

Micro/Macro & Small Multiples

Envisioning Information (ch 2&4)

Hope you have your books

Today's lecture

Updated schedule
 Overview + Detail
 Micro/Macro
 Small Multiples
 Animation vs. Small Multiples

For each

- Discussion with book
- Digital examples
- Summary

Updated Schedule

Thursday: Exam and homework feedback
 Friday: Overview and maps in Tableau
[Full lecture on maps deferred until later in course](#)

Homework due (no change)

- **ASAP: Send us your project links**
- Thursday: P2, Individual Tableau visualizations
- Tuesday: P3, Group visualization, includes a map
- Thursday: Project feedback on P3 ([too soon?](#))
- See Final Project document on website for more detail

[Questions?](#)

Visual Information Seeking Mantra

Overview, zoom & filter, details-on-demand
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Overview+Detail Techniques

Tufte

- Micro/Macro
- Small multiples
- Layering (chapter 3)

Interactive

- Scroll, pan, zoom
- Lenses, Call-outs
- Coordinated views, view warping
- Dynamic layering and filtering

Envisioning Information

Micro/Macro Readings

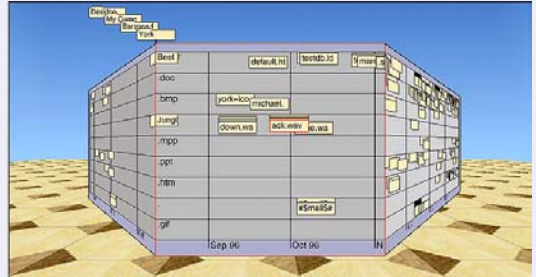
Things to think about:
 Paper vs. displays, examples of your own, your project

Online examples

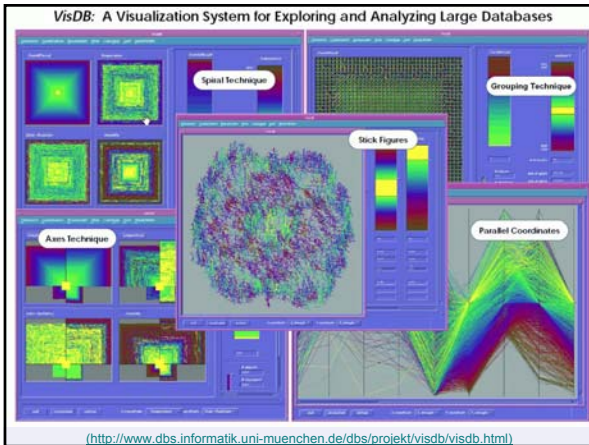
Maya Lin [Systematic Landscapes](#)
 TextArc [Home](#)
 PhotoMesa (desktop)
 Dynamic call-outs: [Google stocks](#)
 Piccolo [examples](#): Fisheye Calendar, Graph Editor, Presentation Tool
 Star Tree: [Org chart](#) [GreenPlant](#)

[Google maps](#)

Temporal Data



Perspective Wall [Robertson+ 1993]



(<http://www.dbs.informatik.uni-muenchen.de/dbs/projekt/visdb/visdb.html>)

Micro/Macro summary

...detail cumulates into a larger whole

- Maps (flat and perspective)
- Data dot patterns
- Patterns in words and numbers
 - Stem and leaf plots
 - Vietnam memorial
- Pictures from pictures
 - Scattered (Where's Waldo, Cuba)
 - Coherent (Marley)
 - Objects (Lin's Landscapes)

Paper vs. displays?

Envisioning Information

Small Multiples

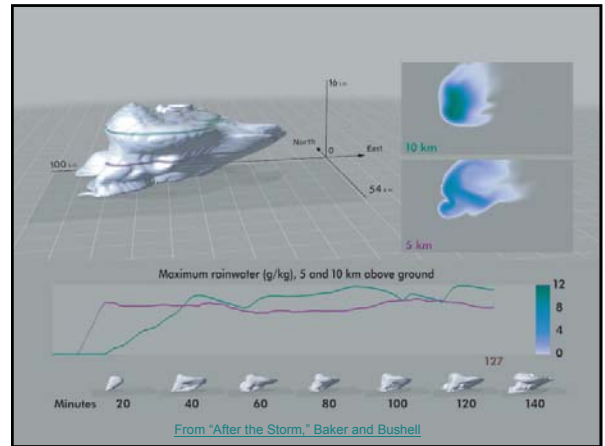
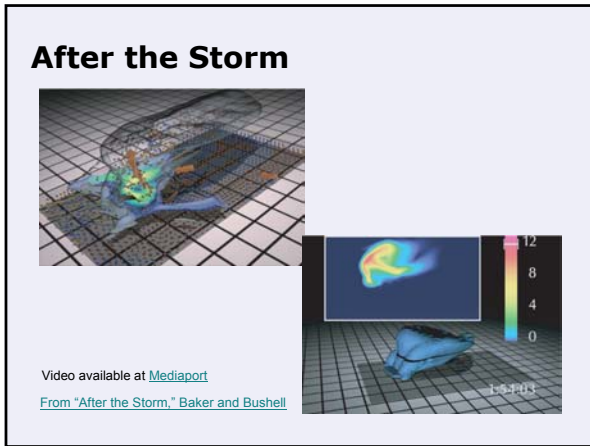
Things to think about: Paper vs. displays vs. animation, examples you've seen, your project

Small Multiples Summary

...visually enforcing comparisons of changes, of the differences among objects, the scope of alternatives

- Similar repeated instances
 - To show cases (train signals)
 - To show variation (fishing flies)
 - To show process (calligraphy, origami cranes)
- Frozen animation
 - To show positions (planets, chess, Muybridge)
 - To show process (instructions)
- Abstract data to detailed graphic

What about real animation?



Animation vs. Small Multiples

Small-multiples often better

- Easier to see all steps (Muybridge)
- Doesn't rely on memory for comparisons
- User is in control of pace

Animation problems

- Too fast ([visible human](#))
- Too complicated
- Interactive much better

Animation pluses

- More detail, if less precision
- Better overall sense of motion

[Animation: Can It Facilitate?](#) Barbara Tversky, Julie Morrison, Mireille Betancourt