Big Data for Cities

Week 5

Curt Savoie
Connor McKay

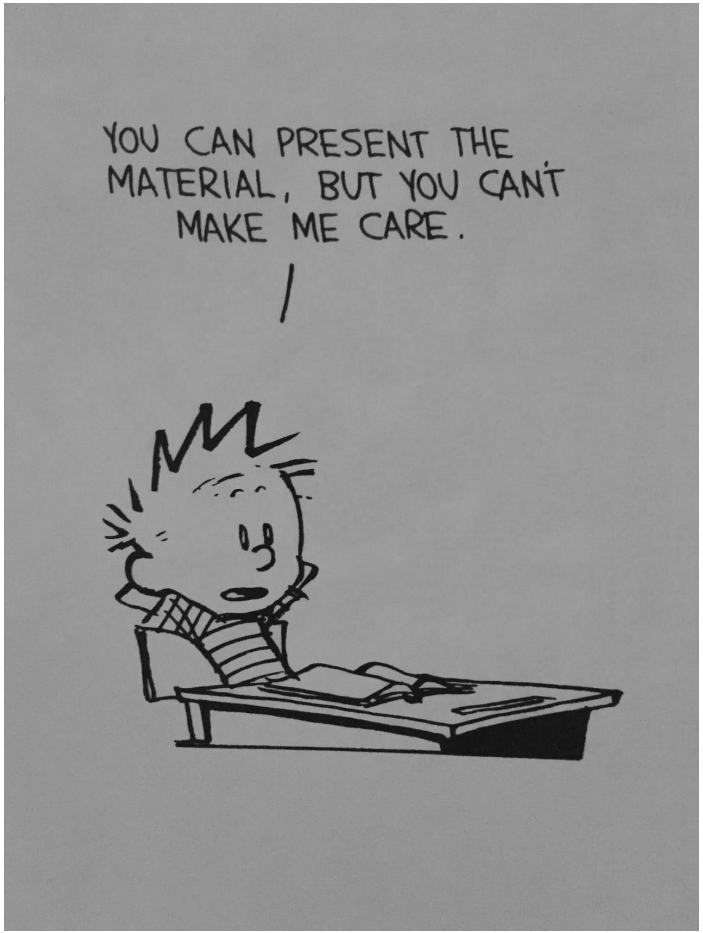
Agenda

- Recap on last week
- Communications and Data Vis
- Examples
- More R Demo
- Q&A

Recap

- Readings / Questions on 311?
- Is R getting a bit easier?
- Other Questions on last week?

The Problem...



Good Data Communications

What Makes Good Data Communications?

What Makes Bad Data Communications?

WEEK 3: Keys To Effective Data-Driven Policy

- Clearly Communicated Methodology
  - Rigorous statistics
  - Reproducible Results
- Data Availability
- Engaged Stakeholders
- Small / Targeted Scope
- Achievable Recommendations
- Measurable Effects and definitions of success

Good Data Communications

- Key Questions/Thoughts
  - Who is the audience?
    - What are their expectations/needs?
  - What format of presentation lends itself to best communicating the findings?
  - What is the main point/narrative?
  - If the audience will only take away one or two things, what should they be?
  - Don't get lost in jargon and too much mathematical explanation
    - Speak to the level of the room!
  - Present actionable information or information that gives background/context, **anything else is trivia** and should be added judiciously
  - BE CONFIDENT AND KNOW YOUR MATERIAL!!!

Good Data Visualizations

What Makes Good Data Visualization?

What Makes Bad Data Visualization?

Good Data Visualizations

- Key Questions/Thoughts
  - Data should be clear
  - Narrative should be consistent
    - Bring people where you want them to go, it's a journey through the story
  - Labels should be meaningful
  - Graphs and plots should be detailed, but not *busy*
  - Colors and icons should not take away from the message
  - Chart types should be reflective of the type of information
  - Build from simple to complex
    - A few simple visuals can be more impactful than one complex visual
  - **There should never be an audience reaction of "What am I looking at?"**

Examples

- https://dashboards.digital.mass.gov/superset/dashboard/traffic_percussion_drupal/
- http://www.mass.gov/chapter55/
- http://mbtaviz.github.io/
- http://feltron.com/FAR14.html
- http://www.informationisbeautiful.net/

For Next Week

- **Reading on theory and practice**
  - https://blog.hubspot.com/marketing/data-visualization-choosing-chart
  - https://datavizcatalogue.com/
  - https://www.elsevier.com/connect/a-5-step-guide-to-data-visualization
  - https://www.ted.com/talks/jer_thorp_make_data_more_human
  - https://www.ted.com/talks/hans_rosling_on_global_population_growth
  - https://www.ted.com/talks/david_mccandless_the_beauty_of_data_visualization
- In R
  - homework!