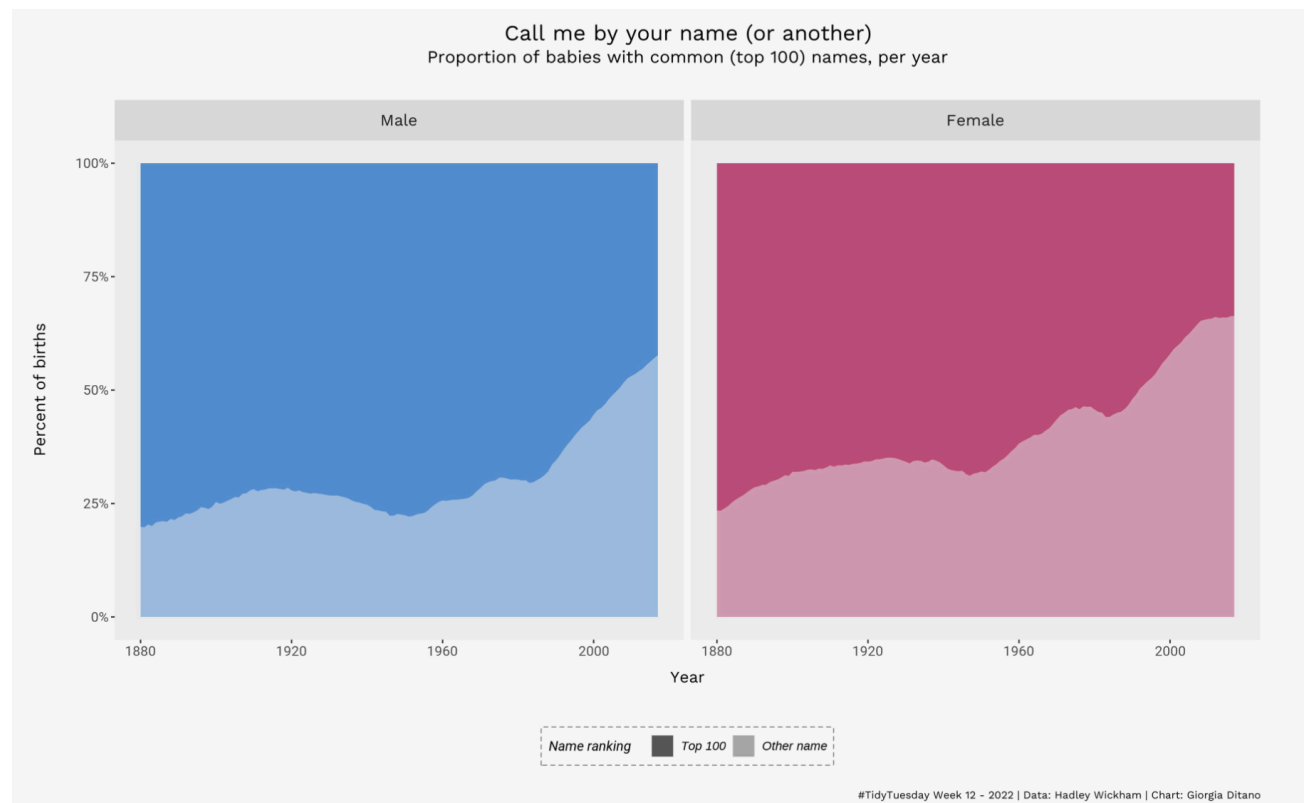
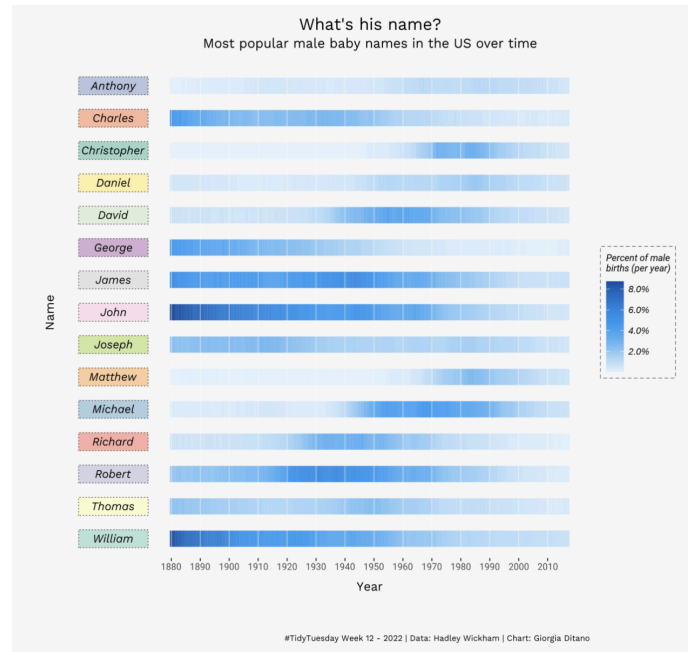
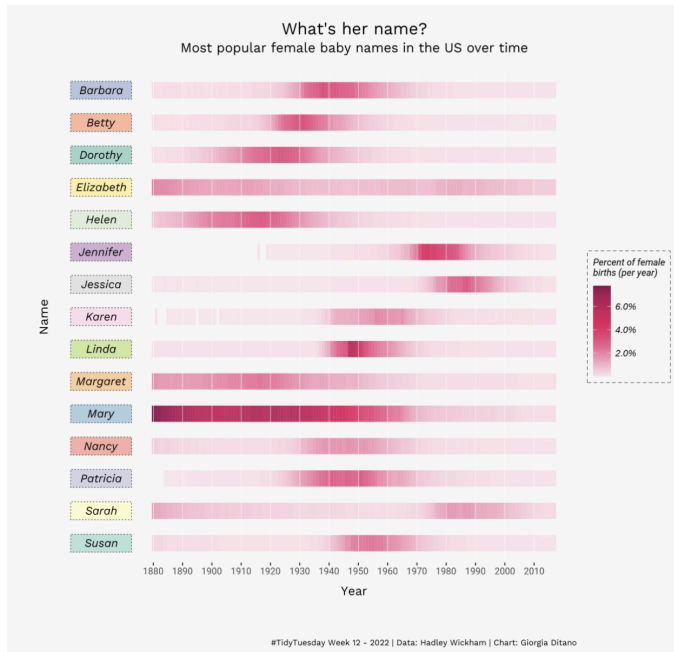


Critique

<https://twitter.com/giorgiadit/status/1506961297937682434>



The visualization above shows the most popular male and female baby names in the US from 1880 to 2017. This longitudinal dataset is presented using a combination of bar charts and a filled line chart to show trends in naming conventions over time, specifically the popularity of certain names and the diversification of naming choices. The designer tailored these graphs to convey the changing dynamics of naming popularity, indicating societal shifts in preferences for baby names.

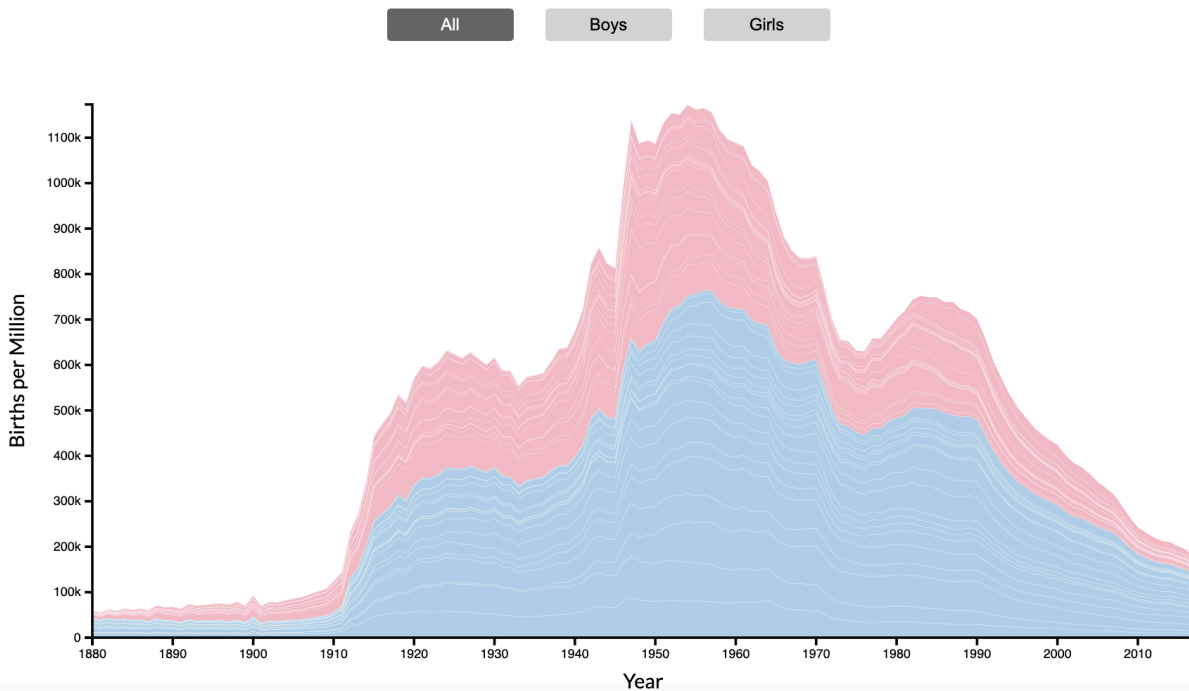
The bar charts and filled line chart combined are effective in conveying the general trends at first glance, including the dominance of certain names in particular eras and the increasing diversity in naming. The designer uses horizontal bar segments with varying saturation according to the prevalence of each name in any given year. I think this use of color density to signify popularity is a great visual tool that intuitively communicates that darker hues mean higher occurrences of a name. According to Liu and Heer's article "Somewhere Over the Rainbow: An Empirical Assessment of Quantitative Colormaps", one of the key goals of quantitative color encoding is to accurately map perceptual dimensions of color to the logical structure of data. As such, this visualization effectively employs a single-hue colormap strategy that was recommended in the article, where changes in luminance provide a strong perceptual cue for ordering and can be consistently understood across individuals and cultures. However, the reliance on color density alone does come with limitations because subtle variations in saturation can be challenging to differentiate if the viewer wants to discern the exact popularity of a name at any given time. This absence of precise numerical indicators could be improved upon by adding interactive elements that could provide exact numbers upon interaction. Another critique is the use of arbitrary colors for the names...

The filled line chart complements the bar charts by offering a macro view of naming trends over time. It shows the proportion of babies with top-100 common names against those with less common ones, highlighting the broadening spectrum of naming choices through the decades. The choice of color and the contrast between the filled areas are effectively used to distinguish between the two categories of names, making it easy to see the relative growth/decline of these categories over time. However, the chart design does seem to introduce a potential point of confusion regarding the interpretation, particularly in how the "top-100 common names" are represented. The title of the graph, "proportion of babies with common (top 100) names, per year" suggests a focus on the prevalence of common names. Yet in the visualization, the area representing the top-100 common names is filled at the top of the chart, contrary to conventional expectations where one might think to see this proportion represented at the bottom. Typically, viewers expect a graph to build upwards, with higher values/proportions represented by greater vertical extent from the bottom. In aligning the representation of common names at the top, the chart inversely maps the concept of 'increase' and 'decrease', which might not be immediately intuitive for all viewers. This could potentially hinder the viewer's ability to quickly grasp the key message that the diversity of names is increasing (the proportion of babies receiving less common names is growing).

My Visualization

Top 20 Baby Names Through the Decades

Dive into the chart below to explore the popularity of baby names over time. Use the filters to view trends for boys, girls, or all names and click on any name to see its detailed trend.



(<https://four310-hw4-ed2r.onrender.com/static/>)

My visualization shown above builds upon the original static representations of the top baby names data from 1880-2017 in the US. While the initial designs effectively use horizontal bar segments and filled line charts to show the trends over time, my design improves upon this with an interactive line graph that allows for a more detailed understanding of the data. I chose to represent the data in a filled line chart because it introduces a more immediate understanding of the changes in popularity of names over time. The layered graph allows for the representation of both individual data points and the cumulative trends they contribute to. The areas are stacked on top of one another so that users can perceive the collective change of name popularity, while also retaining the ability to discern the patterns of each name.

It begins with an aggregated view of the top 20 most popular baby names per sex over time to provide a high-level perspective of the overall trends at a glance. Users can filter by sex for a closer examination of trends among girl names or boy names. They can hover over any point in the timeline

to receive feedback in the form of a tooltip, detailing the exact popularity of a name for a given decade. They can also click on specific names to see a detailed view of the rise and fall of the name's popularity. In the previous design, the top-100 common names were inversely mapped so I redesigned my visualization to align with conventional graph expectations, where values build upwards. This makes the trend of increasing diversification in naming choices immediately apparent. Similar to the previous graphs, I use light blue and pink to represent male and female names because it leverages the culturally familiar color associations to allow for quick visual distinction between these categories. Overall, this new visualization's ability to filter and select names aligns with Shneiderman's "overview, zoom and details-on-demand" framework to give the user more control over the data they view compared to the initial visualization.