Introduction to Data Science
SKKU University, Summer 2015

Prof. Jevin D. West

University of Washington

Lecture 11 – July 13, 2015

Agenda

- 9:30 – 10:30   Information Visualization
- 10:30 – 10:40   Break
- 10:40 – 11:50   Final Paper
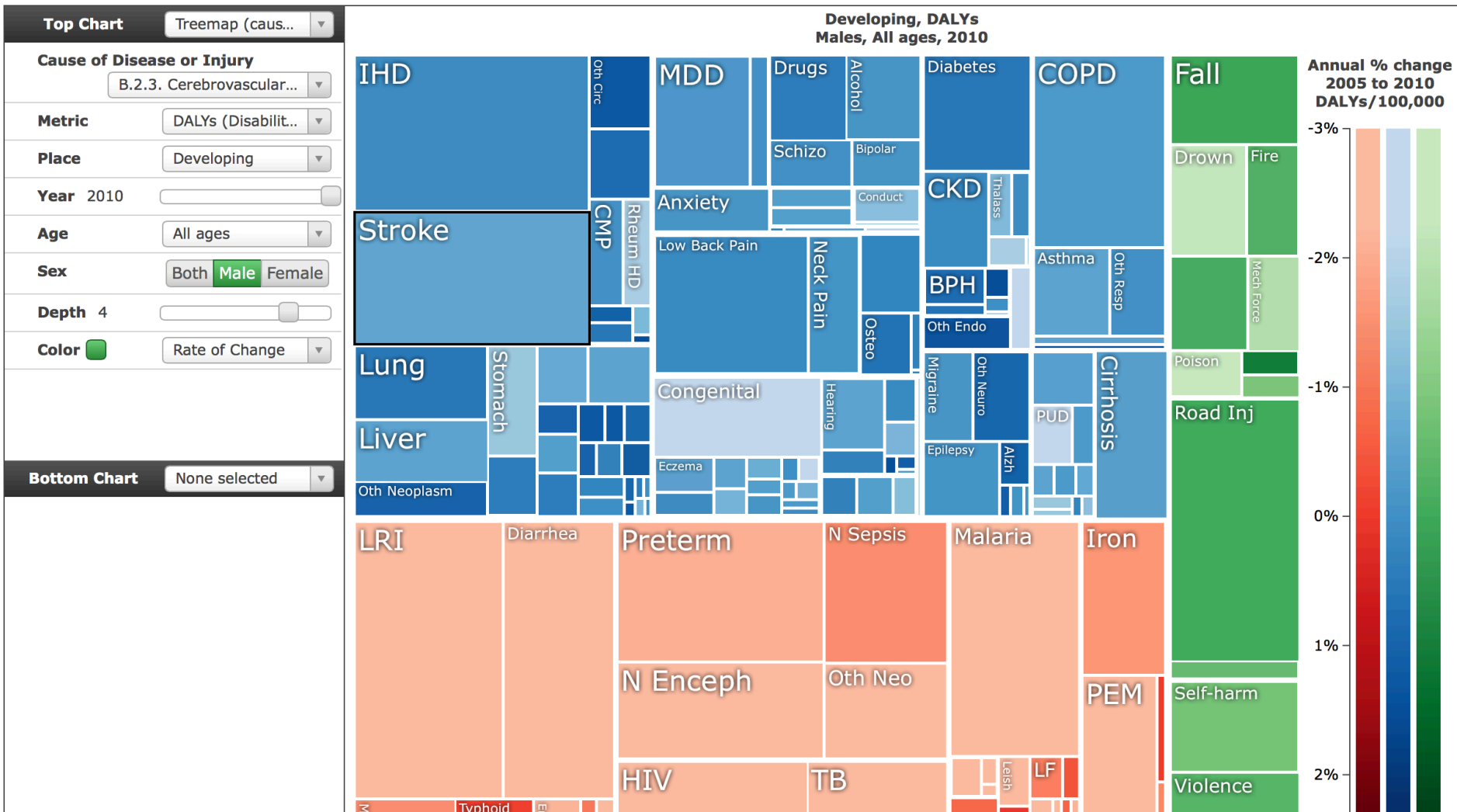- 11:50 – 12:00   Questions

Week 2

- Monday, July 13: Information Visualization
- Tuesday, July 14: Analysis
- Wednesday, July 15: Machine Learning
- Thursday, July 16: Data Ethics
- Friday, July 17: Final Presentations

Week 2

- ~~Tuesday, July 14: Quiz #3~~
- **DUE** Wednesday, July 15 at the beginning of class: <u>Final Paper</u>
- **DUE** Thursday, July 16: Assignment #3
- **DUE** Friday, July 17 at the beginning of class: <u>Final Presentation</u>, make sure to turn in presentation on your group repository
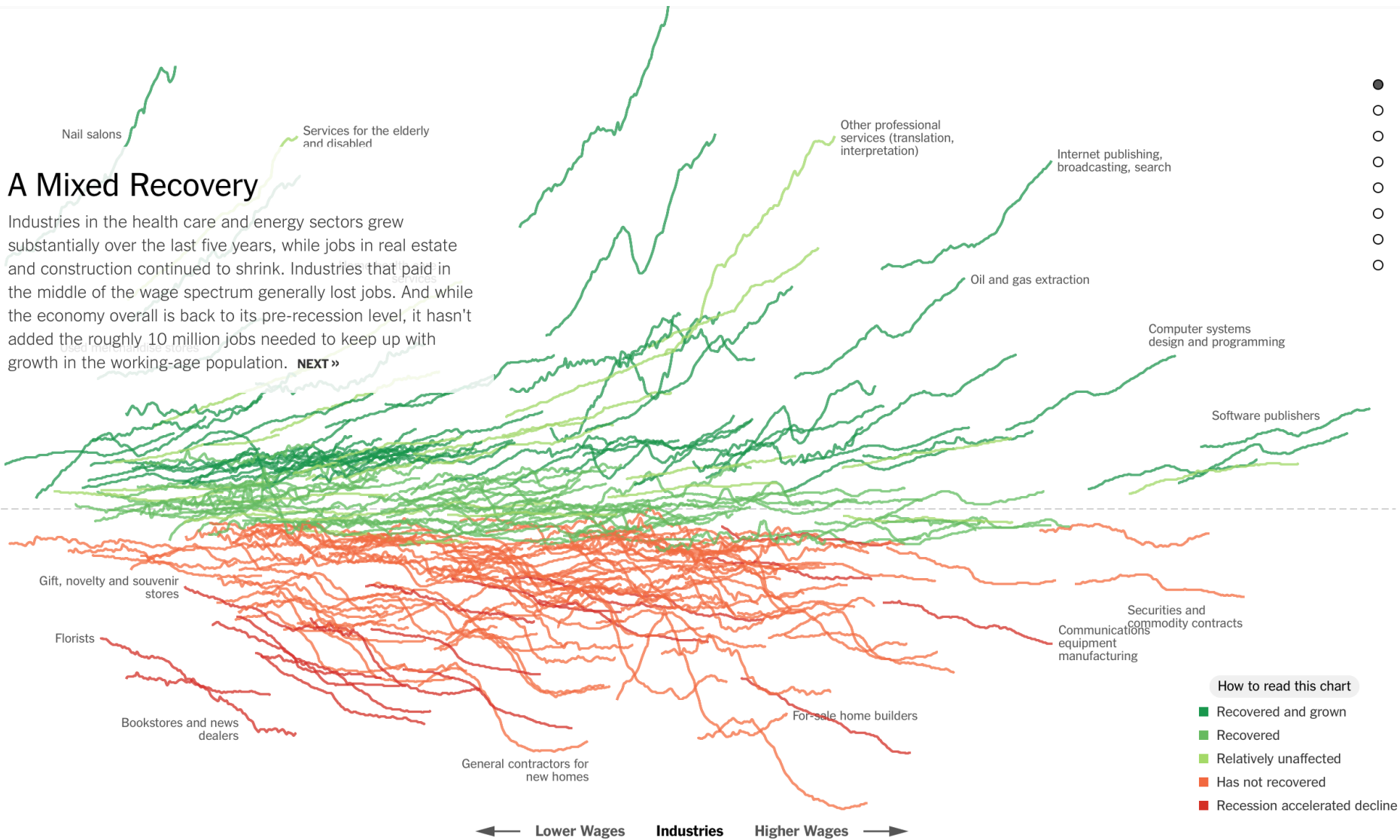
Information Visualization

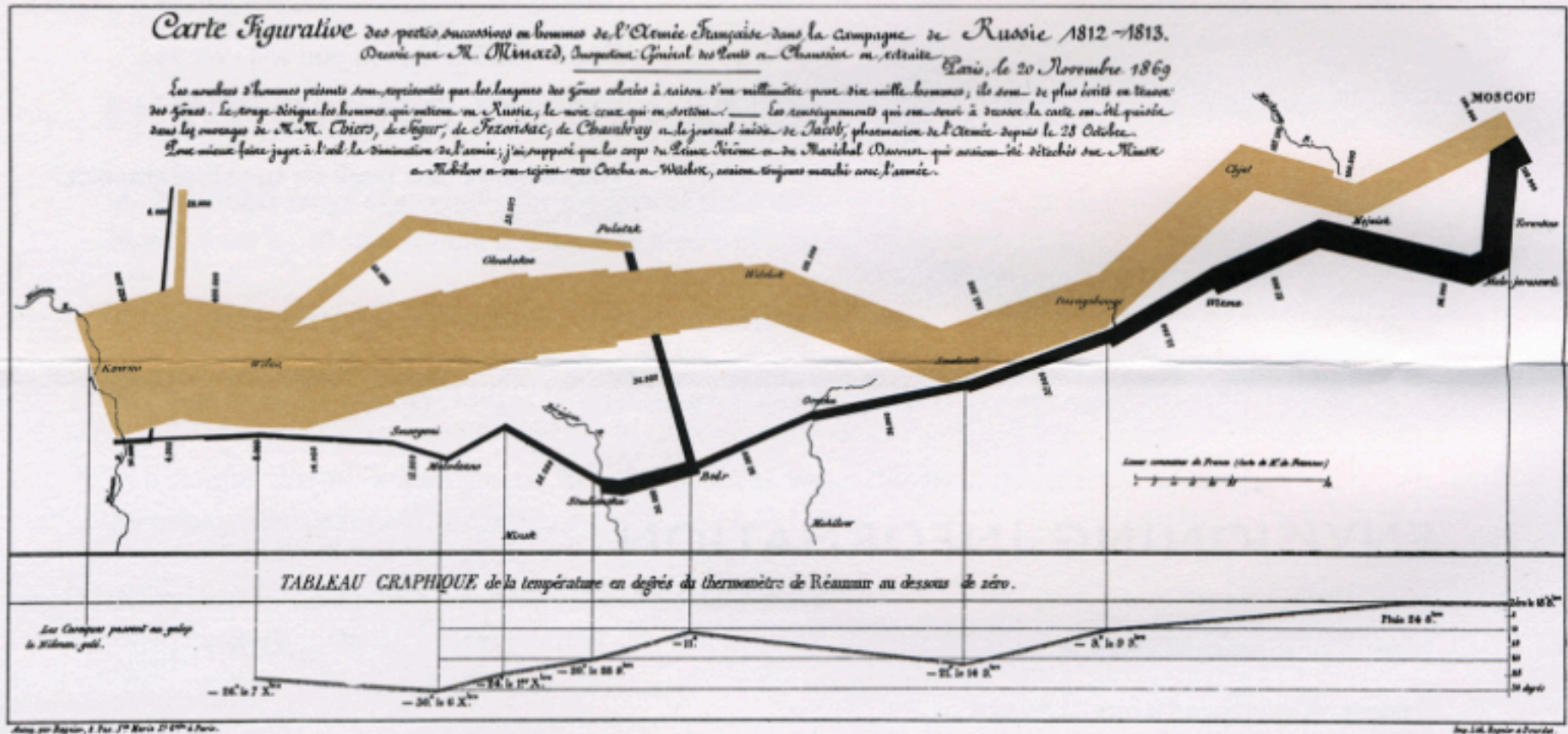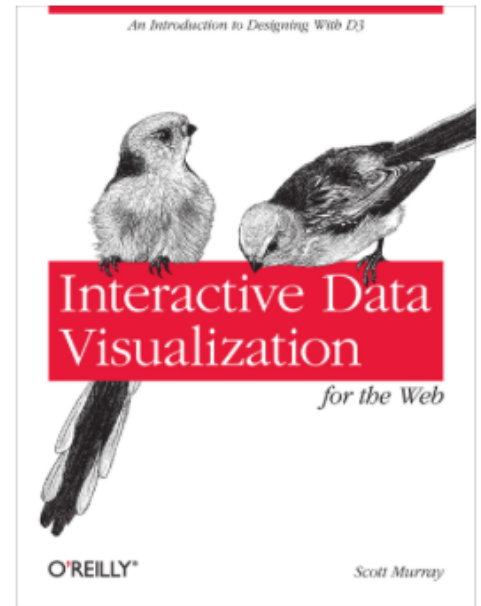http://vizhub.healthdata.org/gbd-compare/

A Mixed Recovery

Industries in the health care and energy sectors grew substantially over the last five years, while jobs in real estate and construction continued to shrink. Industries that paid in the middle of the wage spectrum generally lost jobs. And while the economy overall is back to its pre-recession level, it hasn't added the roughly 10 million jobs needed to keep up with growth in the working-age population. **NEXT »**
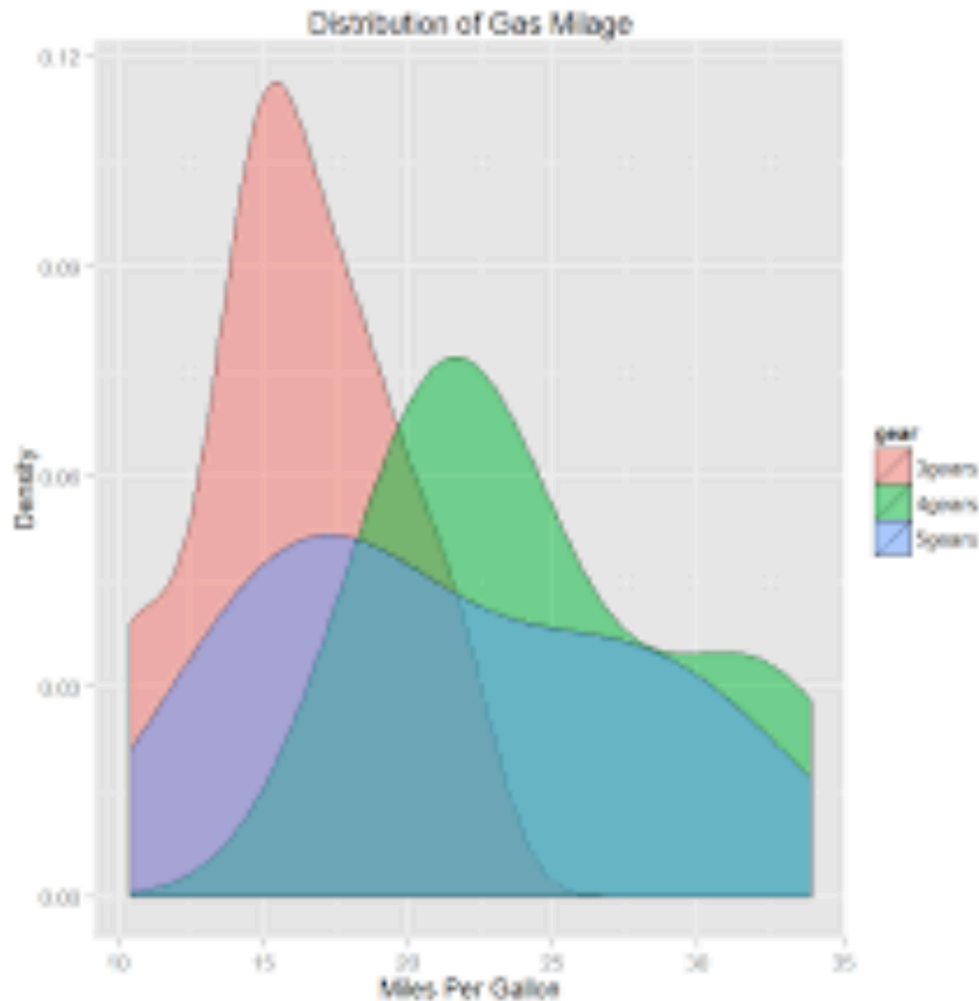
Nail salons

Services for the elderly and disabled

Other professional services (translation, interpretation)

Internet publishing, broadcasting, search

Oil and gas extraction

Computer systems design and programming

Software publishers

Gift, novelty and souvenir stores

Florists

Bookstores and news dealers

General contractors for new homes

For-sale home builders

Communications equipment manufacturing

Securities and commodity contracts

How to read this chart

- ■ Recovered and grown
- ■ Recovered
- ■ Relatively unaffected
- ■ Has not recovered
- ■ Recession accelerated decline

⟵ **Lower Wages**   **Industries**   **Higher Wages** ⟶

http://www.nytimes.com/interactive/2014/06/05/upshot/how-the-recession-reshaped-the-economy-in-255-charts.html?_r=1&abt=0002&abg=1

Edward Tufte

Data-Driven Documents

- Elijah Meeks just wrote a D3 book
- Scott Murray wrote a great (free) book on D3 from a designer's perspective
- D3 newsletter: Cool stuff every week
- Interactive Data Visualization: http://chimera.labs.oreilly.com/books/1230000000345

ggplot in R

Visual Perception