Common Chart Types

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Course Outline

Visual Perception

Planning

Building in Excel

Common Charts

Design

Building in Tableau

Overview

- **Basic Data Presentation Methods**

- **Basic Chart Types**

- **Choosing a Chart Type**

- **Advanced Chart Types**

- **Chart Types to Avoid**

Basic Data Presentation Methods
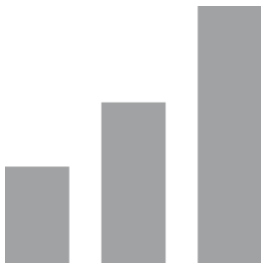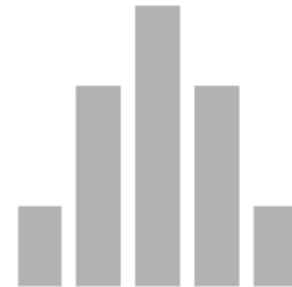
Basic Data Presentation Methods

Geo-Spatial

Correlation

Hierarchical

Categorical

Time Series

Distribution

Basic
Chart Types

Basic Chart Types

Maps

Scatterplots

Drill-Downs
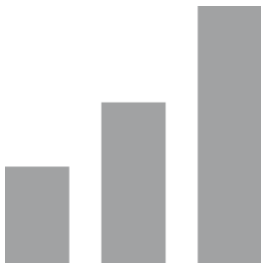
Bars

Lines
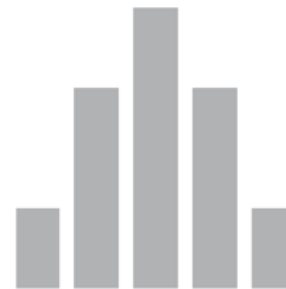
Histograms

Basic Data Presentation Methods

Geo-Spatial
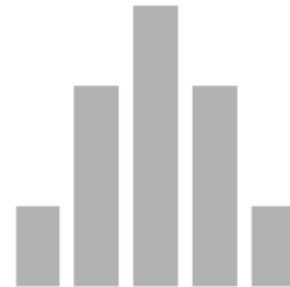
Correlation

Hierarchical
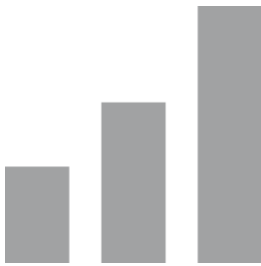
Categorical

Time Series

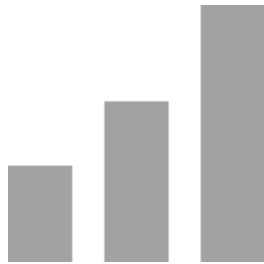**Distribution**

Choosing a Chart Type

Choosing a Chart Type

Bars

Comparing Categories
- Sales by Region
- Time on Site by Page
- Clicks by Ad

Lines

Trends over time
- Sales by Month
- Year over Year Growth
- Page Visits by Day

Choosing a Chart Type

Maps

When geography matters!
- Real Estate
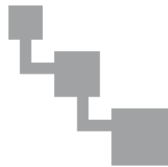- Oil & Gas Industry
- Public Safety

Scatterplots

Comparing two numbers (measures)
- Sales & Profit
- Order Size & Shipping Duration
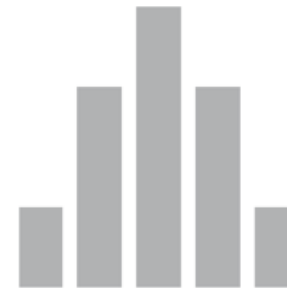- Customer Satisfaction & Age

Choosing a Chart Type

Drill-Downs

When data are hierarchical
- Category > Sub-Category
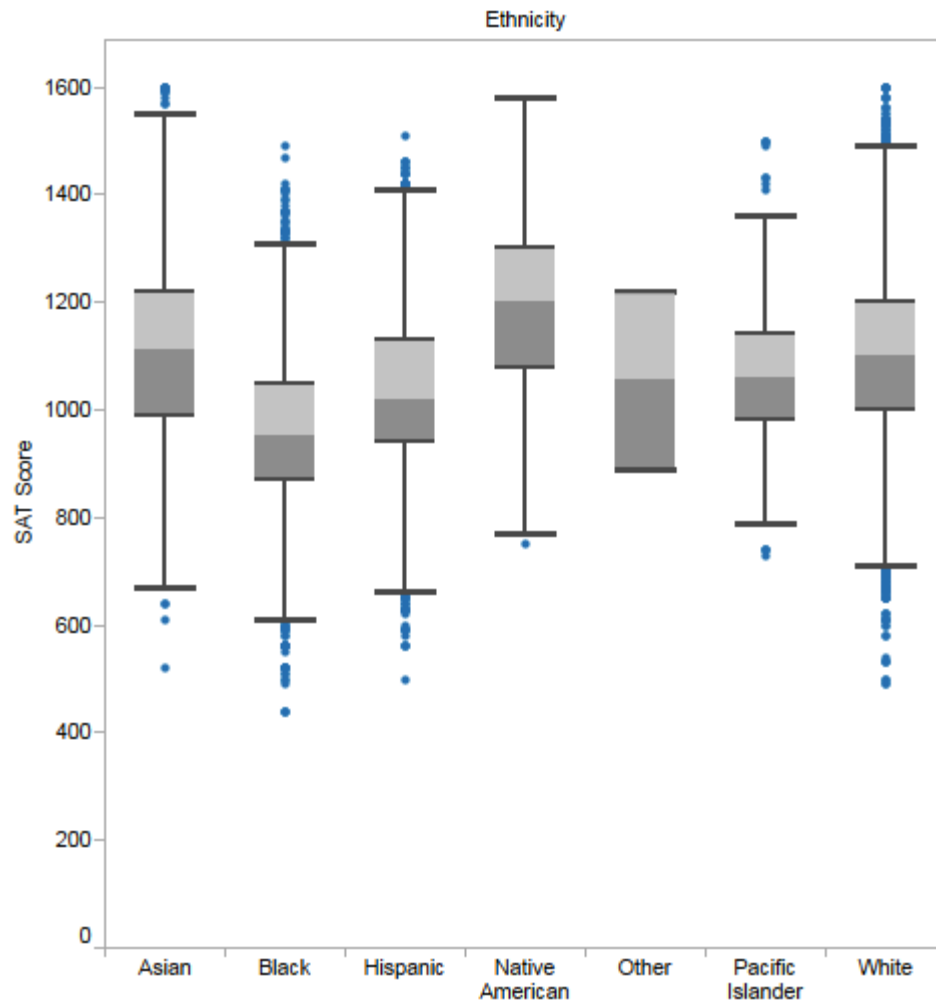- Department > Team
- Sales Region > State

Histograms

Looking for what is "normal"
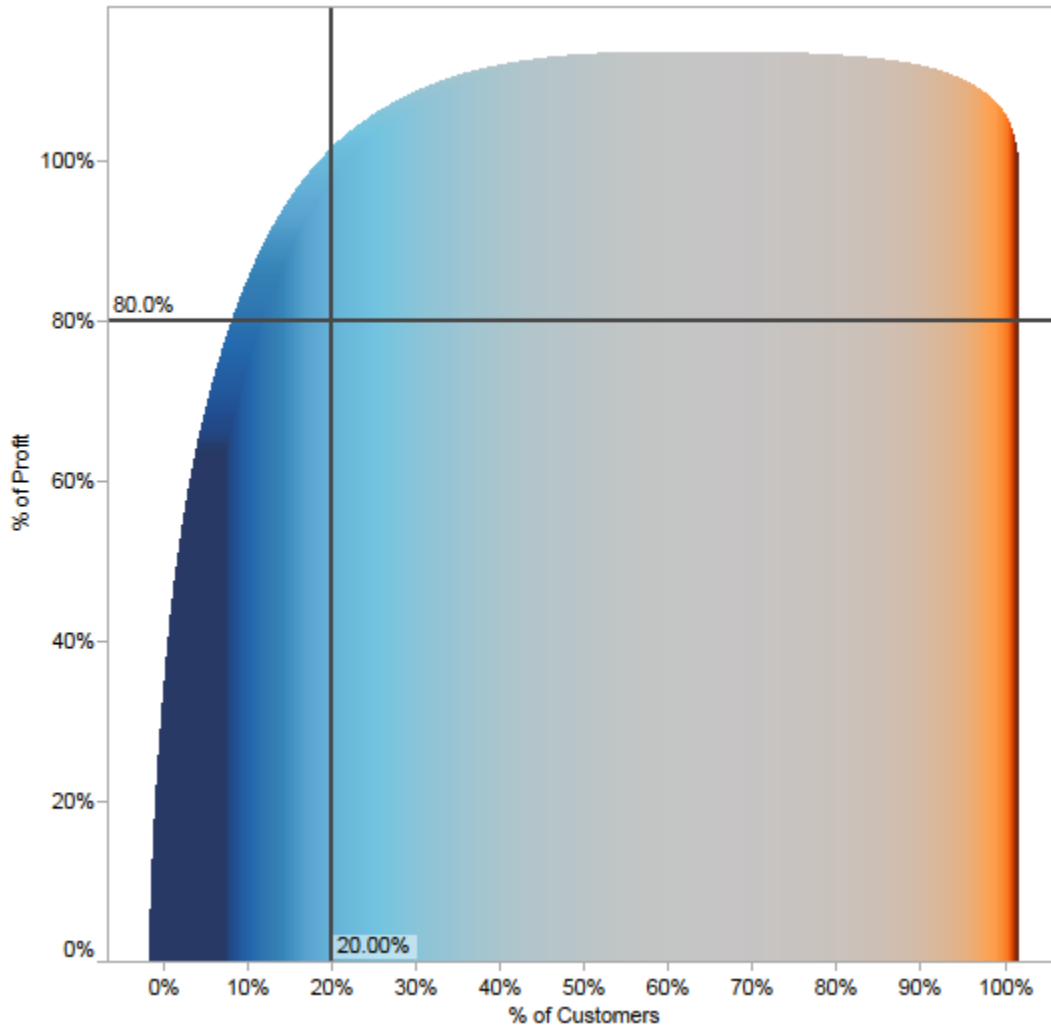- Home Prices
- Salaries
- Page Load Times
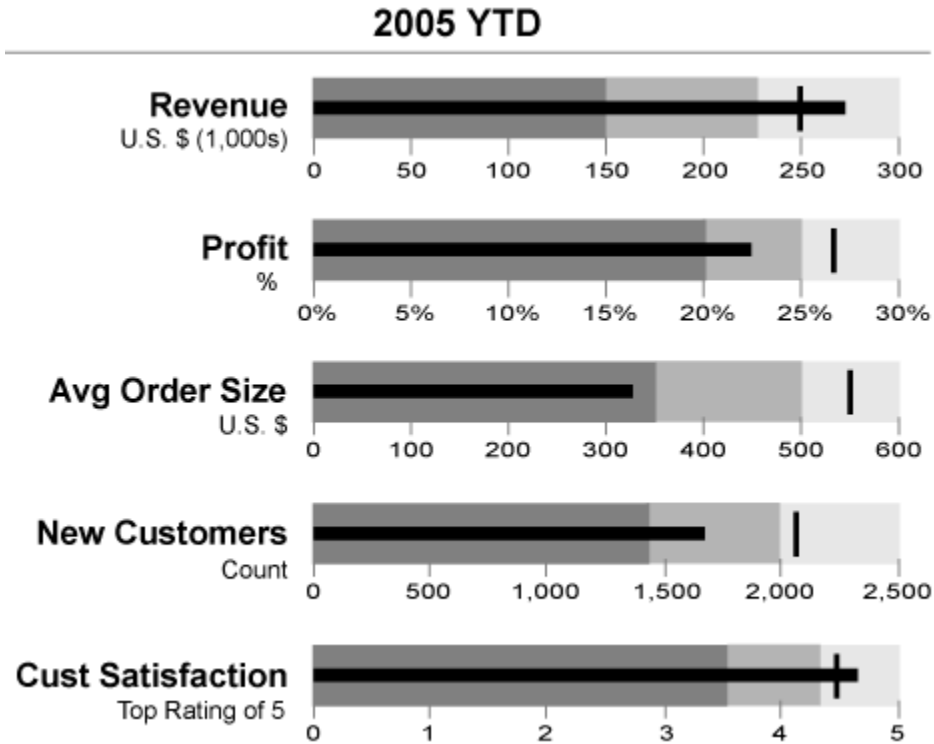
Advanced Chart Types

Box Plot

- Distribution, Percentiles, Median in 1 chart
- Commonly used in Statistics
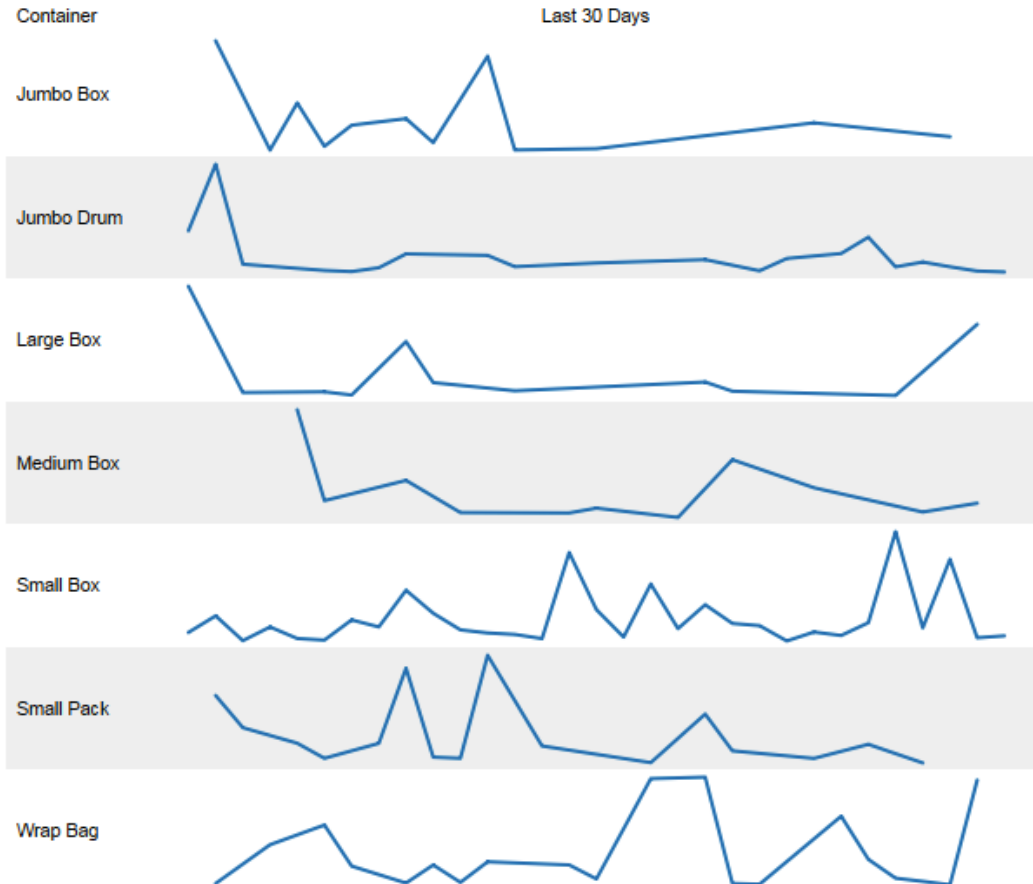- Good when wide range of values in data

Pareto Chart

- Visualizes 80/20 rule
- Great for understanding what % of X **is caused by** what % of Y
- ex. 80% of profit come from 20% of our customers

Bullet Graph

2005 YTD

- Actuals to Target
- Invented by Stephen Few
- Dark bar is actual, reference line is target
- Optionally color code bar by how close/far from target

Sparkline

- Bite size graphs to be used in sentences
- Shows trends, not actual comparisons
- Great for monitoring dashboards
- Independent Axis for each row
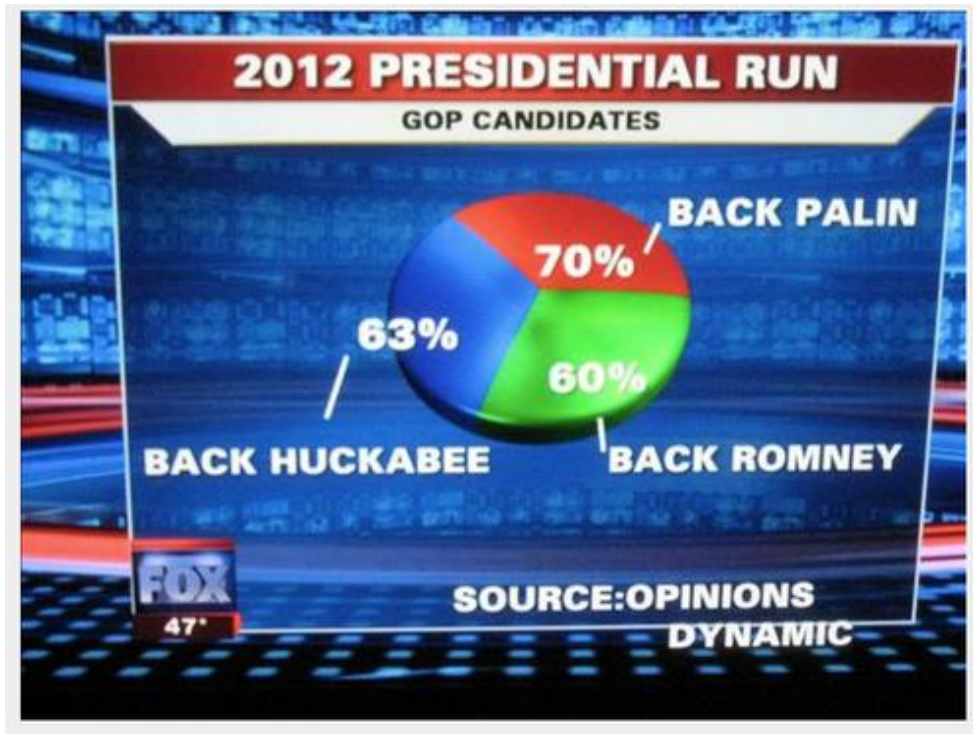- Does not necessarily start at zero

Heat Map

- Easily analyze large combinations of dimensions
- Color is everything here
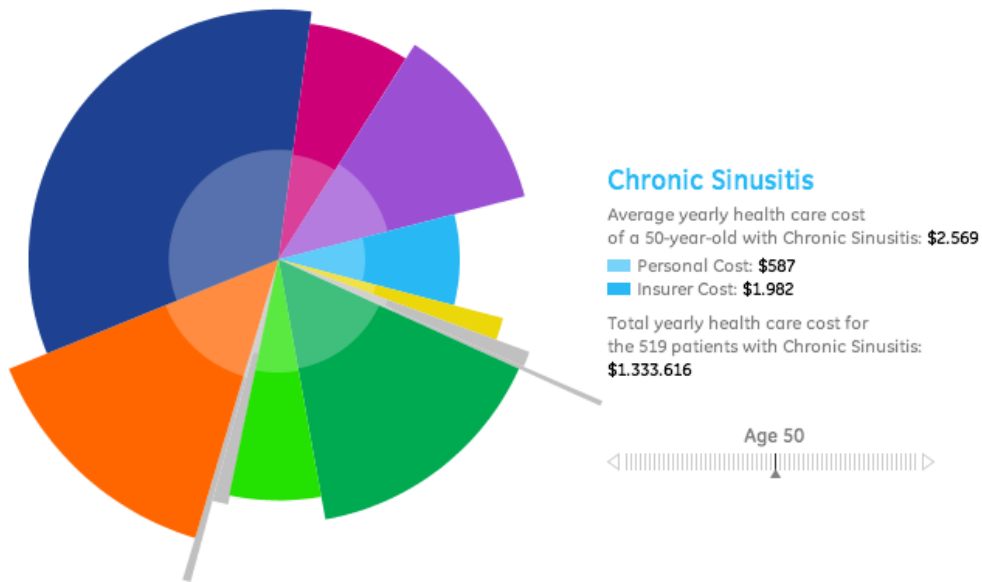- Great for high-level then allow drill-down

Chart Types to Avoid

Pie Chart

- Angles make for tough comparisons
- Wastes space
- More decorative then informative
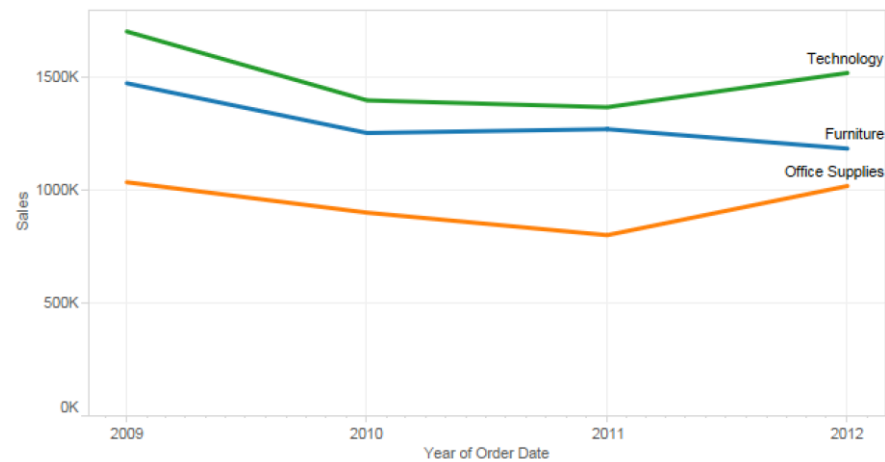- Scale isn't often used
- Often skews results

Polar Area Chart

Chronic Sinusitis

Average yearly health care cost
of a 50-year-old with Chronic Sinusitis: **$2.569**

■ Personal Cost: **$587**
■ Insurer Cost: **$1.982**

Total yearly health care cost for
the 519 patients with Chronic Sinusitis:
$1.333.616

Age 50

◁ ||||||||||||||||||||||||| ▷

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- Scale isn't often used
- Often skews results

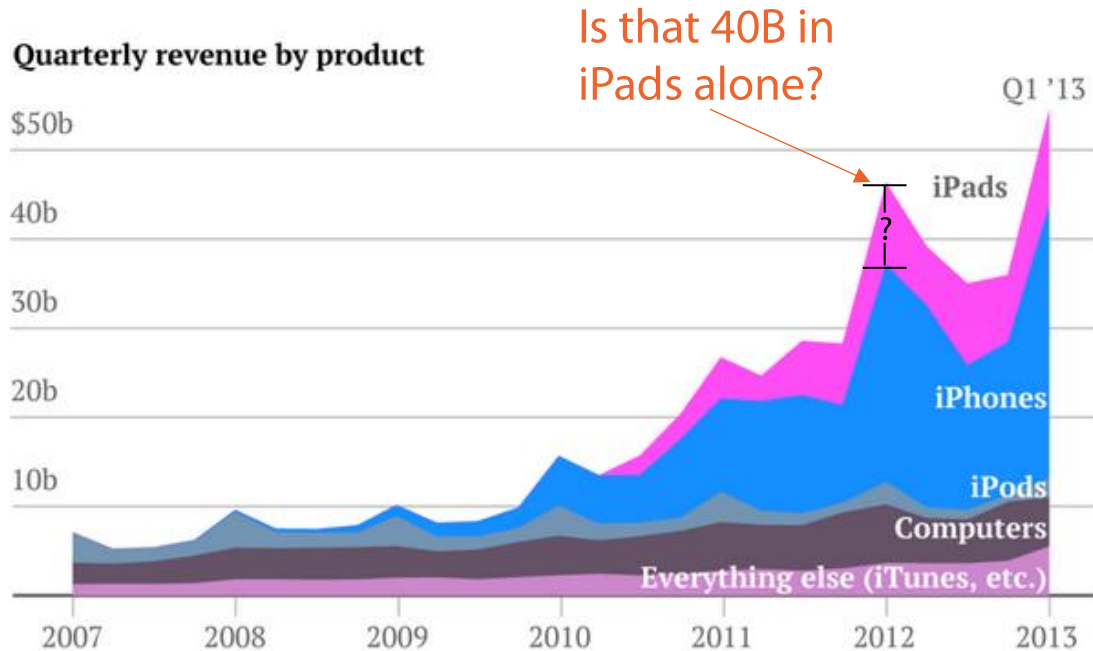img src: http://datavisualization.ch/showcases/ge-visualizes-the-cost-of-getting-sick/
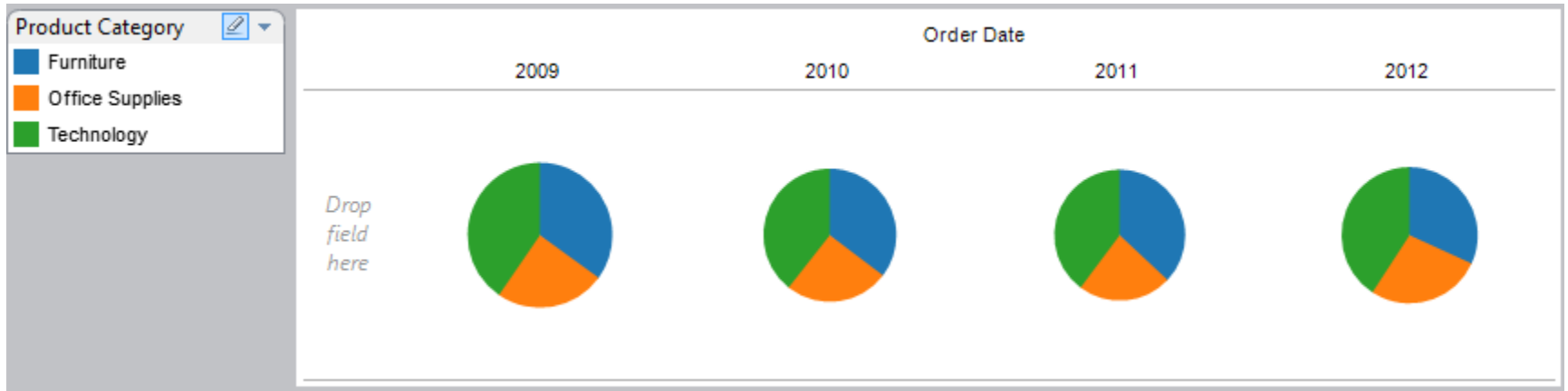
Attentive

Pre-attentive

Stacked Area Charts

Quarterly revenue by product

Is that 40B in iPads alone?
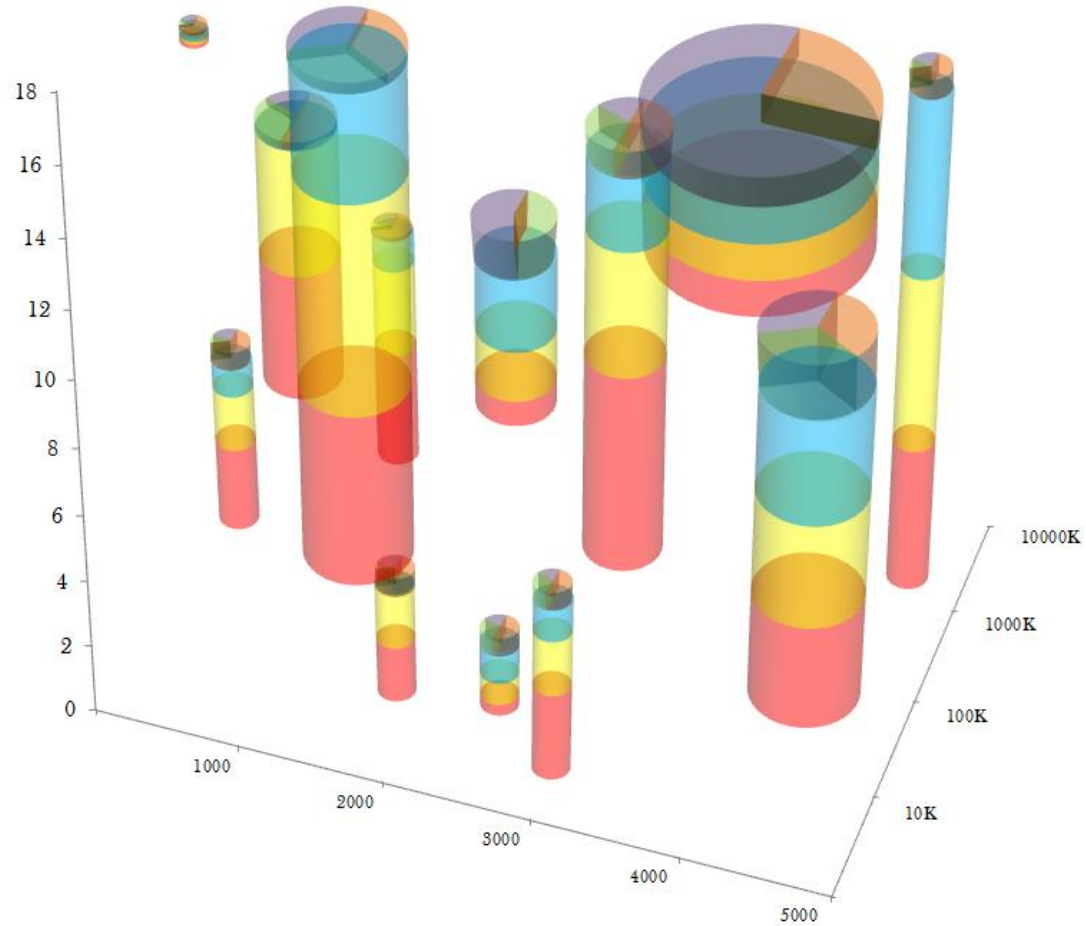
- When stacking, makes it impossible to see individual trends
- Only really works w/ 2 or fewer series
- Can skew results

img src: http://qz.com/47265/apple-ipad-mini-is-cannibalizing-sales-of-the-larger-ipad/

3D or Translucent Anything

Summary

- **Basic Data Presentation Methods**

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