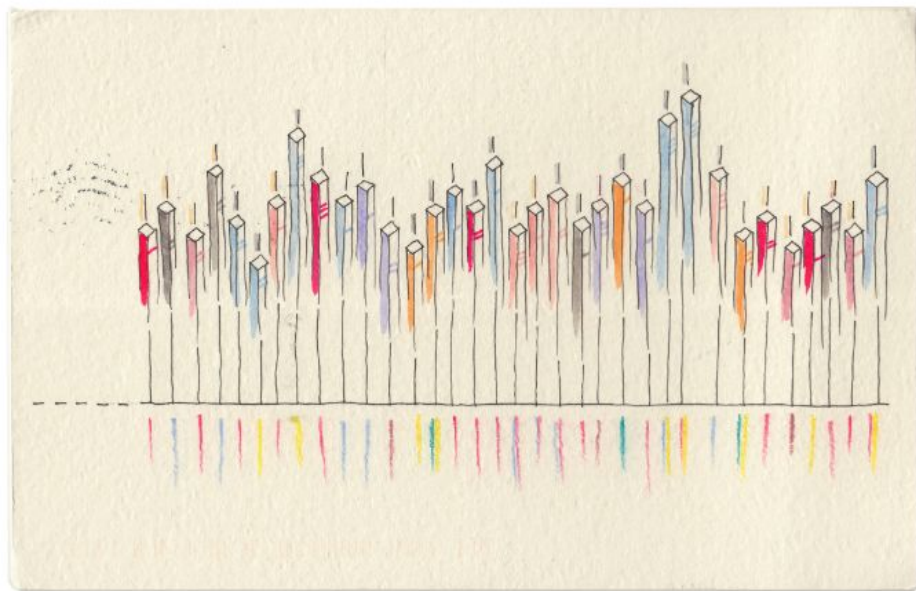


# Visual Marks & Glyphs





# Visual Language Dear Data





# Visual Marks & Glyphs

Week Twenty-four

a week of

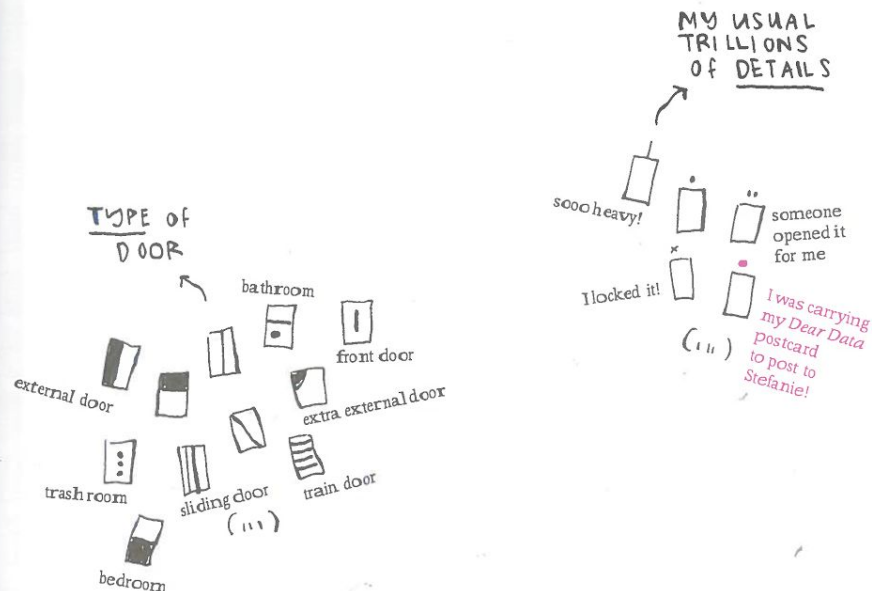
DOORS

This week Georgia and Stefanie were tracking the doors they passed through. As much as it sounds an unusual dataset, it was a pretext to show each other the pace of their days through their external and internal environments.

It is a reminder that you can still see the story of a life lived, even in the most uncommon types of data tracking, if you add the right details to your gathering.



(111)

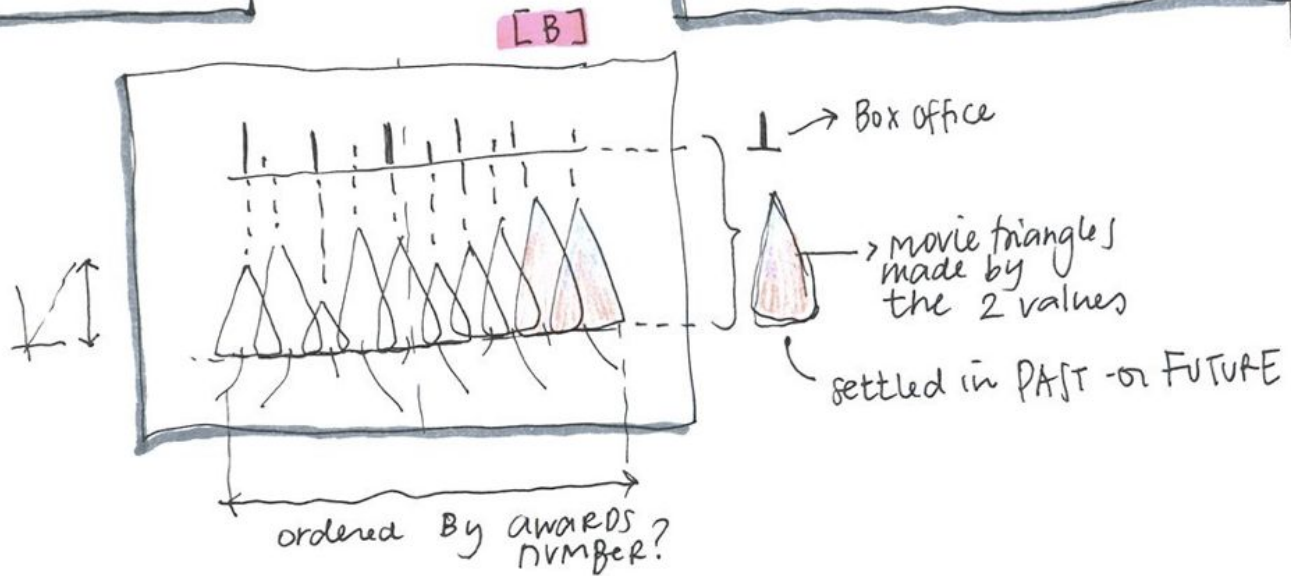
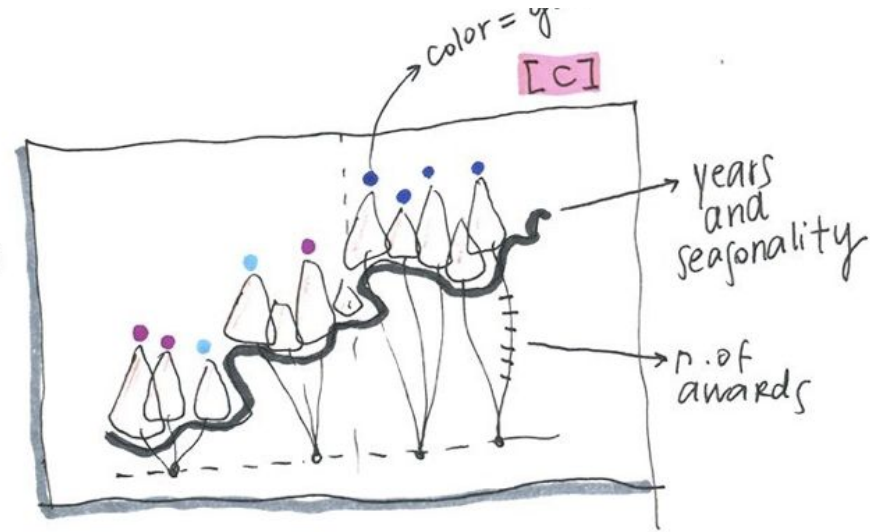
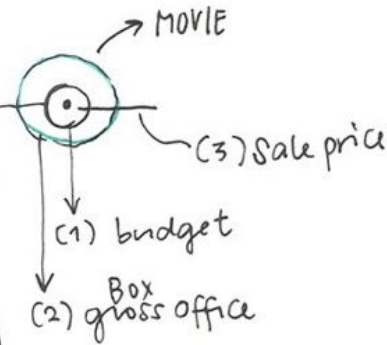
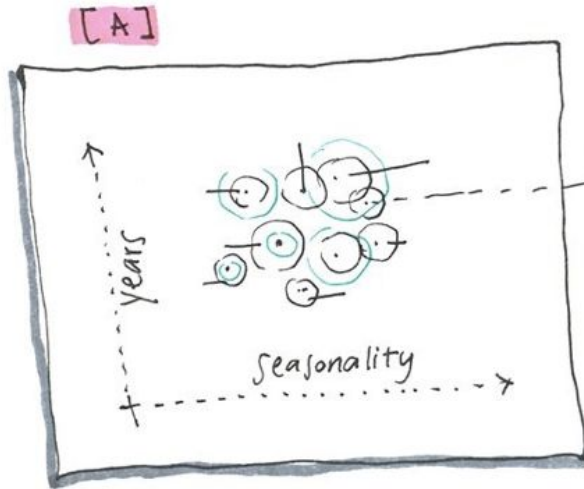


Why can't I help ooooooooooverdetailing my  
data collections???

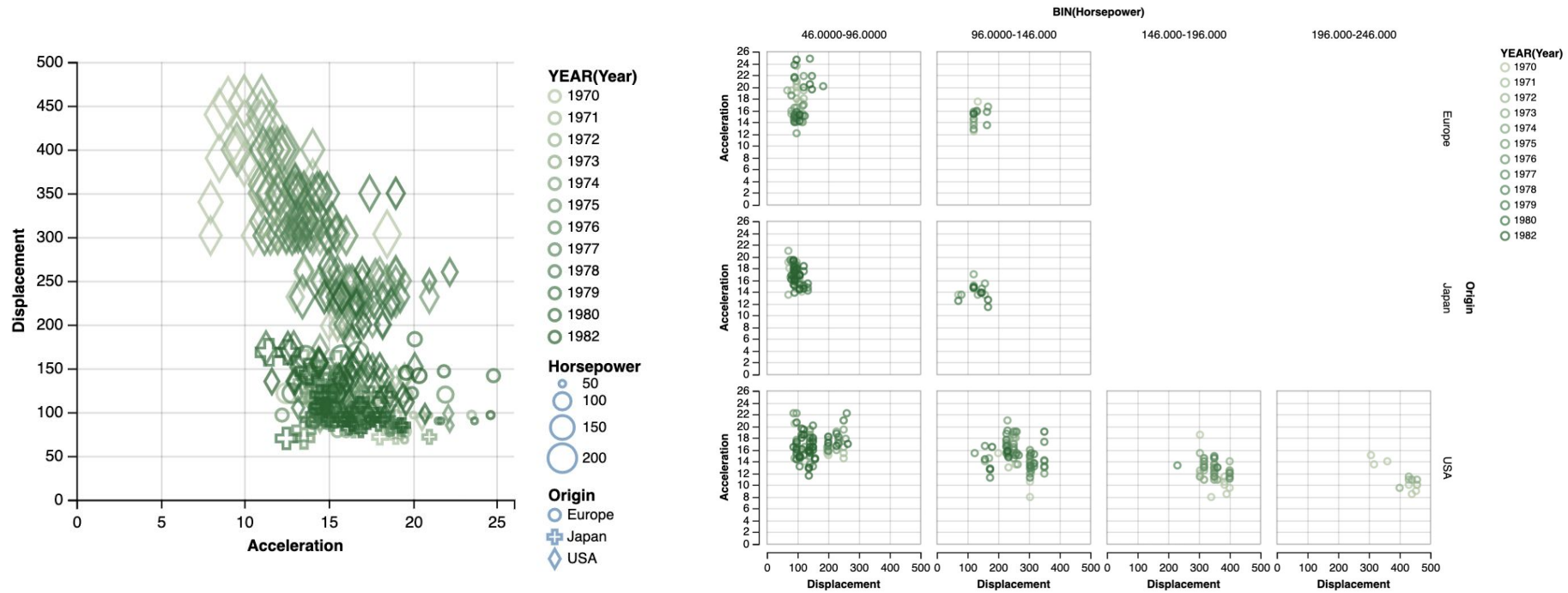
go!

go!

# Visualizations



# Visualizations: *Complex vs. multiples?*



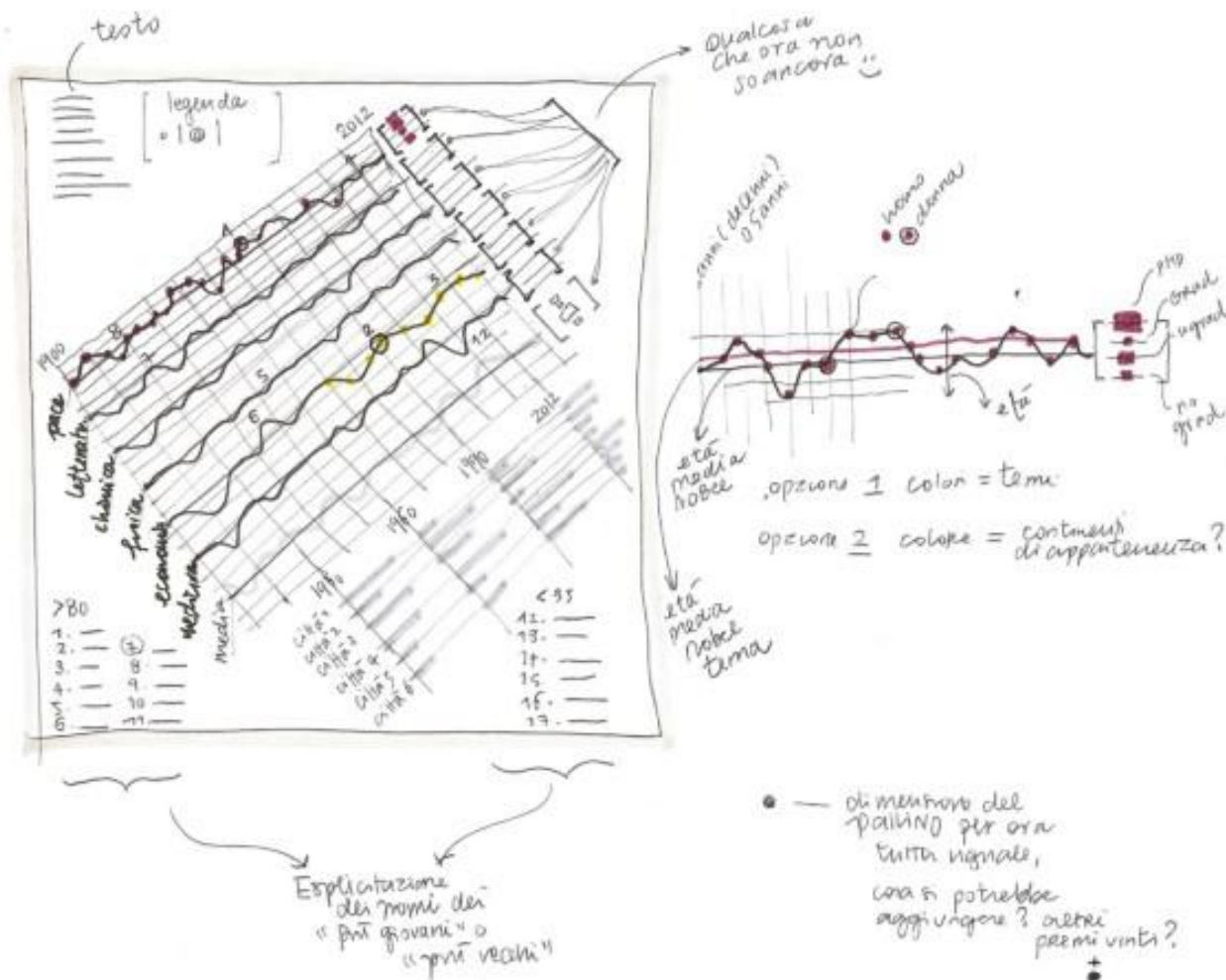
High



Low

Information density

# Structure

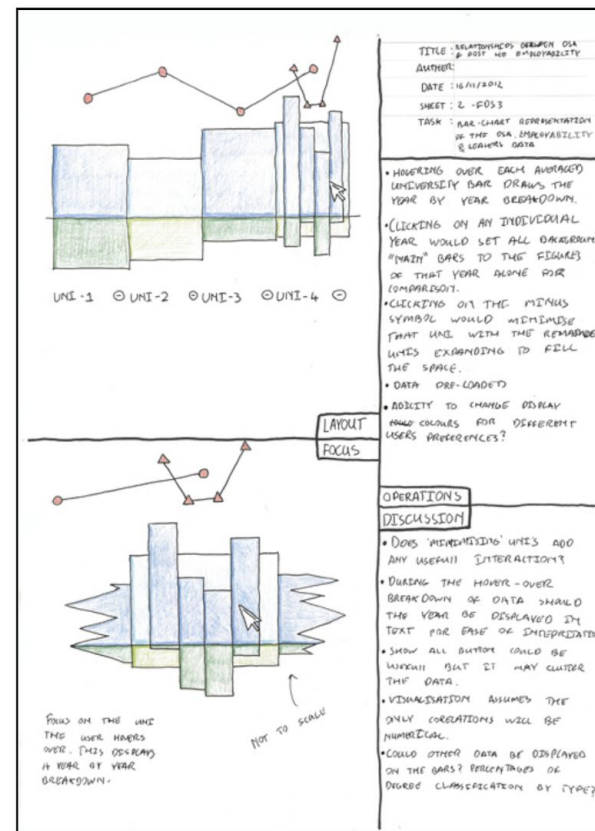
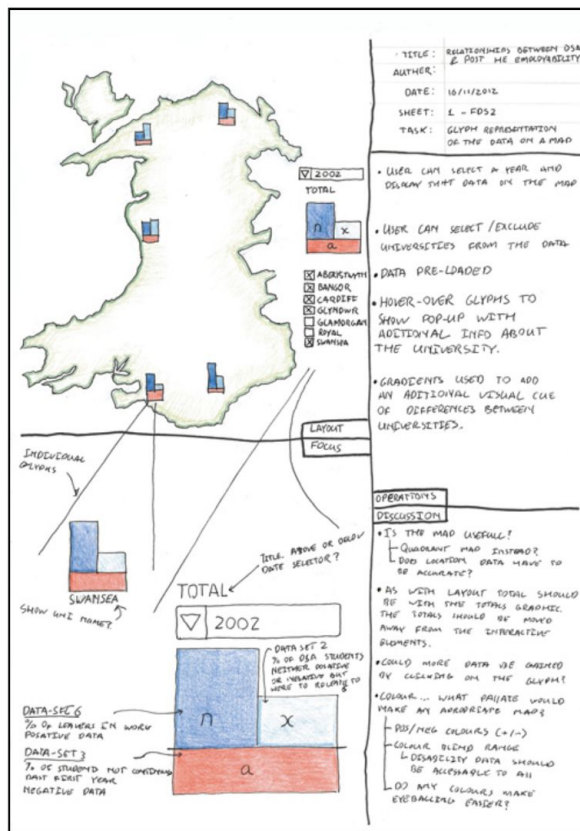
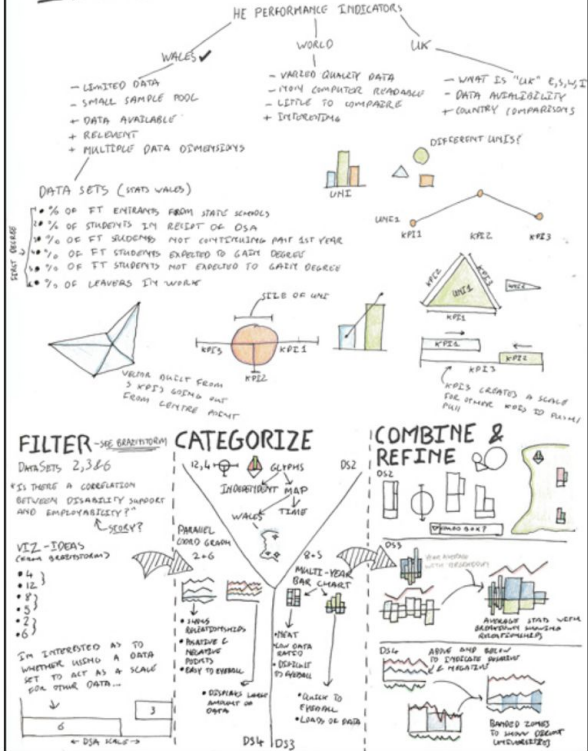


- Visualizations
- Space
- Layout
- Titles
- Legends
- Text
- Color schemes
- Pictures
- ...

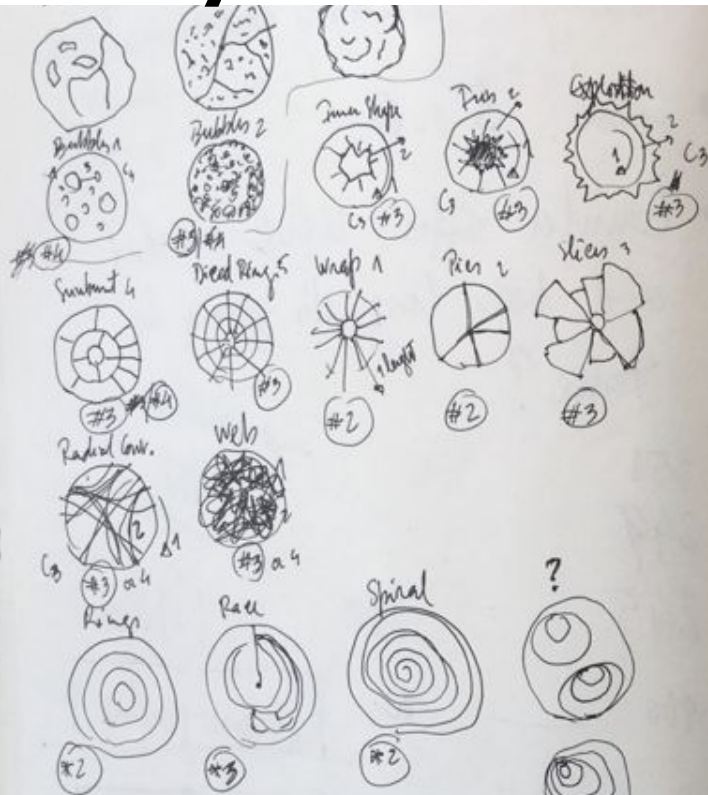


# Views and Layouts

## IDEAS



# Quantity, Alternatives, & Iteration



① Ring | Race | Spiral | Explosion

② Wrap | Pier | Subst | Dead Ring

③

① Concentric order

① Radial order

③ Length or thickness

④ Length or angle swept

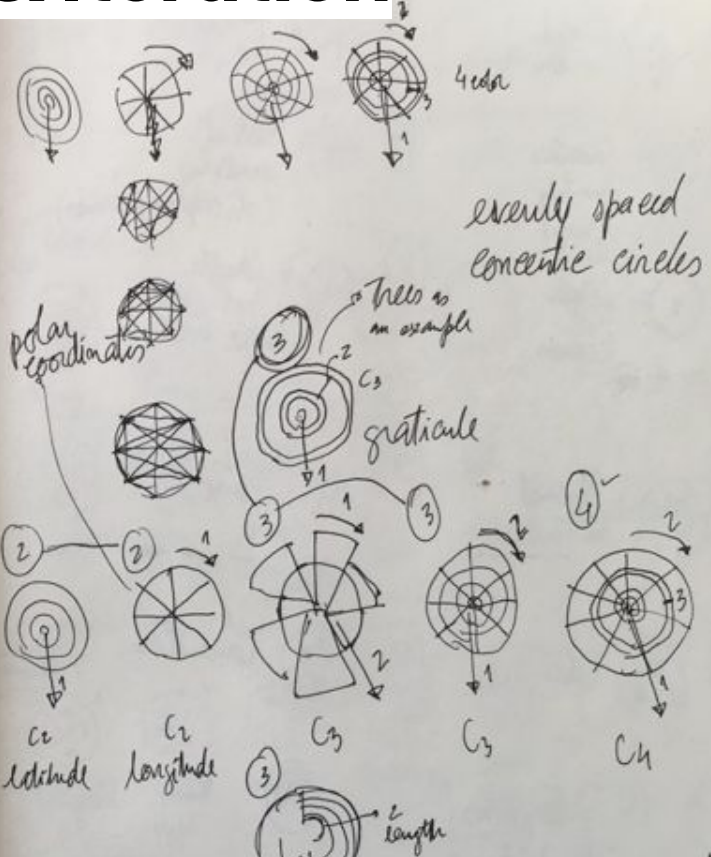
⑥ Connection

⑦ Size

⑧ Color

⑨ Pictograms & Illustrations

⑤ Placement based on Graticule



C1 latitude

C2 longitude

C3

C3

C4

V1 radius order

V2 radial order

V3 angle swept or height

V4 height or thickness

V5 connection

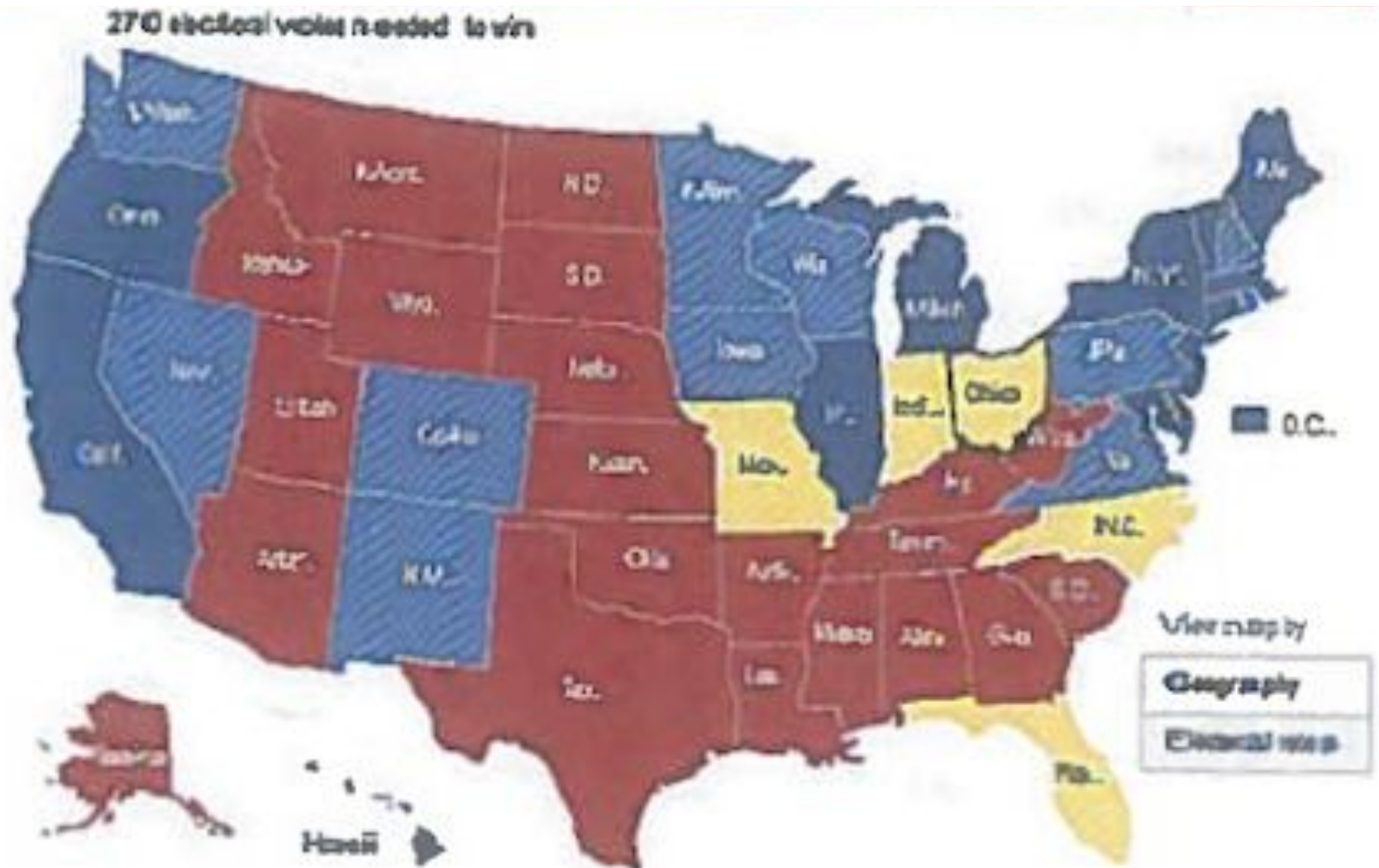
V6 size

V7 Color

V8 Pictograms

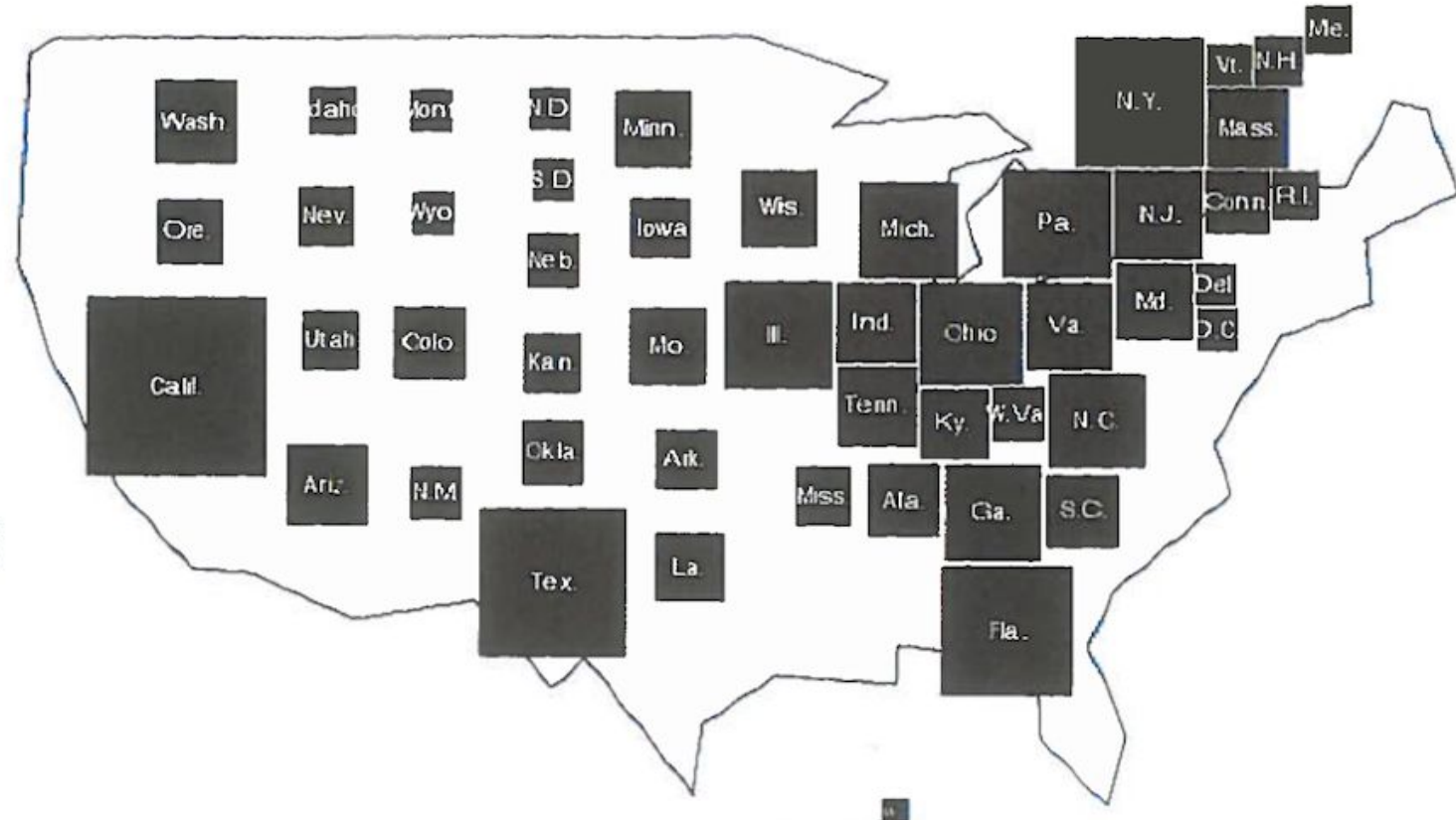
V7 Placement Coordinates between V1 & V2

# Idea Evolution





# Idea Evolution

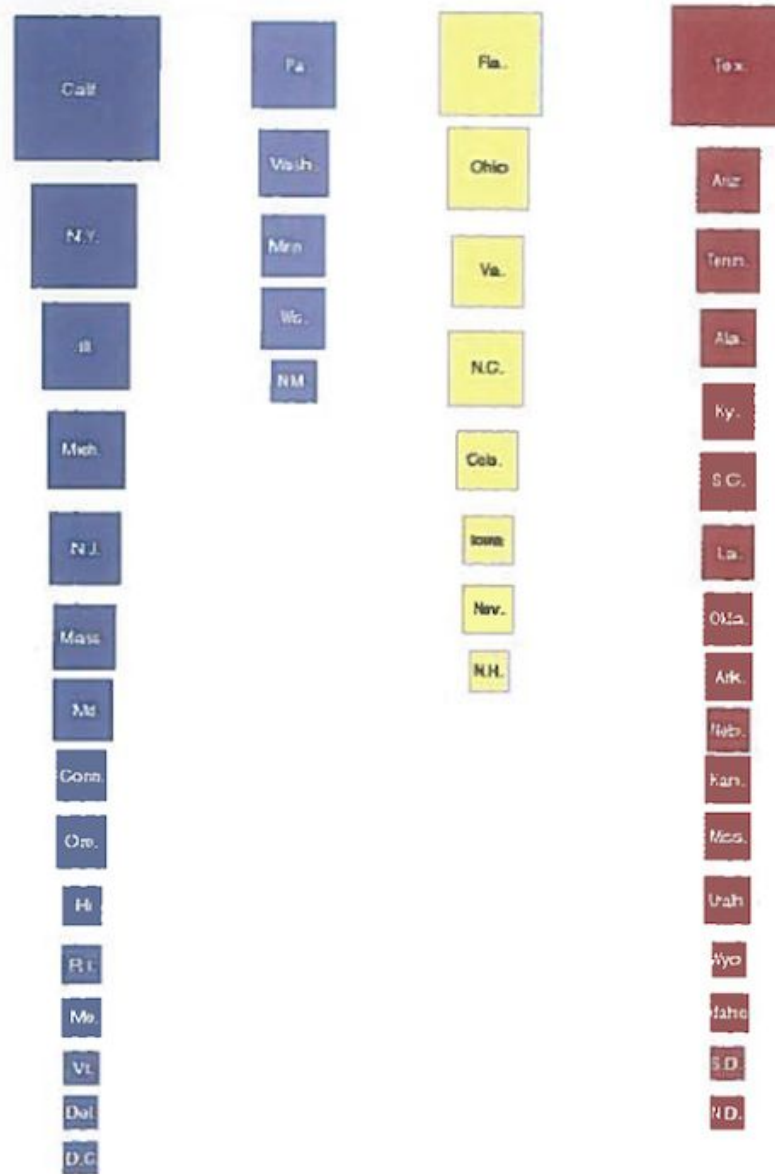




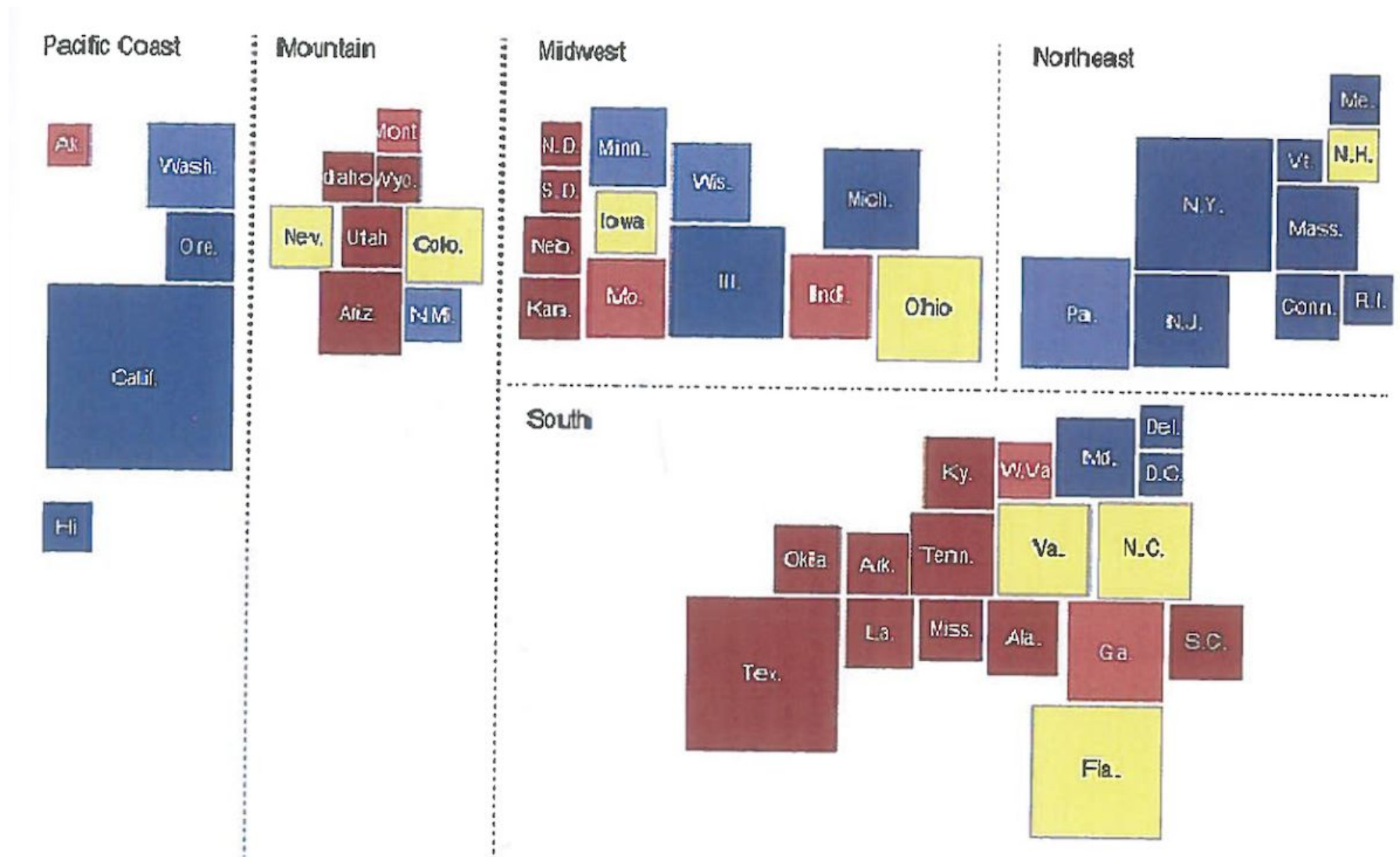
# Idea Evolution



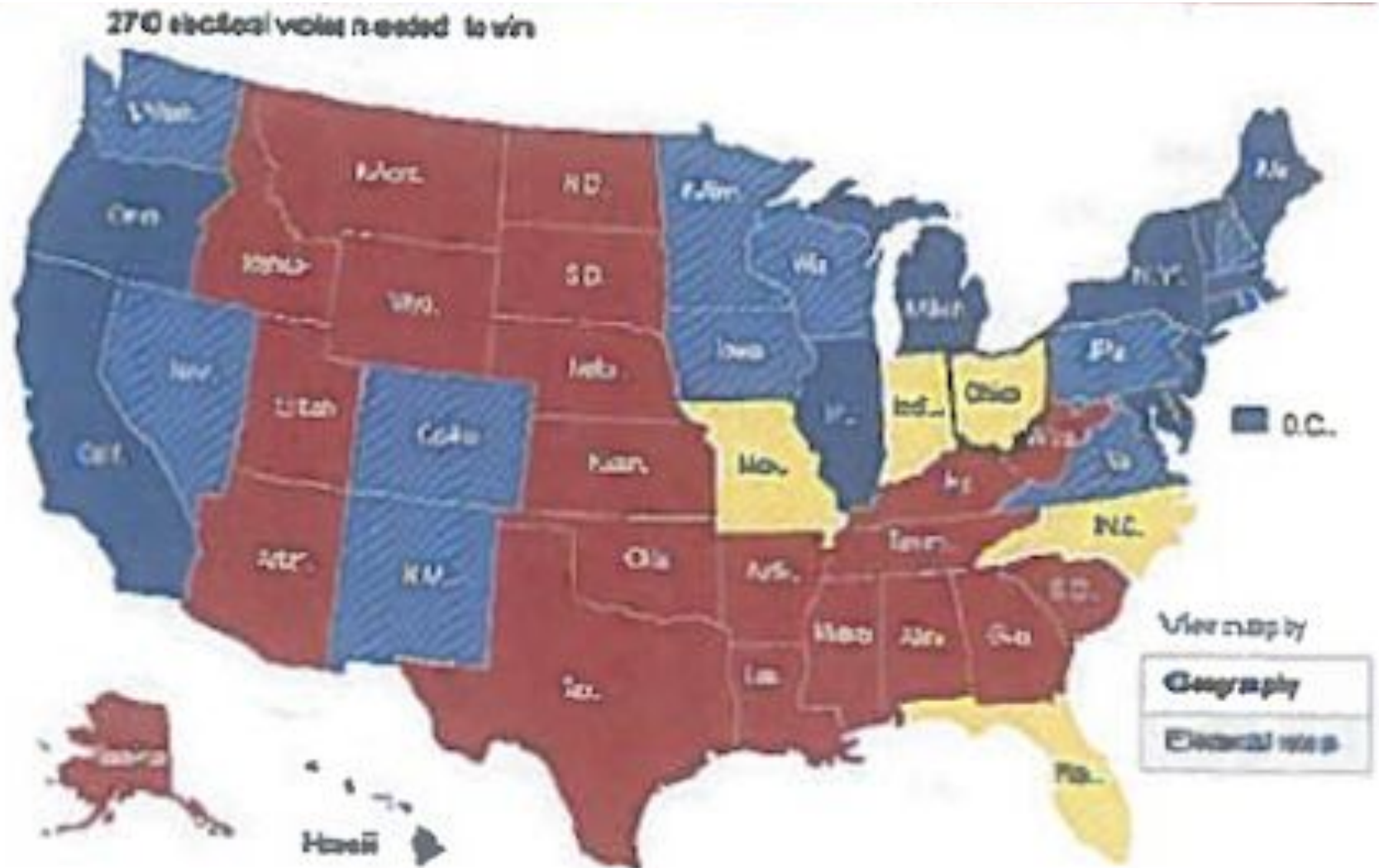
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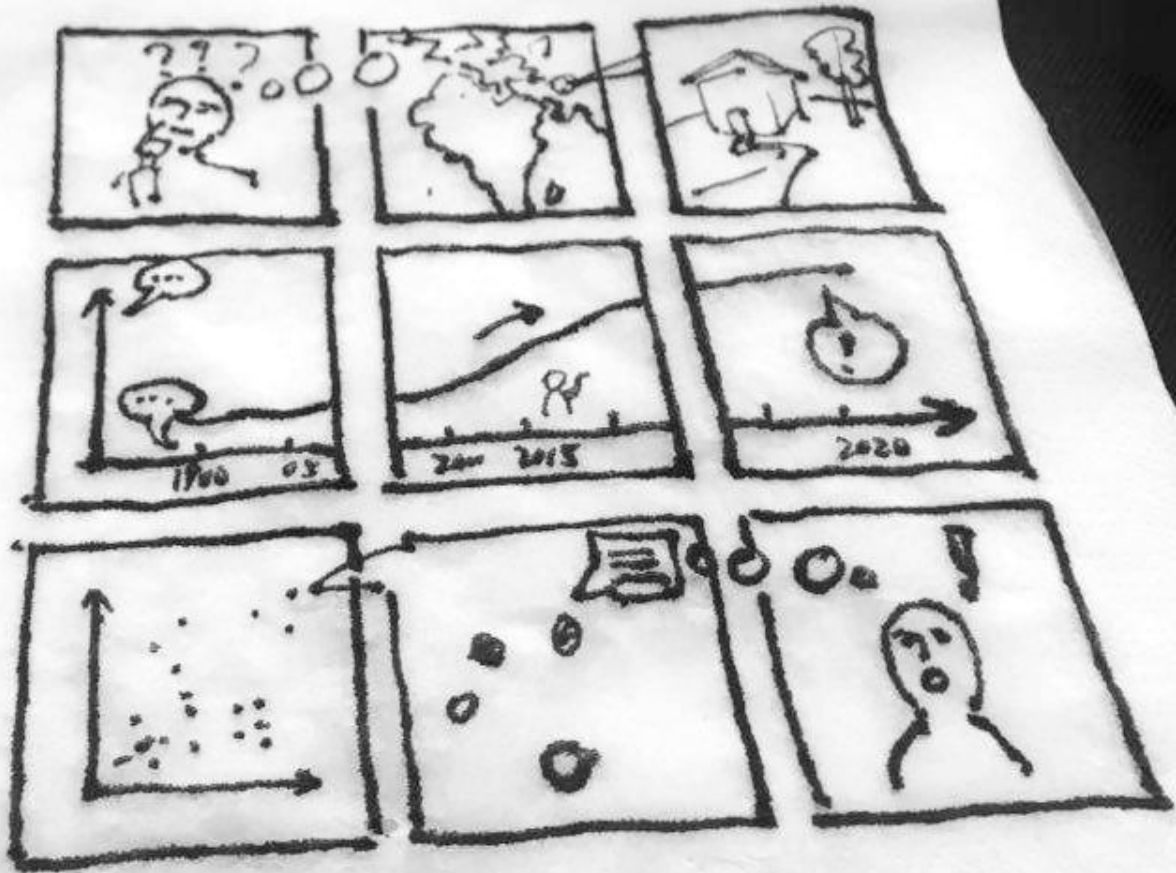


# Idea Evolution





# Storyboarding



# Sketching in a nutshell

## Why:

- Idea generation
- Explore visual marks, structures, layouts
- Communication
- Reflection

## What:

- Fake data or real data
- Visualization types
- Visual patterns

## How:

- Doodles & iterations
- Visualization types & visual variables,
- Layouts and page structures
- Views and complexity

Blueprint



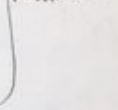
Flat Map



World



Multivariate



Bubbles 1



Bubbles 2



Inner Map



Peris



Explosion



Submap 1



Dead Ring 5



Wrap 1



Peris 2



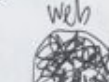
View 3



Radial Grid



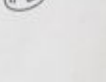
Web



Wrap 2



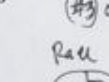
Peris 3



Ring



Race



Spiral



?



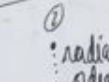
1 Ring | Race | Spiral | Explosion

2 Wrap | Peris | Submap | Dead Ring

3



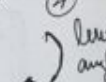
4



5



6



7



8



Concentric order

Radial order

Length or thickness

Length or angle swept

Connection

Size

Color

Pictograms & Illustrations

Placement based on Graticule

?

?

?



4 cda



evenly spaced concentric circles

