

Problem Statement

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After reading the original data product, I think the literature is trying to tell us the reason why gun violence is a unique American problem, and why there should be gun control. The data product provides 17 maps and charts to show what gun violence looks like in the US comparing to the rest of the world, why it happens, and why it's such a tough problem to fix.

To my opinion, this data product is both effective and ineffective in different ways.

The data product is effective because it captured many different aspects when analyzing gun violence:

- 1) It included comparisons worldwide between different developed countries as well as comparisons within the US between different states, it contained comparisons between firearm homicides and suicides, and also it included how politics and controls changes throughout the time.
- 2) It used different types of figures to best fit each analysis, and to give the best visualization that matches the background.
- 3) Each of its figures supported the major insight.

At the same time, I think this data product is also ineffective for different reasons:

- 1) All the 17 figures are equally distributed throughout the analysis, which I somehow loose track when reading through it. I think it would be more effective if come up with each head section claiming the general issue that is going to be analyzed, and then support it with different sub-figures/analyses.
- 2) I noticed some analyses about same topic are using data from different years, for example, some are ending in 2000, some are in 2015. So I'm wondering should we use the data from the same time period to make the analysis more precise?
- 3) I find it less effective that the data product presented the figure first and then continued with text analysis, and some of the figures are not even directly related to or didn't support what the text talked about. For example, #8 in the data product, I think it would be more effective if it can provide some text analyses and then support it with some supportive/persuasive figures for better visualization of the analytical results under each head sections.
- 4) Some of the figures didn't make strong support to the main topic of the whole analysis. It is important to see how the number of guns relate to the gun deaths, but it is kind of obvious that more guns will lead to more gun deaths. So I don't think it's necessary to have too many figures keep talking about this issue in different areas.

If I were going to redesign this data product, I would first keep the same major insight, which I would use multiple analyses to support how bad gun violence is in the US and it is important to implement gun control.

I would section my data product into three parts:

- 1) Gun violence analyses between US and other countries, and within the US between different states. This includes average number of guns obtained per adult person in each country instead of total numbers, because obviously US has larger population size as well as gun powers than other countries. It also makes more sense to analyze the per capita instead of total numbers. I would also obtain another analysis on firearm homicides between different countries, then combine and compare the above two together to see how number of guns obtained per capita affects the gun violence in the world. Again, I would apply the similar analyses on between different states in the US.
- 2) Massive shooting in the US. I found it interesting that the original data product mentioned the massive shooting and Sandy Hook, so I think I would do some analyses on this as well. But instead of only showing the number increase after the shooting, I would like to analyze the trend before and after it to see the overall difference, and to see if Sandy Hook could be some trigger for more massive shooting? And also analyzing the pattern of how massive shooting spread out in a year between many different years could be another way to think if there could be any trend or other reasons for massive shooting based on the results.
- 3) Conduct analyses proving gun control or education would decrease suicide rates, homicide rates, and maybe also mass shooting rates. I like how the original data product #13 works, but I would like to apply it to homicide and mass shooting as well. Also I would compare both general education level vs. suicide/homicide/mass shooting rates in different states, and specific gun education implementations vs. suicide/homicide/mass shooting rates, if I could find possible related data records.

In my data product I would skip the “more guns, more deaths” analyses, because they’re important results but I don’t think they’re interesting enough – I personally would believe this result even without the analyses.

Then I would conclude my point of view with all the supporting analyses above to either keep highly suggesting government gun control, or might just find it super difficult to achieve and seeking other possible solutions.

To make my data product even more persuasive to the audiences, I would like to have a deceptive version of it. To do that, I need to focus and enlarge the analytical results that matches my point of view, and then vague the results that disprove it. Or if I found some negative results, it would be great if I could find more powerful positive results to take over the control and make the negative ones less powerful to reach to the conclusion.

Moreover, in terms of deceptive visualization on each sections mentioned above, for example, if the result didn't show much difference in number of mass shooting happened throughout the time, I would try to truncate the Y-axis and make the visualization on difference much bigger. More specifically, for example, if the number of mass shooting increased a little from 3-4 in a certain time frame, I could then truncate the y-axis to "3, 3.1, 3.2, ..., 4" instead of "1, 2, 3, 4" to enlarge the difference for better and more dramatic visualization.

Also I could omit data if the trend is not obvious in the original figure. For example, if the trend on number of suicide before and after implementing gun control policies didn't form an obvious decreasing line but with some floating points in certain years, I could omit certain years (but keep the ones used in a reasonable pattern, for example, even years only or odd years only, depending on the actual result) to achieve a better visualization with more obvious line trends.

As a conclusion, there are still a lot more improvements I can make to the original data product, and I would explore it more and deeper when I'm working on the redesign versions. In the mean time, in terms of datasets, I can get access to some of the data used in the original data product, but I will need to do more research on some other data sources and try to get more up-to-date datasets.

Sources:

The original data product – <https://www.vox.com/policy-and-politics/2017/10/2/16399418/us-gun-violence-statistics-maps-charts>

World firearms murders and ownership data -

<https://docs.google.com/spreadsheets/d/1chqUZHUY6cXYrRYkuE0uwXisGaYvr7durZHJhpLGyys/edit#gid=0>

Mass shooting data - <http://www.gunviolencearchive.org/mass-shooting>

International crime victims survey data -

http://www.unicri.it/services/library_documentation/publications/icvs/data/

Other related gun violence data - <http://www.gunviolencearchive.org/reports>