

Design critique

Group 3:

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Problem 1:

- **What is the problem domain or context of the visualization under consideration?**

The visualization shows how well different movies have done at the box office over time (between 1986 – 2008). How well a movie has done is determined by the height of their weekly revenue.

- **Which tasks can be achieved with this visualization?**

You can compare different movies from a certain period of time and see which movies have made the most revenue during that time, and for how long they've been successful at the box office. You can also see which movies have done well overall (by showing their total revenue). Trends.

- **Tufte's principles of graphical integrity:**

- **Are the scales appropriately labeled?**

The scale for the period of time is is, but there is no accurate scale that tells you what the height of the shapes mean in terms of absolute numbers (what the movie's weekly revenue is).

- **Is the Lie factor high?**

The Lie factor for the color scale for the total revenue is high. The scale makes a large jump from one value to the next: the lowest is 1 – 25 billion dollar, the next 25 – 75, then 100 – 250, and finally 250 – 852. The scale makes it look like these values go up by steps of equal size.

Because of the missing scale for the height of the shapes, it is hard to say whether the Lie factor of this part of the visualization is high. You can't see the exact values the heights and shapes represent, so there is no way of knowing if this is represented accurately. Assuming that it is, the Lie factor would be low.

- **Does the visualization show data variation and not design variation?**

It is a combination of both, since it uses layers for the shapes of the different movies. If both movies start on the same date, they are layered on top of each other to show the difference.

- **Tufte's visualization design principles, are they adhered to?**

We think the graphic has maximized the data-ink ration, the graphic is in 2D and overlapping movie shapes are separated by white lines. There is some clutter, because on the right they have to explain how to interpret the data.

This is also what makes up most of the chart junk, along with the movie titles and lines for the different years. The data in the visualization is very dense. It is layered, but the data is

the same for multiple layers, because the total surface of the shape is equal to the total revenue, which is already represented by a color.

- **Graphic design principles:**

The graphic uses contrast in colors to show how much the total revenue of movies has been, the darker the color (ranging from yellow to brown), the more money the movie has made at the box office.

The graphic uses repetition by using the same shapes. The alignment is above and under. The alignment is by time period (shapes close together are for the same period of time).

- **Which visual encodings are used?**

Position, color, size, length, area, shape,

- **Are the visual encodings appropriate?**

Yes, because they represent the data accurately.

- **Comment on subjective dimensions such as aesthetics, style, playfulness and vividness.**

Overall the visualization looks good, the shapes are creative and it is nice to use the slider to go through all the movies in time. The interaction works well, you can search for a movie in the search bar. It is fun to look at and find things.

- **What is the intended goal of the visualization and is that goal achieved?**

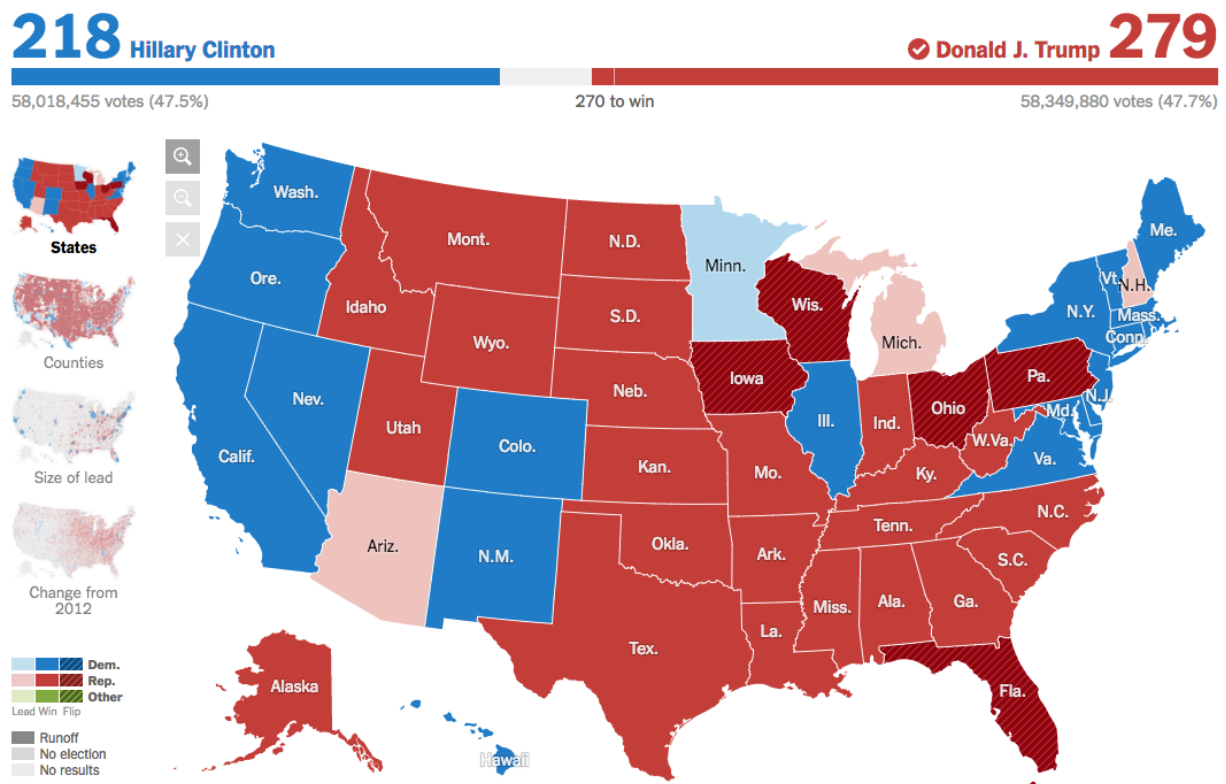
The goal is to show how well movies have done at the box office and how well they have done over time. The goal is partially achieved, because it is clear by the height and colors which movies have done well. However, it isn't entirely clear how each measures up to another, and movies at the bottom of the visualization are hard to compare to movies at the top. It is also impossible to see right away how much money a movie has made.

- **Are there any things you would do differently, and why?**

We would include a scale for the y-axis to show exactly what the heights of the shapes mean. To reduce the density of the data, we might leave off movies with the lightest color, and only show them when you click on them (or search for a title). Now they are already hard to see, so they don't add much to the visualization. This would also make it easier to have all movies on one side, so it's easier to compare the movies with each other.

Finally, instead of linking to a movie review when you click on a movie, we would show information about the total revenue.

Problem 2



Source: <http://www.nytimes.com/elections/results/president>

- Consider Bertin's characterization of visual variables (position, size, shape, value, color, orientation, and texture). Pick 2 of Bertin's visual variables, and discuss them in relation to your visualization.

Many of Bertin's visual variables are used in this visualization (shape, color, value and pattern). Here the shape represents a state in the U.S. and the color corresponds to whether a state has more Republic or Democratic votes.

Lighter colors (light-red/light-blue) mean either Hillary Clinton or Donald Trump is leading in the results as the votes come in, but the states haven't officially been won yet. Once a state has been won by either candidate, the color becomes a solid red or blue.

A pattern of stripes is used in some states, to show that a state has been 'flipped', which means that the result is different than what the polls previously suggested. (In this case, many states that voted Trump instead of Clinton).

- Ask yourself what the designer is trying to convey and think of three to four possible tasks this visualization should help you with. Does the visualization achieve any of your tasks?

This visualization tries to show what the results of the presidential election are in each state. It shows the absolute number of votes, and the electoral votes overall and per state (once you click on one of the states).

It also shows how many votes each candidate needed to win the election, and updates the results as more votes were counted.

The graphic achieves all the tasks well, the colors make it very easy to see what the winner in each state is, who has a lead, or if votes haven't come in yet. The bar on top of the graphic also makes it immediately clear how each candidate is doing overall.