

America's unique gun violence problem

Individual Project- Part II

Redesign

Graph 10: Most Gun Deaths are Suicides

Data Source:

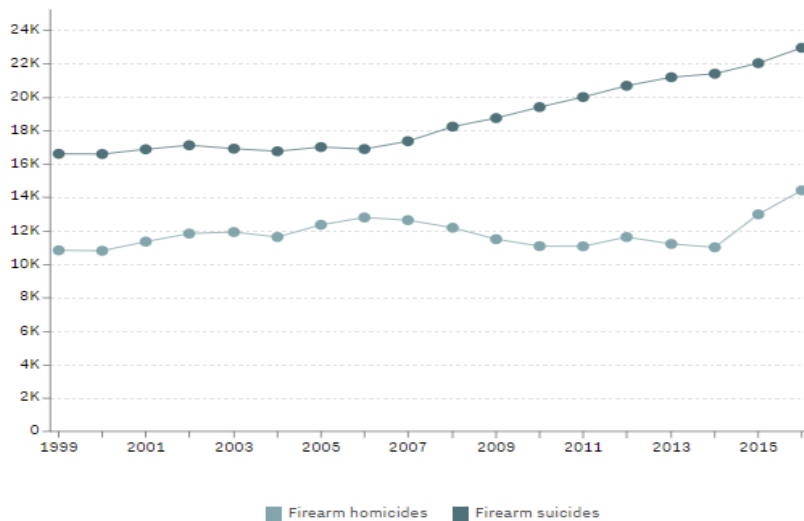
https://webappa.cdc.gov/sasweb/ncipc/mortrate10_us.html

Original Graph:

10) Most gun deaths are suicides

Firearm suicides versus homicides

Twitter Facebook Pinterest



Source: [Centers for Disease Control and Prevention](https://webappa.cdc.gov/sasweb/ncipc/mortrate10_us.html)

Vox

Redesign:

I have designed an annual comparison chart of total firearm homicides and firearm suicides. I have also shown the total firearm deaths (that includes homicides, suicides and some others) in the same chart for better visual comparison.

As I analyzed the data using other variables like sex, age group, ethnicity, etc. I realized a substantial difference in the no. of deaths as per sex. I have added that additional variable that gives more information about firearm related deaths in general

Pls Note: when we hover the cursor over the image, we can see the actual values

Findings:

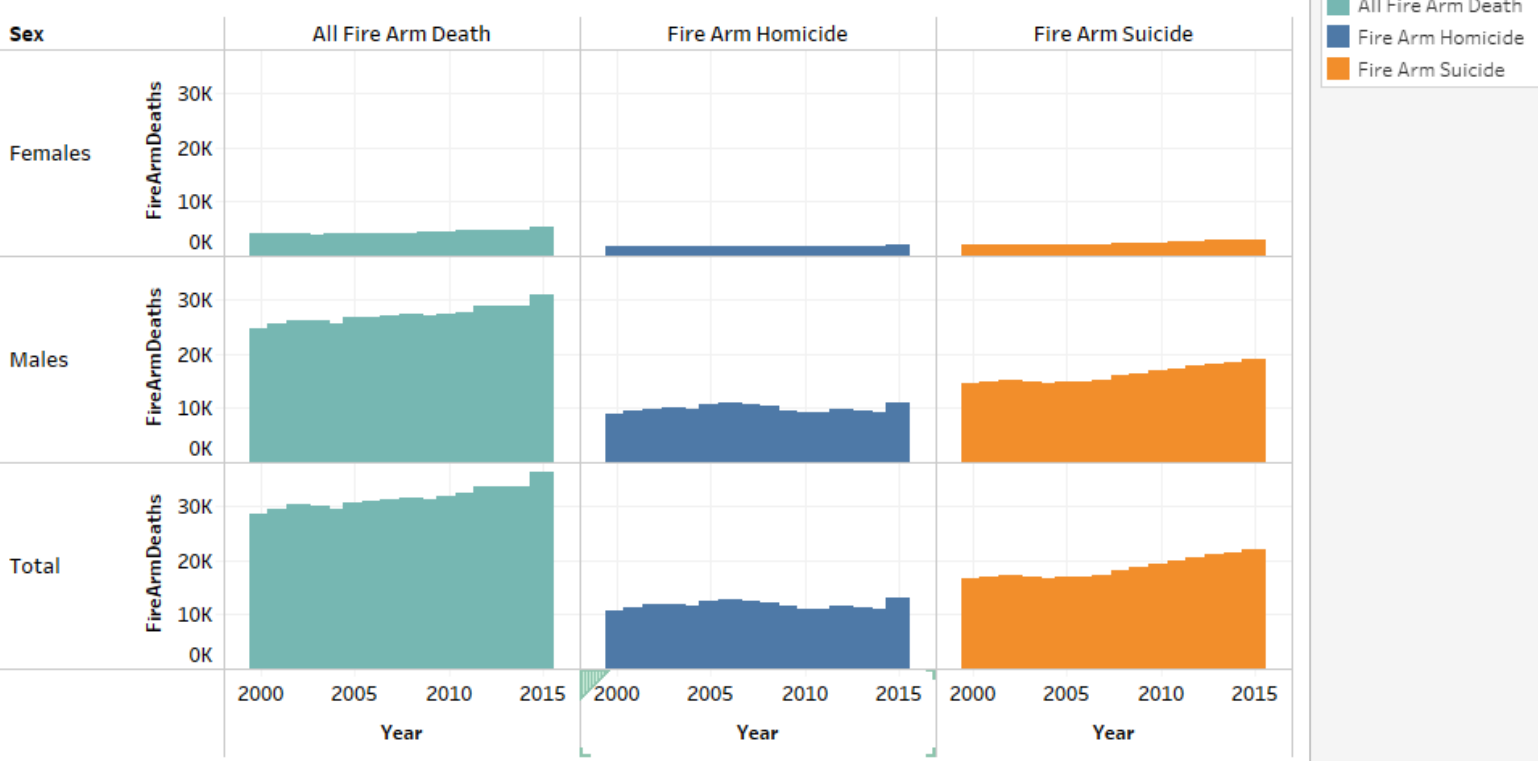
- 1. Firearm suicides are higher as compared to Fire Arm Homicides
- 2. Firearm deaths in general is lower in case of women as compared to men, but the trend 1 is still valid for women

One of the reasons cited by this research article is that Men gun owners tend to be more immersed in gun culture than their female counterparts and has listed down comparison between the genders in a lot of gun related activities

<http://www.pewsocialtrends.org/2017/06/22/americas-complex-relationship-with-guns/>

I will try to study and understand the reasons better for further enhancements in the graph

Annual Firearm Homicides & Suicides Comparison as a part of Total Firearm Deaths



Working:

I first downloaded three different files with an annual, gender wise breakup from the data source – firearm homicides, firearm suicides and total firearm deaths.

I used python for merging all these three datasets and Tableau for data visualization.

Enhancements:

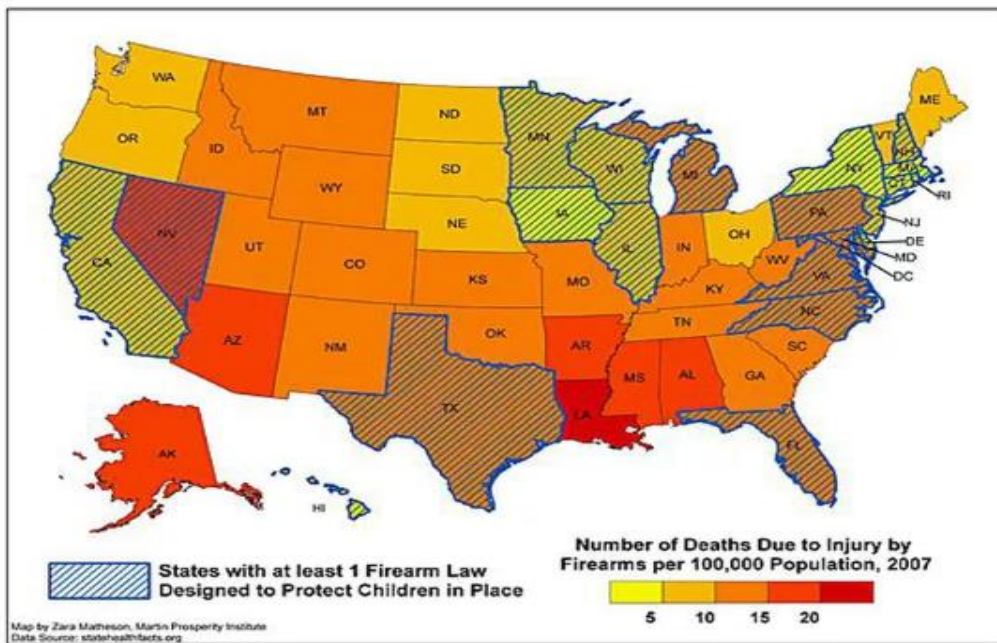
I would further analyze the above graph as below:

- Try and find correlation between access of guns / gun ownership differences between Females and Males and thus correlate to firearm deaths
- Try to analyze age trends
- Try to find out additional correlations for the widening gap between firearm homicide and suicide
- Improve the design aspect of the visualization

Graph 8: States with tighter gun control laws have fewer gun related deaths.

Original Graph:

8) States with tighter gun control laws have fewer gun-related deaths



Zara Matheson/Martin Prosperity Institute

Issues in current chart:

It takes the user some time to understand the color variation and read which states have the highest gun deaths and then compare it with the gun control rule in states

Data Source:

<https://www.statista.com/statistics/215655/number-of-registered-weapons-in-the-us-by-state/>

<https://www.thoughtco.com/gun-owners-percentage-of-state-populations-3325153>

This gives total no. of guns per capita and the total guns registered in each state. This is published as on April 2017

<https://www.kff.org/other/state-indicator/firearms-death-rate-per-100000/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>

This gives the no. of deaths due to firearms per 100,000 population. This is as on 2016, released in 2017.

<http://crimadvisor.com/data/Brady-State-Scorecard-2015.pdf>

These are rankings based on background check rules implemented by each state before selling a gun. The overall intent of these rules are to keep guns out of the hands of the dangerous people.

These also consider implementation of all other gun ownership laws. This has been compiled as on 2015

Pls Note:

I found it very difficult to get open data sources for both these for the same year. But since one includes data until end of 2016 and the other one based on gun registration statistics by ATF in April 2017, I found it suitable to compare the two.

Also, since the gun policy rankings are also computed quite recently, we can use the two to compare.

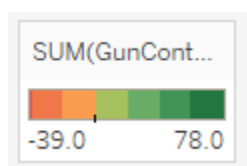
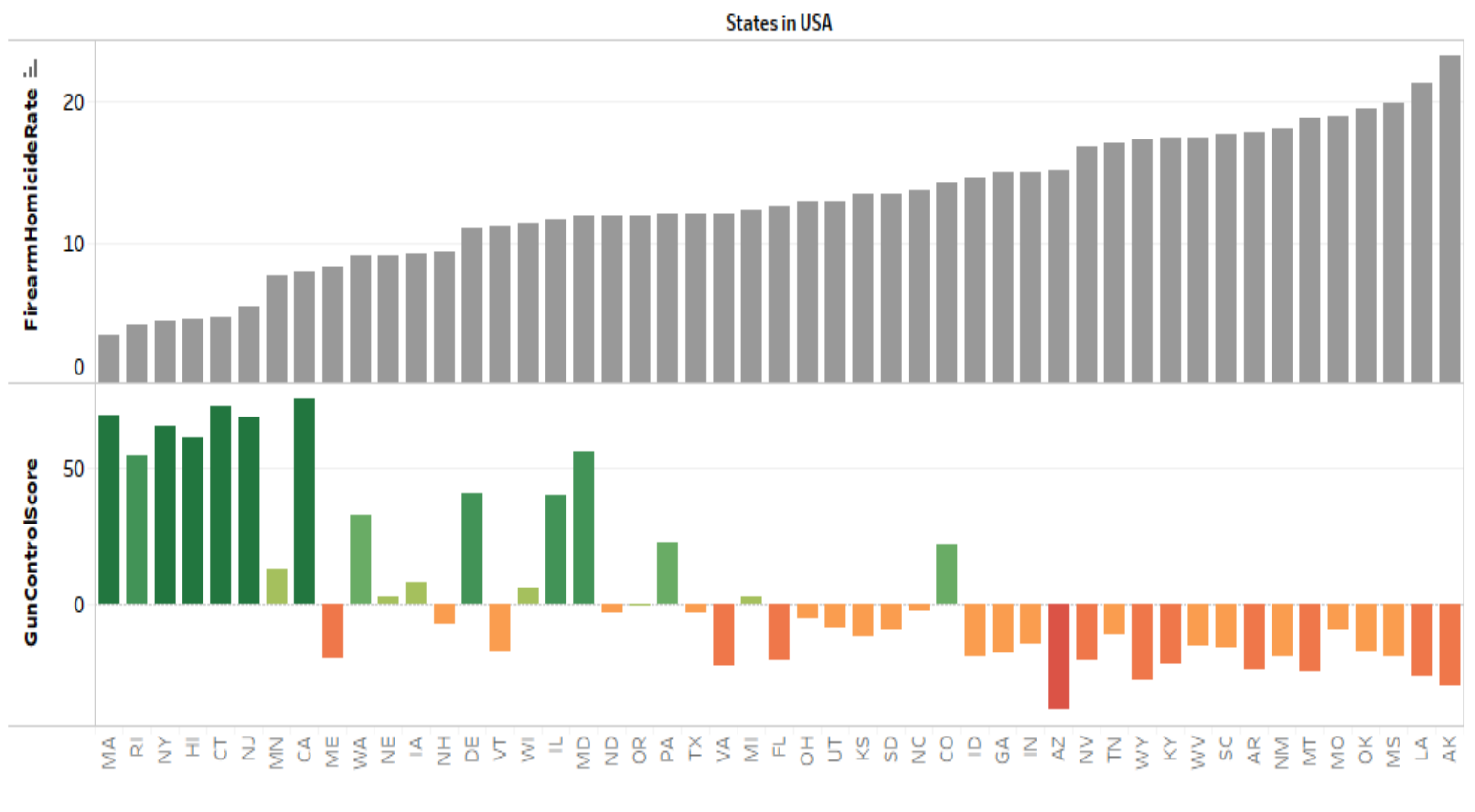
Redesign:

I have used a score computed for each state for the amount of gun control policies. The higher the rank, the tighter are the gun control policies.

A direct statewide comparison of gun control ranking to the no. of firearm deaths clearly signifies that tighter gun controls are associated with lower firearm deaths.

FIREARM DEATHS LOWER in States with HIGHER GUN CONTROL

Homicide rate is calculate per 100,000



Finding:

1. States with higher ranks for Gun Control Policies have lesser firearm related homicide rates as compared to the ones with lower ranks
2. This is directly actionable in terms of stronger policy making

Working:

I have downloaded individual files from each of these sources, and another additional file to get the state codes and then used python for data manipulation.

Future enhancements:

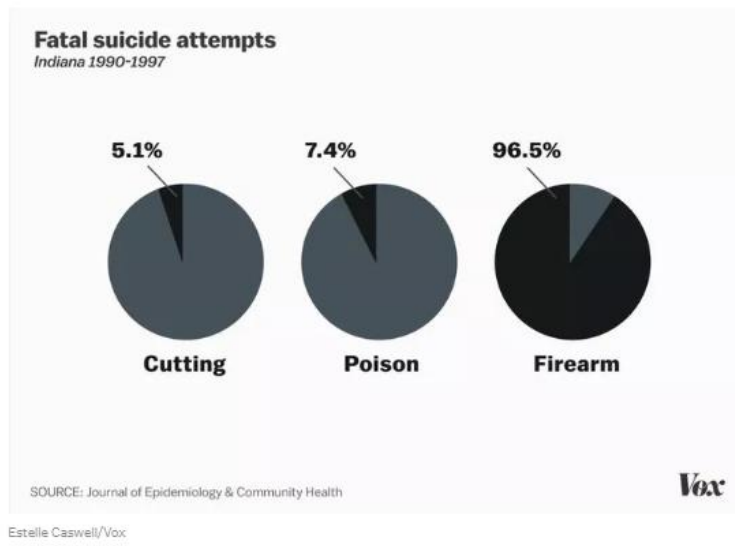
1. The same may be shown using two comparative geographical maps for better visualization
2. I will try to make it more interactive/ dynamic with selection panes, filters etc.

I will also try to get year on year policy change and impact on each year if possible

Graph 12:

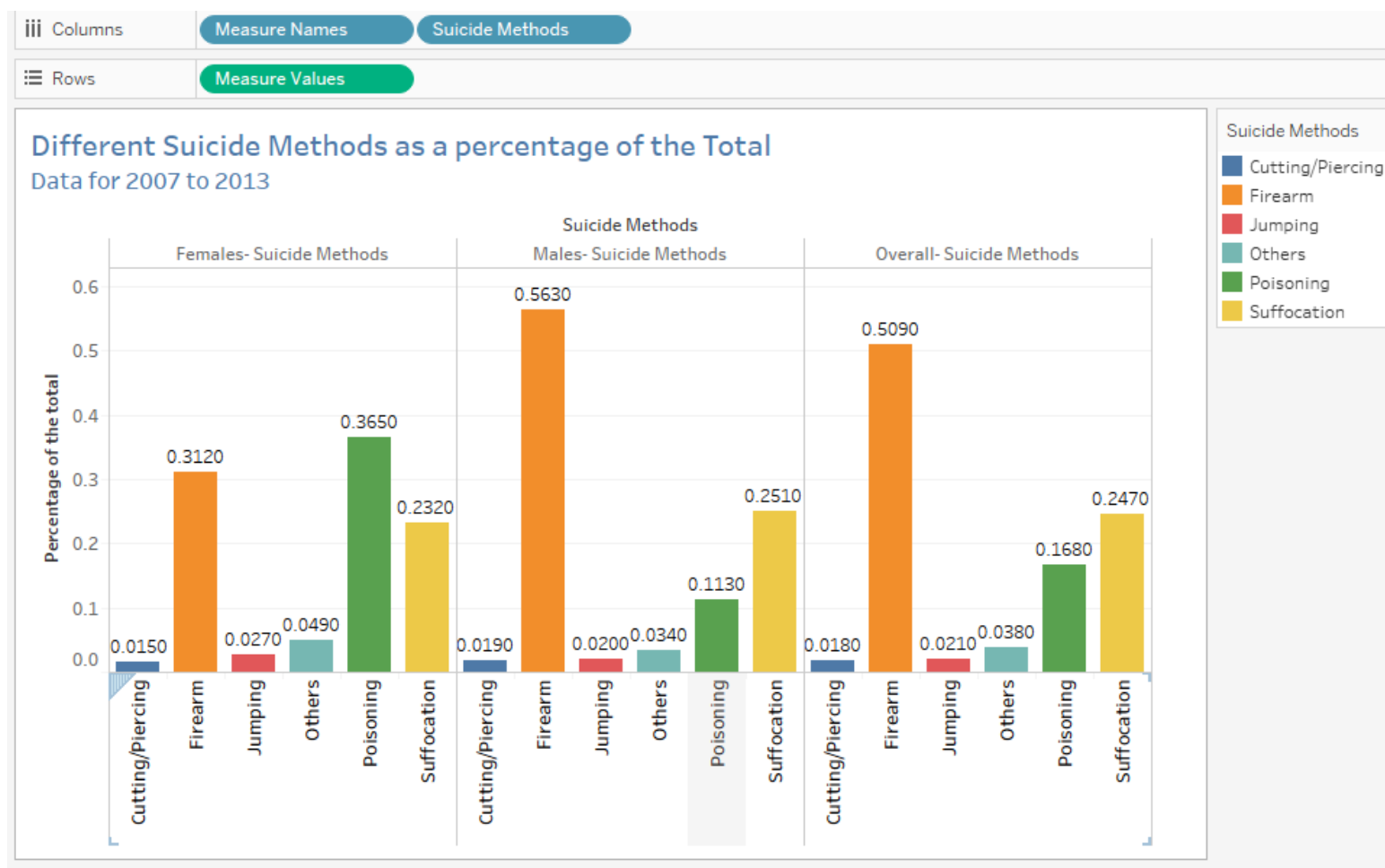
Original Graph:

12) Guns allow people to kill themselves much more easily



Redesign:

I have redesigned the to help the audience to compare easily by looking at one image rather than 3.
I have also changed the color scheme to make it look more appealing
I have added the percentages as well so that the audience gets accurate information on this in one glance



Data source:

<https://www.bradycampaign.org/sites/default/files/TruthAboutSuicideGuns.pdf>

Data Manipulation: Data was available in all the sources in a summarized form for the years 2007 to 2013.

I only merged the female and male suicide methods break up for a comparison as we have seen different trends in general between males and females in

Findings:

1. Men use firearms for suicide much more than women do
2. Firearms still dominate amongst all other methods in terms of suicides

Overall Enhancements:

I will study the gun ownership demographics further and see if there can be any correlations drawn. There is a good research paper on this with lots of insights, I will try to study this further.

<http://www.pewsocialtrends.org/2017/06/22/americas-complex-relationship-with-guns/>

