Chapter 1 Graphical Excellence

* Data map

e.g. US map of cancer death rate.

* Time-Series

One-dimension marching along time.

Problem: time is not a good explanation: descriptive chronology is not causal explanation.

Solution: combine additional variables by decomposition (break by vertical grid).

* Narrative Graphics of Space and Time

Adding spatial dimensions to time series.

Describe multi-relationships, usually over two.

Summary

* Graphical excellence is the well-designed presentation of interesting data – a matter of substance, statistics and design.
* GE consists of complex ideas communicated with clarity, precision and efficiency.
* GE is to give viewer the greatest number of ideas in shortest time.

Chapter 2 Graphical Integrity

* Distortion in Graphic

Perceptions are context-dependent, graphic distorts by perceived visual effect. (Imbalance in rate of change)

Lie Factor = (size of effect shown in graphic) / (size of effect in data)

If Lie factor lies within 0.95 – 1.05, then graphic accurately represents the underlying numbers.

* Context is Essential for Graphical Integrity

Data-thin design should always provoke suspicion for omission, leaving out data that sufficient for comparisons

Graphics must not quote data out of context.

Theory of Data Graphics

Data-Ink and Graphical Redesign

* Maximize share of data ink

Ease non-data ink without reason

Ease redundant ink

* Five principles in graphic design
  + Above all else, show the data
  + Maximize data ink ratio
  + Ease non-data ink
  + Ease redundant data ink
  + Revise and edit