

Junk charts, Intro to Data Science week 2

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First Junk Chart, Autism Prevalence rates

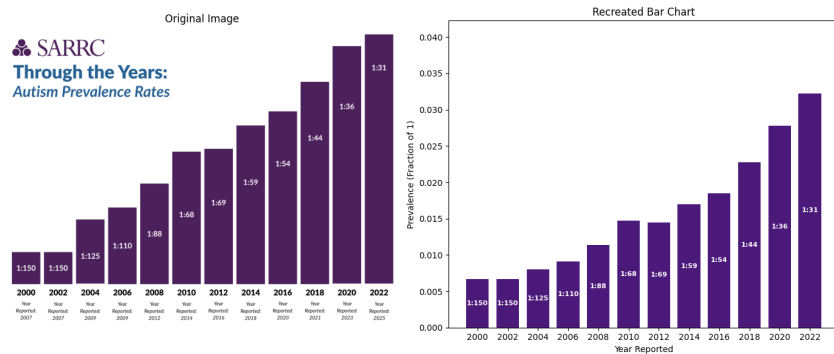


Figure 1: Junk chart and improved chart

The given chart is misleading due to two visual properties:

1. According to the first chart, the increase in prevalence rates doubled from 2002 to 2004. In reality there was a slight increase.
2. The chart visually implies that prevalence rate increased from 2010 to 2012, while in actuality the rate slightly lowered

Chart was improved by having the bar heights reflect the proportion accurately

Original chart in <https://autismcenter.org/wp-content/uploads/2025/04/History-of-Autism-2025.png>

Second Junk Chart, Proportion of cage-free eggs

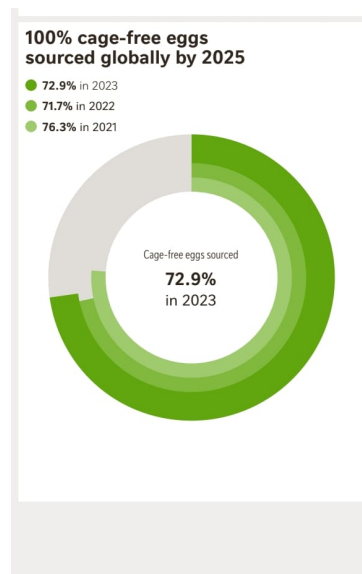


Figure 2: Junk chart

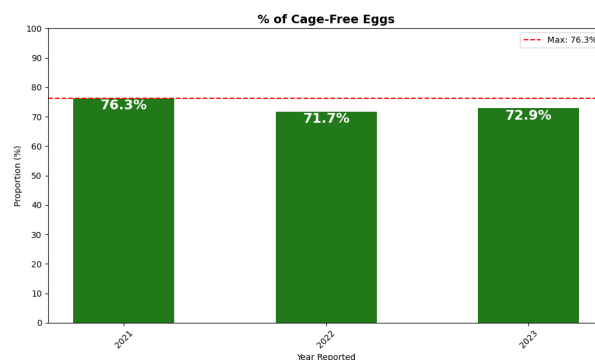


Figure 3: Improved chart

The pie chart is misleading. It can be read as situation improving, if read from left to right, or from outer to inner piechart. Also reporting change with piecharts is confusing way to present the data anyway.

In actuality the year 2021 had the best proportion.

The improved chart shows the bars in correct year order and adds a red dotted line to show the decrease.

Original chart in p.31 <https://www.nestle.com/sites/default/files/2024-02/creating-shared-value-sustainability-report-2023-en.pdf>

Third Junk Chart, Home ownership and Marriage

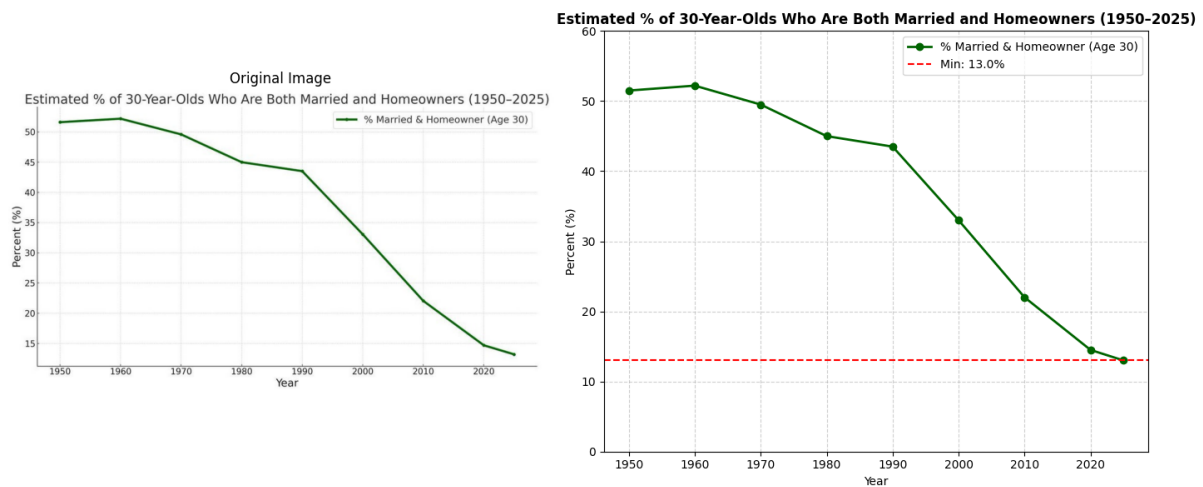


Figure 4: Both charts

The given estimate of married home owners is misleading due to the fact that bar is limited to 10 percent. When the whole range is shown, the change is less dramatic. The improved chart shows the bottom range and draws a red line to emphasize that the current situation is not 0. The values in the original chart were estimated by chatGpt-4o.

Original chart in https://www.reddit.com/r/charts/comments/1mhhbac/estimated_percent_of_30_year_old_who_are_both/