Five Years of Chart Reading

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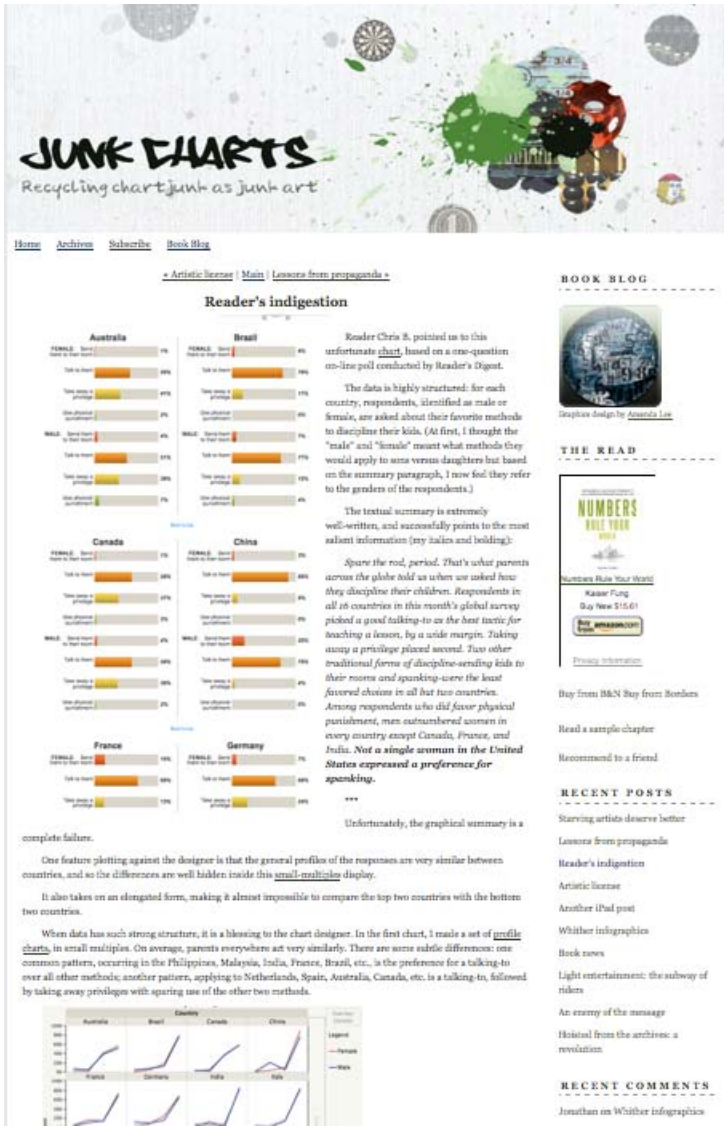
NYU
April 30, 2010

Junk Charts blog

junkcharts.typepad.com

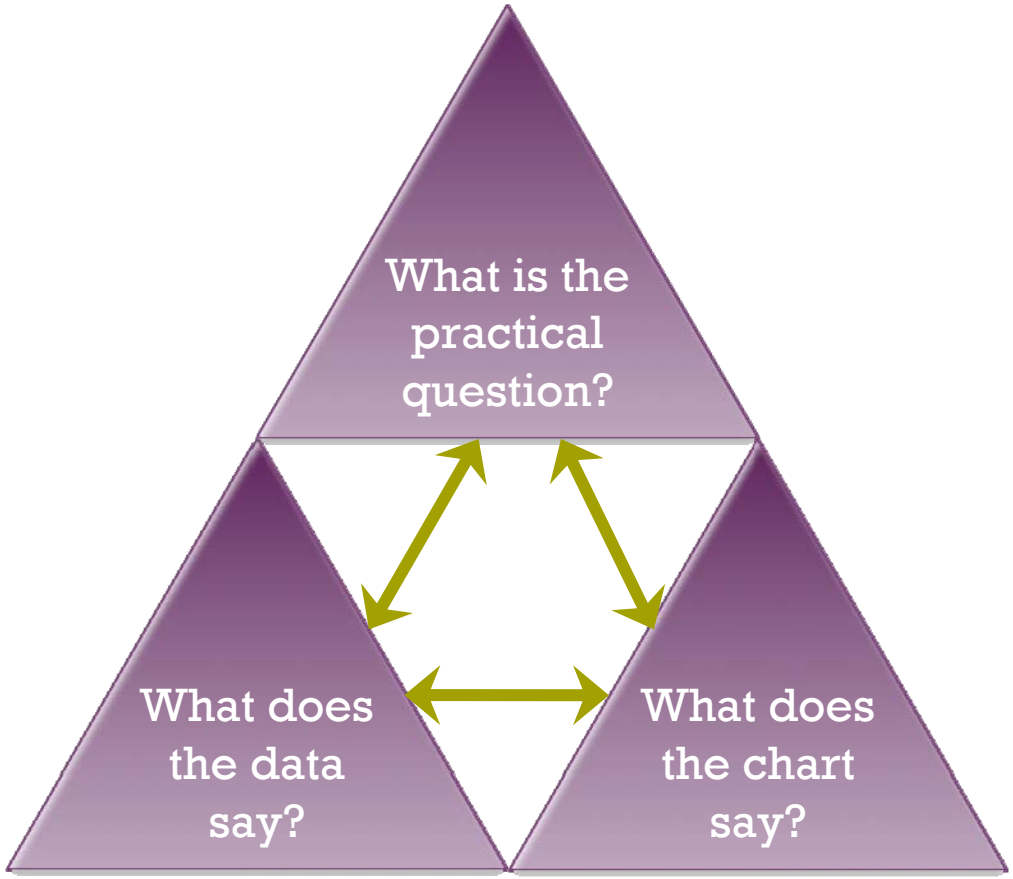
- First post, July 2005
- Pioneering chart critique blog
- Charts from everyday life
- Reconstructed
- Artform



Impact

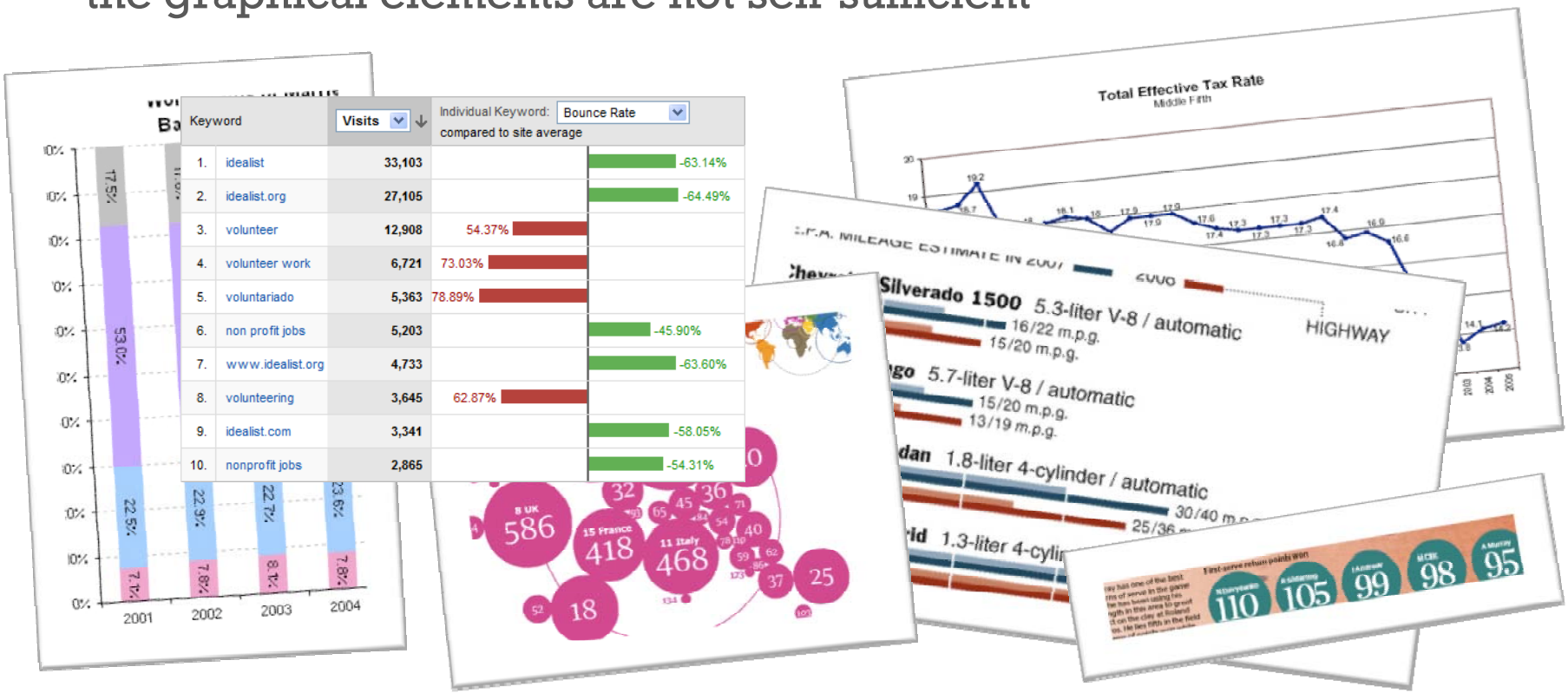
- *Junk chart* has become a popular concept (derived from Tufte's chartjunk); 19,000 results on Google search
- Features: Yahoo! Pick; *Science*; Kottke.org; Media Bistro; Pollster.com; Portfolio.com; Presentation Zen; Andrew Gelman; Unbossed; CACM; many more
- Books: *Handbook of Data Visualization*; *Excel 2007 Charts*; *The Secret Power of Blogging*; Web *Analytics 2.0*; *Discovering Statistics Using SAS (also SPSS)*
- Reader submissions

Junk Charts Trifecta Checkup

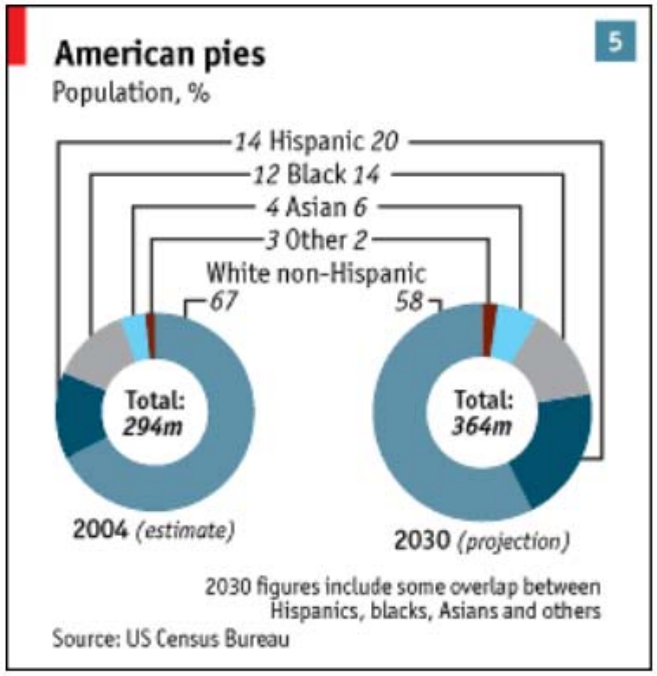


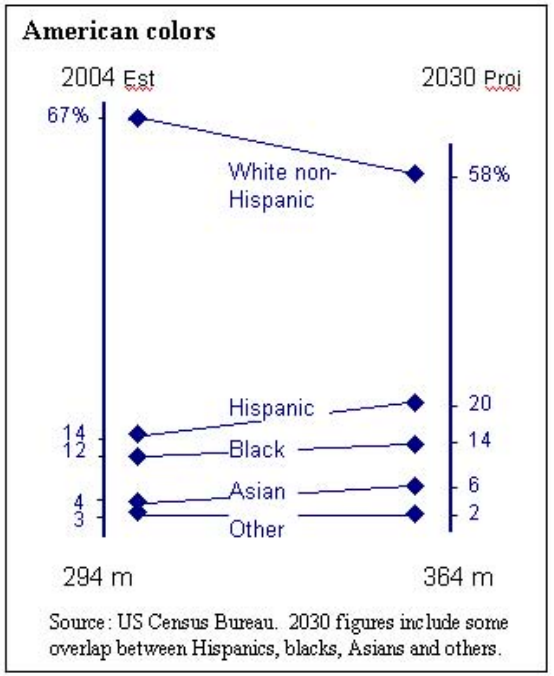
Self-sufficiency

- Graphical elements must add to the data
- Corollary: if the entire data set must be printed on the chart, the graphical elements are not self-sufficient



NO LOVE: Donut chart

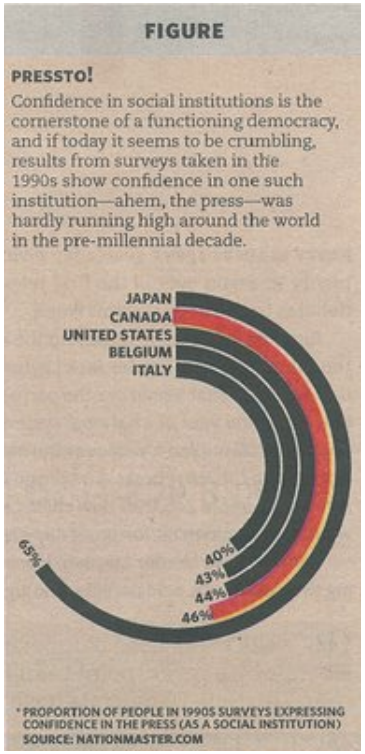




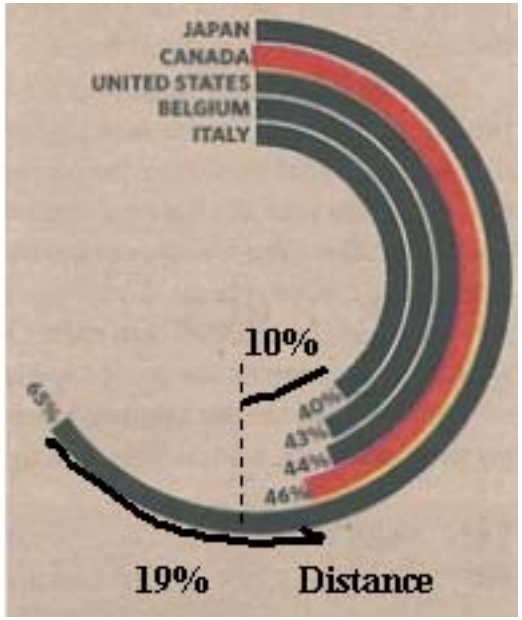
" The donut chart is a pie chart with a hole punched in the middle. Alas, the missing middle contains the angles that help us size up the slices. The donut chart is a useless chart made worse. Never ever use a donut chart. "

"The Americano Dream",
Economist, July 14, 2005

NO LOVE: Racetrack graph



Reader submission from an Ottawa newsletter named "Dose", Dec 2005



" The way this chart is constructed is to have length of curve proportional to angle, not distance; however, our eyes are naturally drawn to the circumference! When we see Japan's green line, we perceive the length of the line, not its angle. "

NO LOVE: Donut, or Racetrack?

The New York Times — September 9, 2009

From the Most Selective Colleges, More Graduates

Students are less likely to graduate from less selective public colleges than more selective ones, even after controlling for the qualifications of the students. Below are the graduation rates for different groups of students, at different types of colleges.

GRADUATION RATES

6-year graduation rates, for students who entered college in 1999.

STUDENT GROUPINGS	MOST SELECTIVE	2ND MOST SELECTIVE	3RD MOST SELECTIVE	LEAST SELECTIVE
3.5 high school G.P.A. or higher, 1,200 SAT or higher	89%	82%	71%	59%
3.5 or higher and 1,000 to 1,190, or 3 to 3.5 and 1,200 or higher	83%	75%	63%	62%
3 to 3.5 and 1,000 to 1,190	75%	67%	56%	50%
Less than 3 or less than 1,000 or both	71%	60%	52%	48%

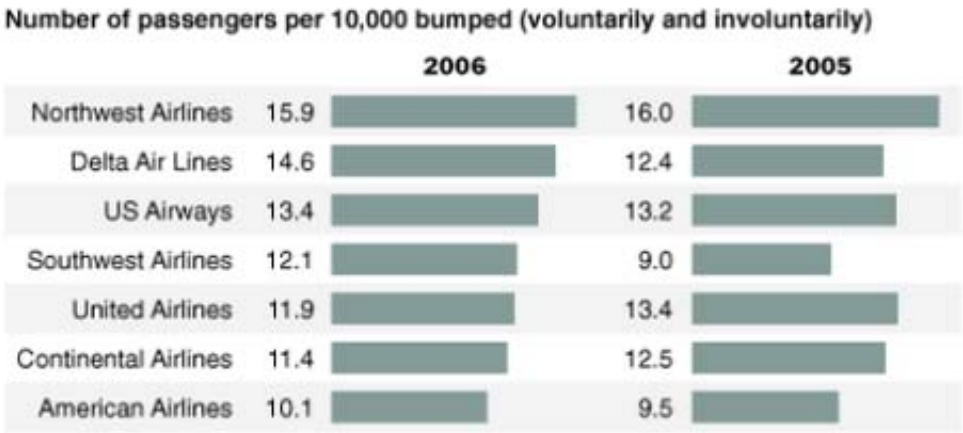
Note: Selectivity of colleges is based on average SAT scores of student body. Colleges in the most selective group have an average SAT score of more than 1,200; those in the least selective group have an average score of less than 1,000.

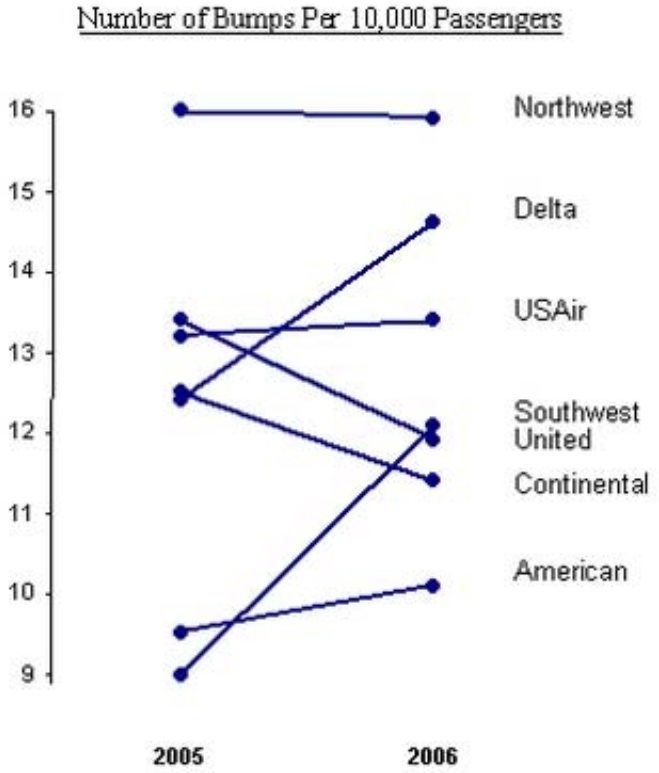
Sources: William G. Bowen, Matthew M. Chingos, Michael S. McPherson

THE NEW YORK TIMES

"Colleges are lagging in graduation rates",
New York Times, Sept 9, 2009

LOVE: Bumps chart





" One would be interested in answering questions such as:

- Which airlines have the best (or worst) bump rate?
- Are some airlines consistently better (or worse) at controlling the bump rate?
- Which airlines have improved (or worsened) from year to year?
- Are the differences of practical significance? "

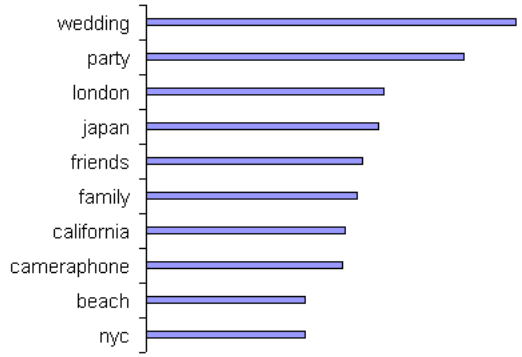
"Bumped Fliers and No Plan B", *New York Times*, May 30, 2007

LOVE: Word cloud

All time most popular tags

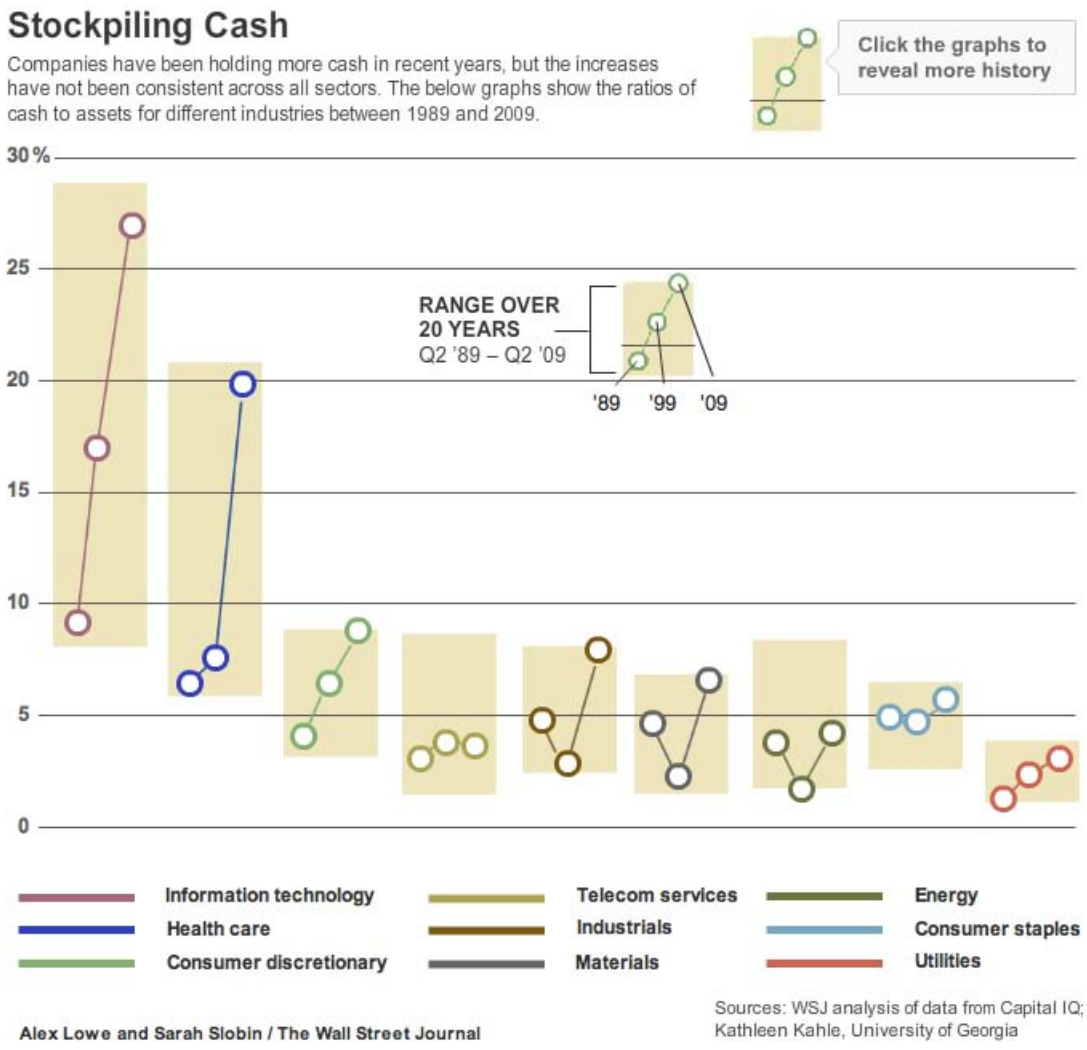
amsterdam animal animals april architecture art australia baby barcelona beach berlin bird birthday black blackandwhite blue boston bridge building bw california cameraphone camping canada car cat cats chicago china christmas church city clouds color colorado concert day dc dog dogs england europe family festival fireworks florida flower flowers food france friends fun garden geotagged germany girl graduation graffiti green hawaii holiday home honeymoon house india ireland italy japan july june kids lake landscape light london losangeles macro march may me mexico moblog mountains museum music nature new newyork newyorkcity newzealand night nyc ocean orange oregon paris park party people phone photo pink portrait red reflection river roadtrip rock rome sanfrancisco school scotland sea seattle sign sky snow spain spring street summer sun sunset taiwan texas thailand tokyo toronto travel tree trees trip uk unfound urban usa vacation vancouver washington water wedding white winter yellow zoo

Tag cloud from Flickr,
circa Oct 2005



" The data itself is nothing more than a frequency table (*wedding* 132,356; *party* 120,222; etc.) but this [tag cloud] presentation is visually appealing and aptly functional. "

LOVE: Small multiples

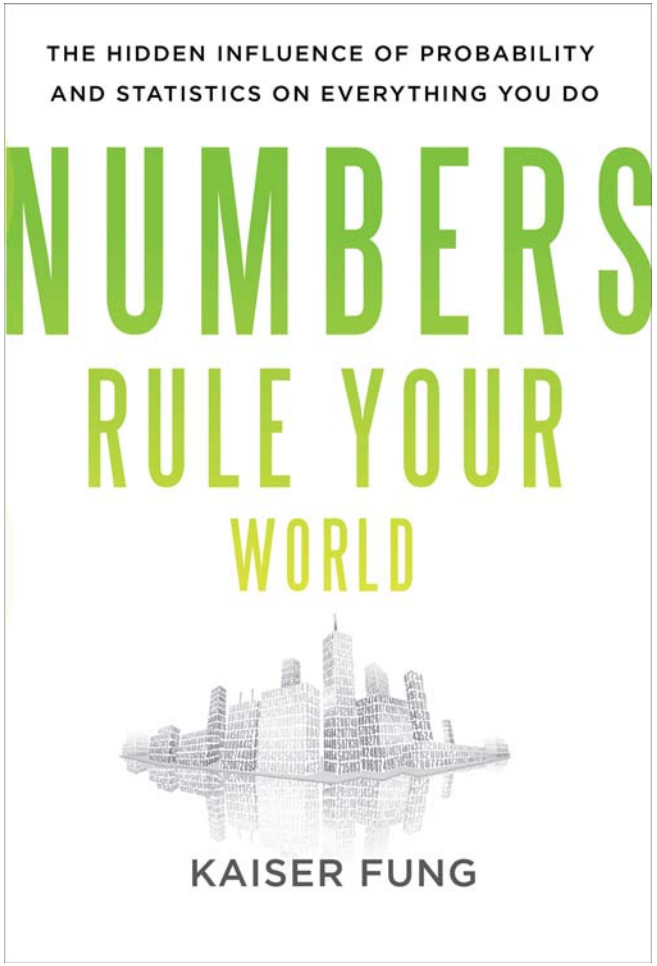


" Most impressive is the highly successful attempt to simplify the data, or equivalently, to elevate the trend: each trajectory is represented by three points, with straight lines drawn between those points. "

"Jittery companies stash cash", *Wall Street Journal*, Nov 3 2009

The book

- Wider scope than the blog: how to think about data in everyday life?
- Stories / concepts
- Contemporary
- Relevant
- Reality of statistical practice



Book Blog: junkcharts.typepad.com/NumbersRuleYourWorld
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