INFO/CS 3300 Project 2

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The story

Through the visualization, we hoped to showcase the relationship between marriage rates and political affiliation in each state. More specifically, we wanted to demonstrate the marriage gap phenomenon, which Wikipedia describes as the "observed economic and political disparities in the US between those who are married and those who are single."

Our visualization shows an upward trend, which indicates that stronger Republican affiliations correlate with higher rates of marriage in both men and women. Broken down by gender, the percentages of married men and married women per state also increase as overall state Republican affiliation increases, where the correlation is stronger between married women and political standing.

Data

In selecting our datasets, we were inspired by an editorial published in Bloomberg View, which indicated in the 2016 election, married America voted for Trump by a solid margin, while Hilary Clinton won single America's vote by a landslide. We were able to find comprehensive data on 2004 marriage statistics and found a similar trend in the 2004 election between John Kerry and President George W. Bush — Republicans won the married vote and Democrats were favored by single Americans.

Our political data is compiled from 2004 national polling statistics, from which we exclusively used the columns containing state name, state percentage leaning Republican, and state percentage leaning Democrat. The marriage data comes from lifestyle statistics about the specific marriage statistics of men and women in 2004. First, we translated the existing data, in percentages of *unmarried* men and women, into respective percentages of *married* men and women, since this was more intuitive with our visualization. Then, we combined the two datasets based on state into a single csv file for management convenience. We also restricted the display to only continental states since the populations of Alaska, Hawaii, and District of Columbia did not contribute enormously to the visualization.

Political affiliation is displayed on the x-axis, where the further right the state is located, the stronger its Republican affiliation. The y-axis shows the percentage of women who have married in each state. The size of the circle relates to the overall percentage of people married within each state and the color of the state corresponds to the political affiliation of the state, where bluer states are more Democratic and redder states are more Republican.

Mapping and Integration

Essentially, we wanted to display the data in two forms — through the standing scatterplot and through the interactive hover feature, which displays multiple visualizations in itself. In total, our

visualizations consist of: the scatterplot, color scale and size scale of the state circles, the bar charts in the hover, and the donut chart in the hover.

The majority of the scales used in our visualizations are linear just because of the nature of our data being mostly percentages. However, while the color scale for the state circles was also linear, the size of the circles were determined on a power scale in order to better show relative population sizes of women who have married in each state.

Work distribution

We worked as a group to conceptualize what we wanted our visualization to convey, and for the most part, we did the majority of the project in person together. We each contributed our respective portions to the status reports.

Sophia designed the initial layout of the visualization from which we based all later coding and styling. She also created a basic framework for the scatterplot and displayed circles representing the states with the corresponding state initials within each circle. She is responsible for the consolidation of versions of code and the final styling of the site.

Kim cleaned the datasets, removing all unused variables and reorganizing the data to make it readily structured to be implemented in code. She created the basic visualizations shown in the hover, exhibiting the specific men and women marriage statistics in each state. She also wrote the content displayed on the site as well as the final PDF summarizing the project.

Eric integrated much of the work Sophia and Kim did — he implemented and designed the hover feature and changed the sizes of the circles to reflect the population of married women in each state. He created the political affiliation donut chart in the hover as well as the additional features displayed upon clicking on state circles. Overall, he was able to debug many of the issues we encountered in creating the visualization.