

Recreating News Visualizations in Tableau

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This guide walks you through the steps to create Tableau visualizations that mimic some particularly good news graphics. The goal is to show what can be done in Tableau, and to show/introduce some of its features in a concrete use context.

Visualization I: Connected Scatterplot with Annotations

The connected scatterplot is an interesting technique for comparing data over time. The inspiration for this comes from one of Robert's favourite news graphics ever, though we'll use different data. The piece is *Driving Safety, in Fits and Starts* by Hannah Fairfield for the New York Times (September 17, 2012): <http://nyti.ms/PB07e2>

The connected scatterplot is easy to create but can be very interesting to explore. Instead of the data used above, though, we'll look at the minimum wage in the U.S.

(1) Create a new workbook, connect the data in Tableau and create your first view

- Download the [Minimum Wage 2015 csv data](#) file from the course website
- Create a new workbook
- Click on the Data Source tab.
- In the left column labelled "Connect", click "Text file"
- Locate the `minimum_wage_2015.csv` file and click "Open"
- A new view will load that displays your data connections and data table. Before continuing, review the data table.
- Click on "Sheet 1". We will produce our first chart of the nominal minimum wage (the amount of dollars people are paid at any particular time) and the actual buying power in constant dollars (so we can compare what those nominal values actually mean).
- Drag *Year* to the *Columns* shelf
- Drag *Nominal* to *Rows* shelf
- Right click *Year* and select Dimension. This will make it so that Tableau doesn't try to aggregate the *Year* data into, for example, a sum.
- Click on the green "pill" in the *Rows* shelf that says *SUM(Nominal)* and from the *Measure (Sum)* menu, pick *Maximum* instead
 - This is because this particular dataset has two entries for *Year* when the minimum wage changed twice in one year, which is causing little bumps that aren't real.
- Now drag the *Real* pill to the *Rows* shelf as well
- Make the same change from *Sum* to *Maximum* for the aggregation here
- Tableau has created two separate line charts, but we want both lines in the same chart. So click on the *Max(Real)* pill and select *Dual Axis* from the menu.
- Now we have both lines, but they're on different axes (compare the values on the far left to the far right). Right-click the axis on the right and select *Synchronize Axis*.

- This is not the connected scatterplot, but it will be a useful additional view to use in a moment.

(2) To create the connected scatterplot...

- Right-click on the tab and select *Duplicate Sheet* from the menu
- Drag *Year* from the *Columns* shelf to the *Label* property on the Marks card
- Drag *MAX(Nominal)* to *Columns*
- This gives us a scatterplot, but we want to connect the dots. Click on the dropdown that says *Automatic* on the Marks card and change it to *Line*.
- Drag the *Year* field from the bottom of the Marks card onto the *Path* field while holding down the command (⌘) key on the Mac or Ctrl on Windows. This adds the field to the path in addition to where it already is, rather than replacing its function. The path makes sure the points are connected in the right order.
- You can remove the *Measure Names* pill from the Marks card by dragging the pill below and outside of the Marks card or by right clicking the pill and selecting “Remove”. This pill was generated by Tableau for the dual-axis chart above, but it’s not needed here.
- Click on the color property and pick black or dark gray to make the view look more like print

(3) To put the views together, we’ll create a dashboard.

- Right-click on the tab and select *New Dashboard* from the menu, or use the middle button in the lower right of the window
- A dashboard lets you combine multiple worksheets, set up interactions between them, etc. For this exercise, we’ll just use it for layout.
- There is a list of worksheets in the *Sheets* area of the *Dashboard* pane. Drag the last one you just created into the main window and drop it there (there’s a preview that pops up as you mouse over to help you pick).
- Now start dragging the sheet with the dual-axis chart, but hold down the shift key before dropping it. That makes it a so-called floating zone that does not try to modify the underlying layout.
- You can move floating items around by grabbing their top bars and resize them in a way similar to windows
- Drag out a *Text* object from the *Objects* area on the bottom left of the *Dashboard* pane to create text boxes that you can edit
- Turn off the titles of the two charts by clicking on the triangles in the upper right and unchecking that option in the menus
- Remove axis labels and hide axes by right-clicking the axis and de-selecting “Show Header”. Do this for both the x and y axes.
- Create a newspaper-style layout for your visualizations by dragging and dropping text objects from the *Objects* area of the *Dashboard* pane. Format the text boxes appropriately. Try to recreate the layout displayed in the image at the end of this document.

- Once you have done this, export your dashboard as an image by clicking the Dashboard menu item and selecting "Export Image..." Include this figure in your writeup.

