MISTAKES AND MISLEADINGS IN MASS MEDIA

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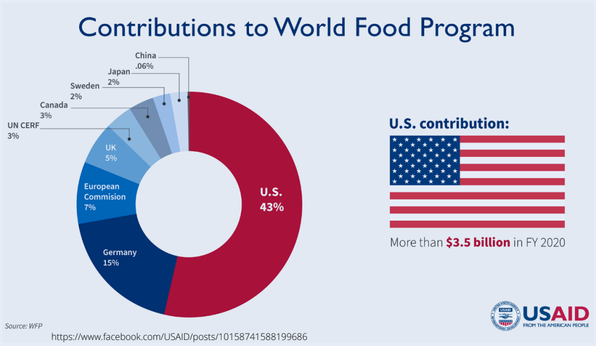
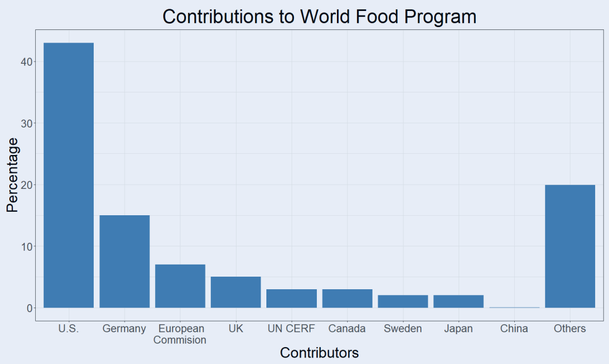
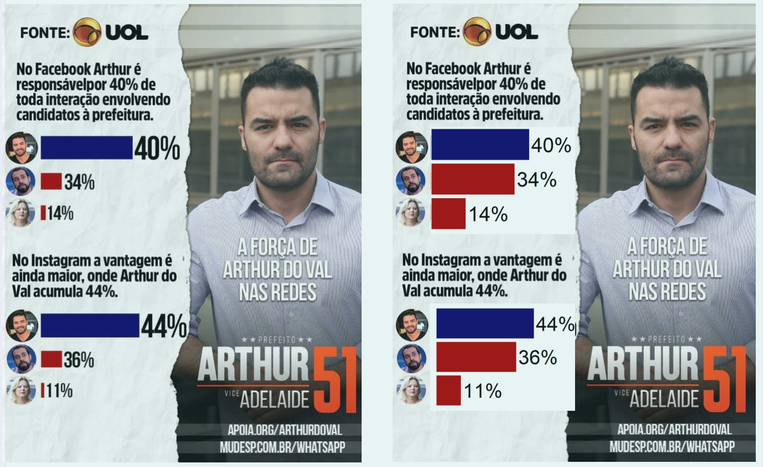
Manipulation of data concealment to highlight US + donutchart



https://www.facebook.com/USAID/posts/10158741588199686

Visualisation created by USAID is presenting **percentage contribution** to World Food Program by each county. However, it contains some sort of manipulation, which relies on **presenting not all of the data** in this **donut chart** and this causes **misleading** impression of USA contributing **more than half of the funds with 43% stake**. Not only the percent **does not sum up to 100** but also the type of visualisation used could be more appropriate. Our reform o visualisation consist in **adding missing percentage** as "Others" and using **bar plot**, which should enable recipients **easier** and more **precise** interpretation of the chart.



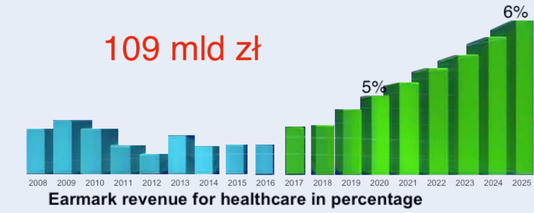


https://www.reddit.com/r/dataisugly/comments/j1fe93/mayor_candidate_in_brazil_post_claims_his/

Manipulation by concealing the true length of the bars

It is common, especially in politics, to use data visualisation for one's thesis. In this case, it is not possible to talk about the use of data visualization, but about an attempt to **manipulate with a bar chart**. On the left, there is an original leaflet advertising the politician, and on the right, the same leaflet with **corrected bar graphs**. You can see quite a big change in the **lengths** and even **widths** of the bars. By making the bars shorter, creator **tried** to **make reader believe**, that other candidates have no chances of winning.

Manipulation by concealing the true length of the bars and misleading title

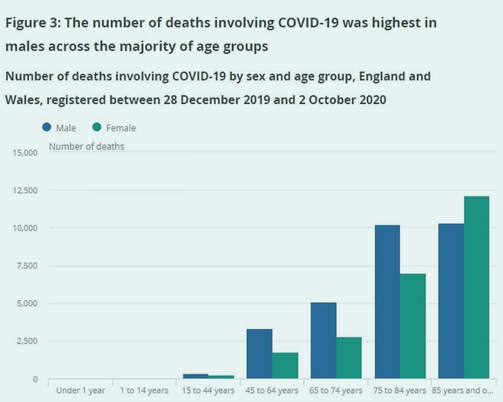


https://www.wykop.pl/link/5339419/w-wiadomosciach-znow-to-zrobili-niesamowita-manipulacja-slupkami/?fbclid=IwAR1q06n9vJ-lbVeq_TiY2ebG2Qfaochwsttx4ajF6KIE8UO6YHix2OWwa0

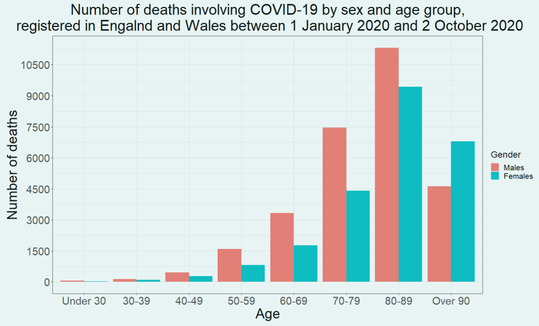
The original title suggests that bars show the **percentage of GDP** which should represent the **values**. The number 109 billion PLN proofs that assumption. However, the chart has rather reference to **treat percentage as a number**. That leads to another misconception of cuting the hight of bars.

The corrected chart has a **modified tittle** which is more suitable and has stronger connection to data. **Bars** are shown **next to the scale** and are **not cut** like in the example above. Moreover the usage of a **uniform color** makes it more objective.

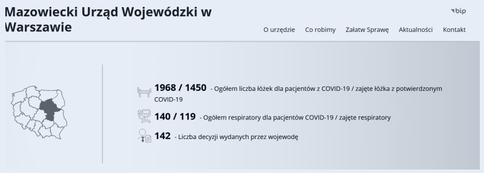
Unequal subgroups



https://www.dailymail.co.uk/news/article-8834187/Covid-19-deaths-continue-creep-321-victims-England-Wales-week.html



These chart show the number of deaths involving COVID-19 in England and Wales by sex and age group. In the chart above, **age groups** have been created in **unintuitive way**. Considering that age is in some sense continuous variable, **uneven subsets** might be **misleading** for recipients. Furthermore, it may be **harder** to **compare numbers**, when unequal numerosity of subsets should be taken into consideration. Reform was performed by setting **fixed length of 10** between breaks.



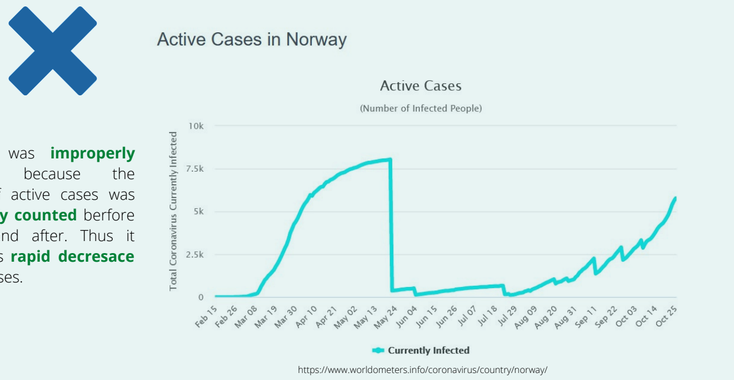
https://www.gov.pl/web/uw-mazowiecki

Usually, we **use fractions** to represent availability or usage of things, or simply say that '**10 computers out of 20 available**' are used. In this case, the author has **replaced the order** of the devices used with those available, so, despite the caption, it intuitively **seems that 1968 beds are used out of 1 450 available**. The same applies to respirators.

https://www.reddit.com/r/dataisugly/comments/jg0eqd/is_less_more_or_more_less_im_not_convinced/

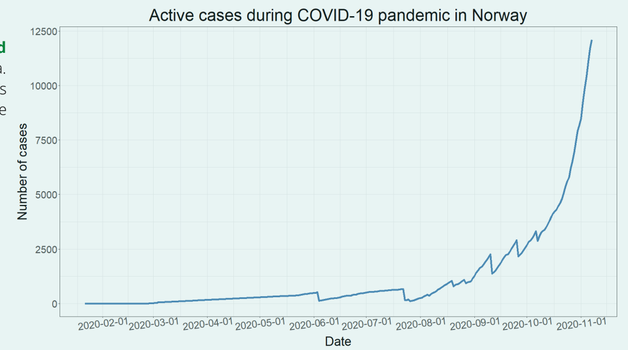
Visualisation should present something in an **open and transparent way**. In this advertisement, we intuitively know that the **left-hand** proposal is "**better**" because it has a **larger bar** and is also **colourful**. However, we do not know what this bar represents. Is it possible to present "betterness" with a bar? Or maybe, the bar represents "Quotes"? **It is unclear**.

Changing data measeaurment on chart



https://www.worldometers.info/coronavirus/country/norway/

The data was **improperly prepared** because the number of active cases was **differently counted** berfore May 24 and after. Thus it creates this **rapid decresace** in active cases.



The chart with **corected measurment** of data. Manage to find it this visualization depicts more **accurate distribution**.