WhirlPul

Visualizing the Pulitzer Prize for Music Winners on a Spiral Timeline
(bit.ly/Pulitzer_Music)

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Abstract

The core idea of our project is to create a data visualization that allows users to explore the demographics of winners of the Pulitzer Prize for Music since its inception in 1943. We intentionally categorize this data in a way that allows users to see trends in gender, race, and performance type that might point to a number of biases inherent in this award. In order to achieve this, we use a novel spiral timeline that depicts incremental change over the years and visually concentrates the data so it is immediately apparent when only a few years are different from the rest. Though our visualization might be useful to anyone interested in music, it is
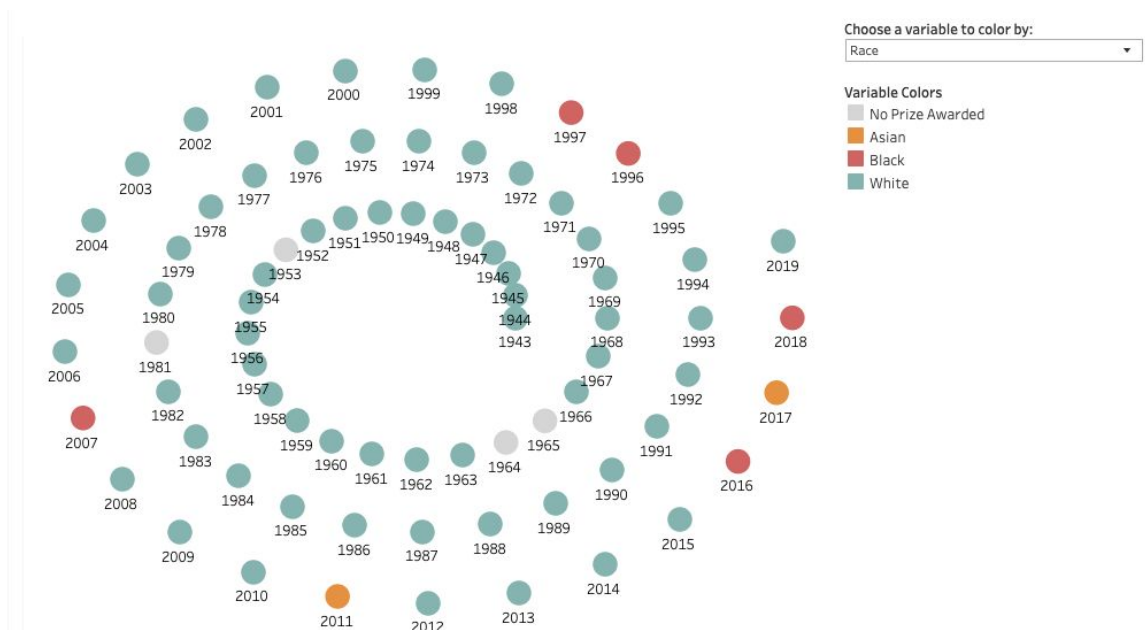
Notes:
- Years in grey are years when the Pulitzer Prize in Music was not awarded.
- There is no distinct nomination process for the Pulitzer Prize in Music. An individual can submit an entrance and pay a $75 entrance fee to be considered.
- The prize is decided upon based on an adjudication by a committee of individuals (the committee changes every year).
- Since 1980, the Pulitzer Prize has shared the three finalists from which the final prize is almost always chosen. Prior to 1980, this information was not public.

perhaps of particular interest to those concerned with issues of racism, sexism, classism, or other elitism in the institutions that shape our culture and those looking for alternatives to a linear timeline.

Background Research

There are three main projects which inspired our idea. First, once we decided we wanted to organize the winners chronologically rather than grouping them by shared trait, we realized we didn't want to simply place the winners on a flat timeline; rather, we wanted to display our data in a way that was more engaging. We were particularly inspired by the representations of time in Laurence Sterne's novel *The Life and Opinions of Tristam Shandy, Gentleman*, which represents the progression of time through the narrative patterns of the main character.[1] Although we ultimately chose a more traditional, calendar-oriented representation of time, seeing the representation in this novel helped open our minds to the possibility of shapes other than a line to represent the passage of time.
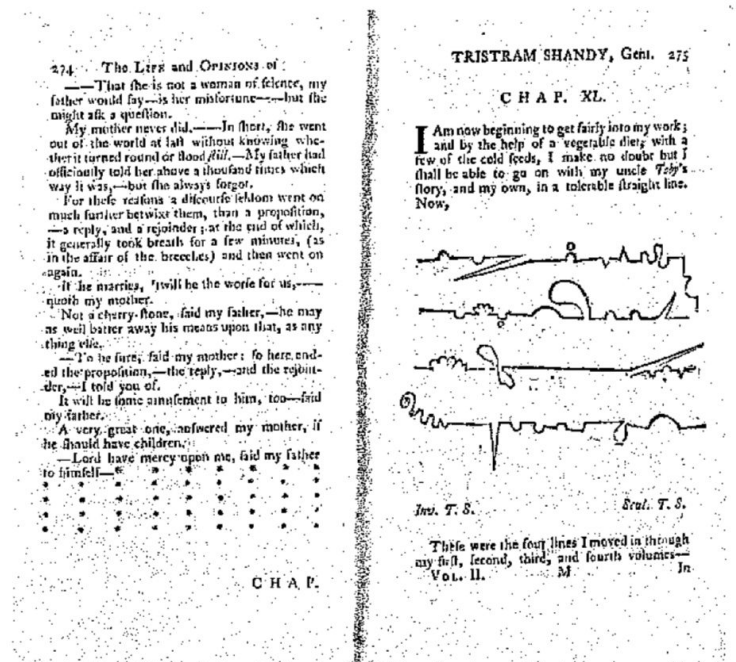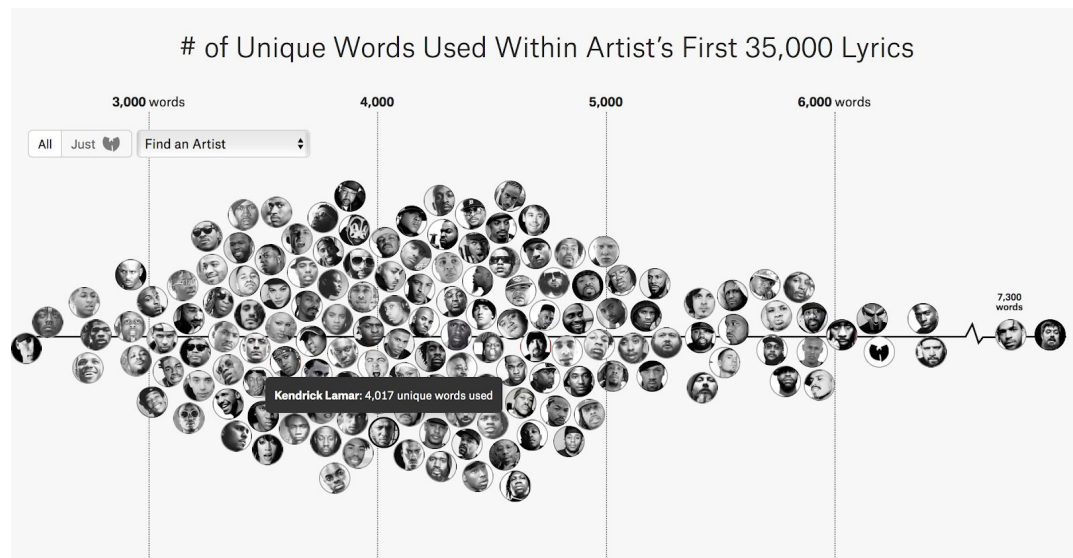
The MIT-associated US-Iran Relations project uses a circular timeline to depict events marking the history of US-Iran relations.[2] The circular timeline allows the viewer to see the major events happening around the selected day as well as the various actors grouped in the middle. Our visualization employs a similar visual concentration of time-ordered data.

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[1] Sterne, L. (1759). *The Life and Opinions of Tristram Shandy, Gentleman*.
[2] US-Iran Relations: National Narratives, America, Iran, and the Clash of Civilizations. (n.d.). Retrieved November 7, 2019, from https://build.bsilverm.now.sh/
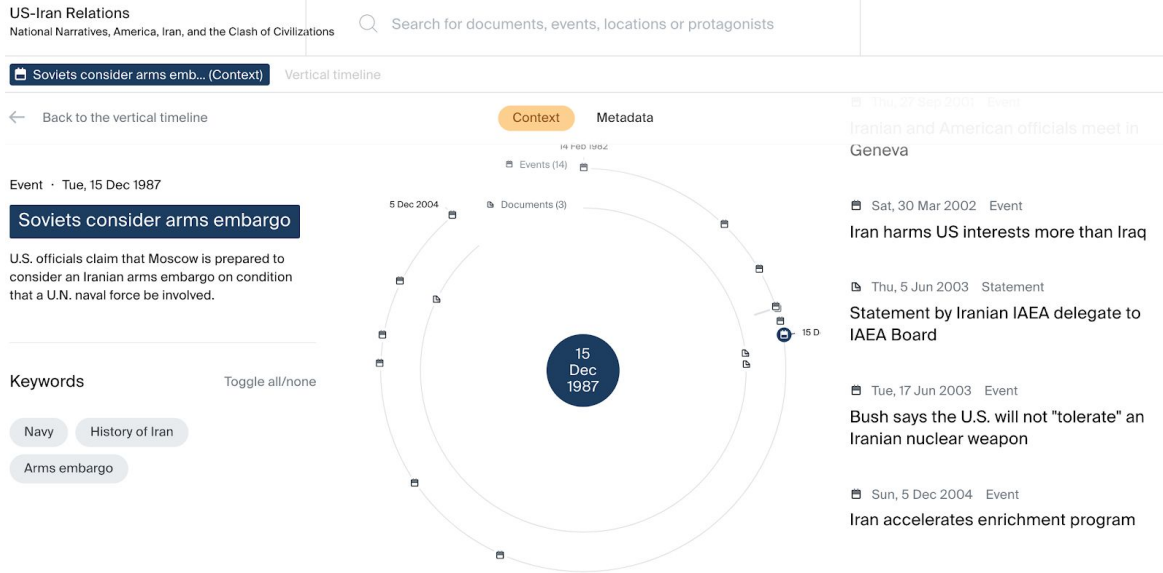
Given that we were originally interested in rap music, we also investigated Matt Daniels' visualization of rap lyrics.[3] Daniels uses images of artists as data points and provides tooltips with more information when you hover over an image. While we don't use images, we do have a similar interface of data points and tooltips.

# of Unique Words Used Within Artist's First 35,000 Lyrics

Kendrick Lamar: 4,017 unique words used

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[3] Daniels, M. (n.d.). The Largest Vocabulary In Hip Hop. Retrieved November 7, 2019, from The Pudding website: https://pudding.cool/projects/vocabulary/index.html

Project Development

We initially wanted to explore the topic of rap music, perhaps focusing on the way the sound or content of the genre has changed over the years. However, we felt these types of differences might be difficult to categorize and quantify in a meaningful way. We then began thinking about the different sub-genres of rap that exist today, from the popular "trap" style of Migos or Cardi B to the more lyrically-driven music of Kendrick Lamar or J. Cole. This sparked an idea, as one of our group members recalled that Kendrick Lamar had won a Pulitzer Prize for Music the previous year, making him the first rapper to win the award. This thought intrigued us; why was this win so important to the rap community, and how was this type of music and artist different from the winners of previous years?

After researching the winners since the award's inception in 1943, we quickly discovered that nearly all the previous winners wrote classical or jazz music, genres that in modern times have a somewhat elitist and inaccessible feel (although jazz music was once itself not considered serious music and had a troubled entry into Pulitzer Prize history). We were curious if this tendency to award more "high-brow" work might also point to a more inherent bias in the gender, race, or class of the artists selected for the prize. Thus, we formed our research question: How might the Pulitzer Prize for Music data shed light on issues of class, race, gender, and other elitism in our musical institutions?

In making our prototype, we decided that an art-based, creator-driven presentation was not as powerful as a user-driven data visualization. We thought that we would curate several categories that might be interesting to a user exploring Pulitzer Prize data; we determined that allowing a user to toggle between race, gender, and performance type would allow individuals to draw connections about the data themselves. Initially, we planned on creating such a tool in Processing and began to write code to create a spiral timeline there. However, we realized that this wouldn't allow for the interactivity we wanted. We decided to switch over to the more user-friendly

Tableau; while we recognize the restrictive limitations of Tableau, it allows for more functional usability given the short development period and public viewing through Tableau Public.

Enabling Technologies

WhirlPul uses Tableau for the visualization and filtering functionality. We manually created a custom CSV file to feed into Tableau with the salient data points; characteristics such as race and gender were drawn from Wikipedia, never inferred from images or names. The spiral configuration was created using a trigonometric equation locating the years on the X-Y plane.[4] Finally, we uploaded our visualization to Tableau Public, which freely hosts Tableau visualizations involving public data in order to provide access for exploration and analysis to a greater number of individuals than those who hold a proprietary Tableau license.

Journey Map

We see a user interfacing with our visualization in an exploratory manner in order to look at the various characteristics of Pulitzer Prize for Music winners. Because it is hosted on Tableau Public, the only requirement for a user to explore the visualization is to have access to an internet-connected device. A user would initially come to our visualization after thinking about how the Pulitzer Prize for Music is awarded every year; we see users interacting with the data we've provided to think critically about the prize from a sociocultural lens. A user can see global trends in the data through the coloring of different years based on certain factors, but also gain new insights into yearly prizes from information provided when hovering over any individual year.

Future Directions

This specific data visualization could be expanded to include more detail. In future iterations of the project, we would hope to link data points to news stories covering each year's award, similar

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[4] How did I create the spiral chart? (2017, January 17). Retrieved November 7, 2019, from Questions in Dataviz website: https://questionsindataviz.com/2017/01/17/how-did-i-create-the-spiral-chart/

to the famous gun violence visualization that links to news stories about each death.[5] The context surrounding the Pulitzer Prize for Music is a crucial component in understanding the inequalities in the award; we see incorporating aspects such as news coverage, prize committee information, and non-winning finalists as relevant information to help a user understand the award. We could also add links to the actual performance or musical recording of the winning composition. Additionally, one of the most important aspects of the prize is that it is not always awarded; for example, in 1965, Duke Ellington was nominated for a special citation by Pulitzer, but was rejected.[6] In this system and visualization, the "missing" data is just as interesting as the data we have. We note that, in our current prototype, when a year is missing data, hovering over the year provides filler text, but no information about why the prize was not awarded that year (see image below). We would like to find a way to incorporate these stories and other "missing" data to better tell the story around the Pulitzer Prize for Music. We also see this spiral timeline technique as highly applicable to other scenarios, such as visualizing other Pulitzer Prize data or Nobel Prize data. Spiralizing the dates provides a concentration of visual information (in comparison to a linear timeline) that allows for more comparison across years.

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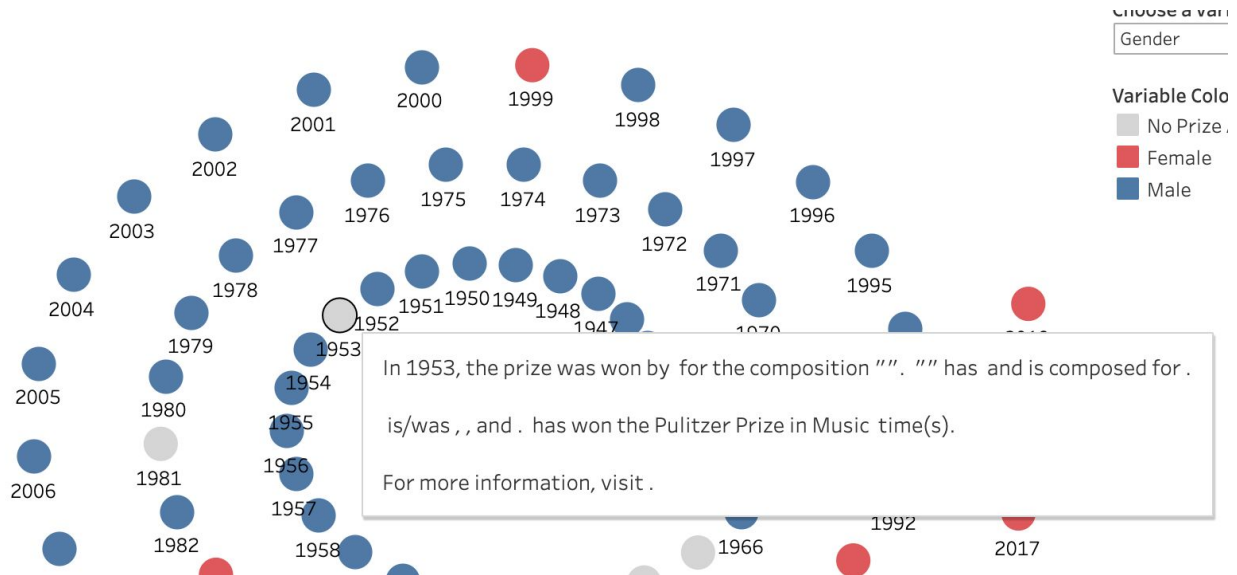
[5] United States gun death data visualization by Periscopic. (n.d.). Retrieved November 7, 2019, from https://guns.periscopic.com

[6] Pulitzer Prize for Music. (2019). In *Wikipedia*. Retrieved from https://en.wikipedia.org/w/index.php?title=Pulitzer_Prize_for_Music&oldid=921733301