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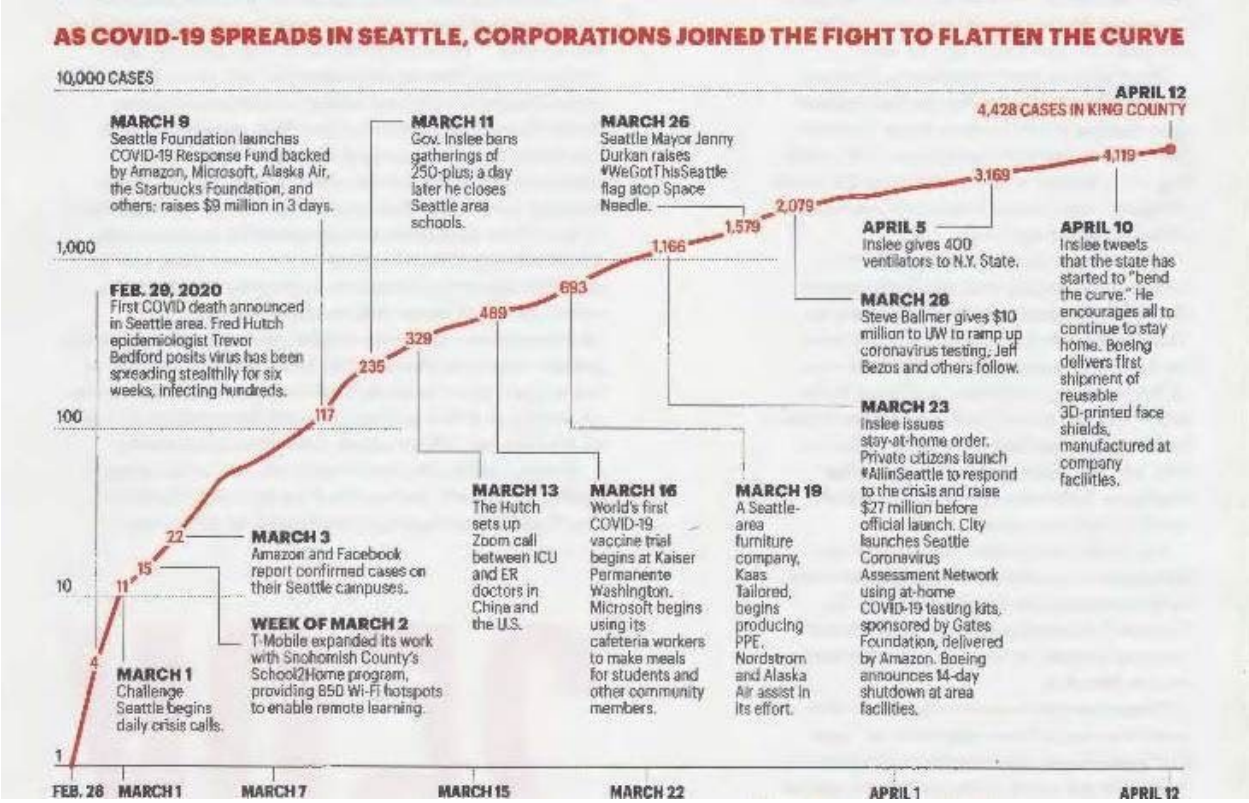
EN 605.662 Data Visualization

Project #1 – Visualization Critique

A Critique of the Visualization: COVID-19 Spreads in Seattle



I. Description of Visualization

The top chart posted in the website *WTF Visualizations* [1] was published in the May 2020 edition of Fortune magazine. Attempting to show how Seattle had been flattening their COVID-19 spreads curve, the line chart plots the cumulative numbers of positive cases vs its timeline from Feb. 28th, 2020 to Apr. 12th, 2020. This chart also provides related events info such as the governor's and local big companies' response.

II. Effective & Ineffective Properties

As we view this visualization, we can notice the y-axis: the number of confirmed positive.cases is not linear scaled, is logarithmic scaled instead. While netizens on *WTF Visualizations* criticize that the visual is using variable y-axis values trying to convince the reader the curve was flattening. Some of them even call it cheating and misleading. However, after some investigation and plotting, I discovered that logarithmic scaling actually is an effective way to plot if the number is expected to grow exponentially, as a viral outbreak does[2]. If we assume the number grows exponential with a fixed multiplicative factor, the chart with a logarithmic scale will plot a linear line. So the top chart displays the flattening curve with reducing slopes, it does visualize and show governors and corporations in Seattle did well in the fight to bend the curve. Hence, the use of a logarithmic Y is defensible in this case.

However, in my opinion, the chart still has a point to criticize. It is very informational to have specific events, acts and policies details that Seattle had done to flatten the curve. But some of the events are not strongly related to COVID-19's spread in Seattle, Corporations reactions, or the events to flatten the spread curve in Seattle, such as "Inslee gives 400 ventilators to N.Y. State", which I don't think had impacted the spread in Seattle.

III. How to Improve

As I mentioned above, in my perspective, the point that netizens criticize about actually is a good point of the chart, displaying the number of positives in a logarithmic scale. But I think it will be better that Fortune magazine could filter and choose carefully what pieces of news regarding the COVID-19 situation in Seattle to report. This will avoid the information overflow, and readers won't be drowned in it.

IV. Conclusion

In this project, I analyzed and criticized the chart displaying the trend of the number of COVID-19 positive cases with related events details. After some research, I discovered the chart does utilize a scientific and effective way to visualize exponentially growing numerical data. But have some unrelated and unnecessary information regarding the flattened curve.

V. References

1. *WTF Visualizations*
   https://viz.wtf/image/618566795056562176
2. Robbins, Naomi. *When Should I Use Logarithmic Scales in My Charts and Graphs?*
   https://www.forbes.com/sites/naomirobbins/2012/01/19/when-should-i-use-logarithmic-scales-in-my-charts-and-graphs/?sh=44ed57f05e67