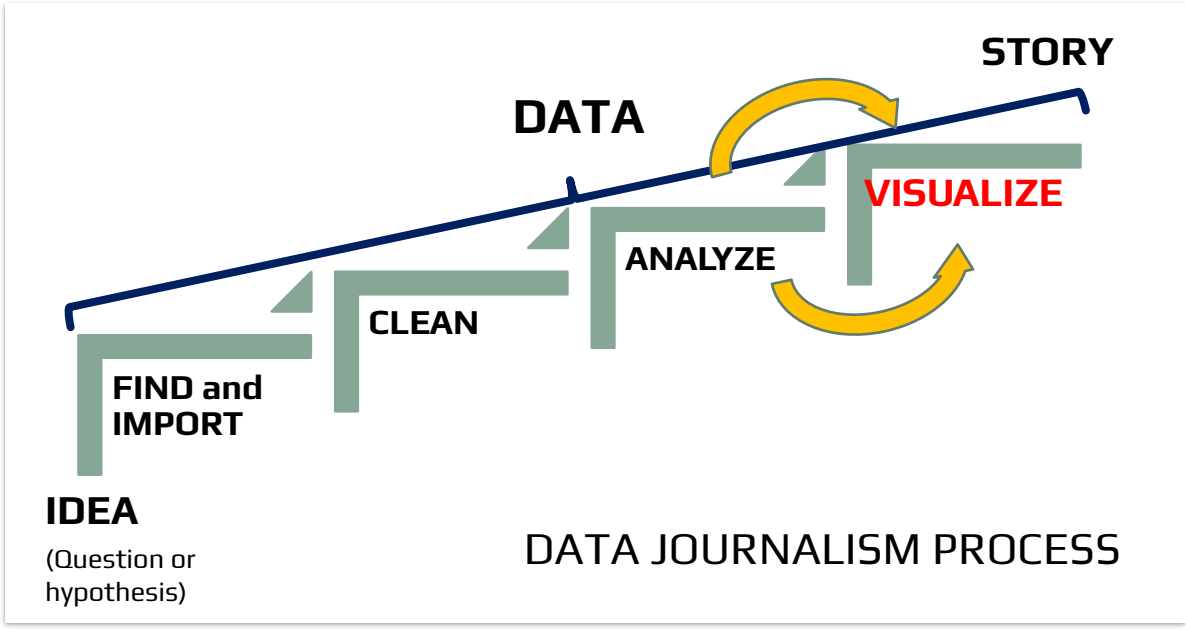
Visualizing data

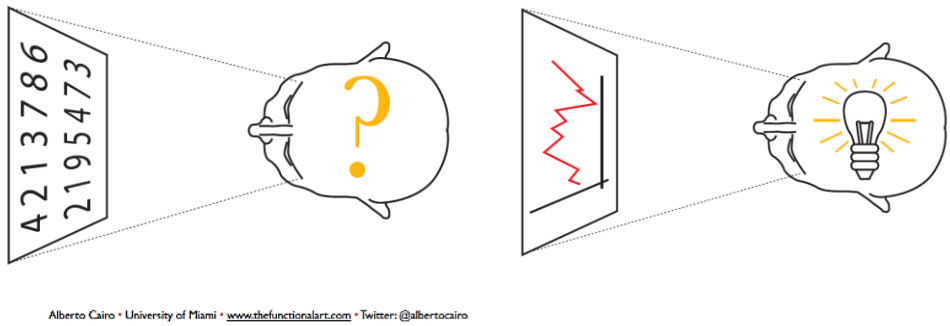
Yvonne T. Chua | University of the Philippines

1



2

Making sense of data



3

data visualization (or data viz)

visual display of data and information intended to enable **analysis**, **communication** or **understanding**

4

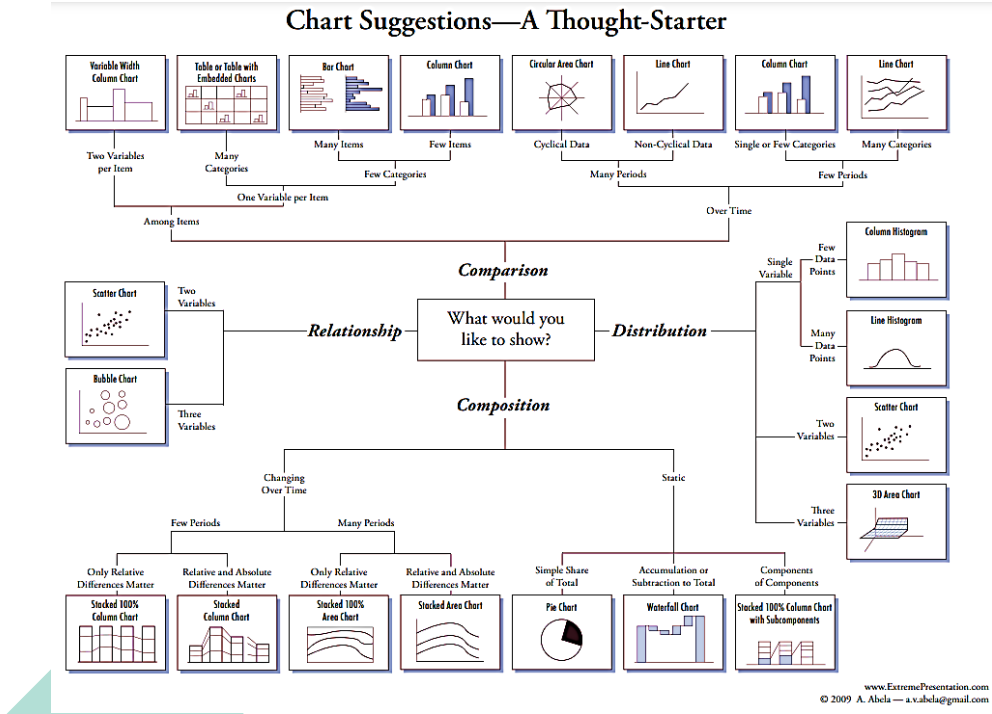


Chart Suggestions—A Thought-Starter
Variable Width Column Chart
Table or Table with Embedded Charts
Bar Chart
Column Chart
Circular Area Chart
Line Chart
Column Chart
Line Chart
Two Variables per Item
Many Categories
Many Items
Few Items
Few Categories
Cyclical Data
Non-Cyclical Data
Single or Few Categories
Many Categories
One Variable per Item
Many Periods
Few Periods
Among Items
Over Time
Comparison
Scatter Chart
Two Variables
Relationship
What would you like to show?
Distribution
Bubble Chart
Three Variables
Composition
Single Variable
Few Data Points
Many Data Points
Column Histogram
Line Histogram
Scatter Chart
Two Variables
3D Area Chart
Three Variables
Changing Over Time
Static
Few Periods
Many Periods
Only Relative Differences Matter
Relative and Absolute Differences Matter
Only Relative Differences Matter
Relative and Absolute Differences Matter
Simple Share of Total
Accumulation or Subtraction to Total
Components of Components
Stacked 100% Column Chart
Stacked Column Chart
Stacked 100% Area Chart
Stacked Area Chart
Pie Chart
Waterfall Chart
Stacked 100% Column Chart with Subcomponents
www.ExtremePresentation.com
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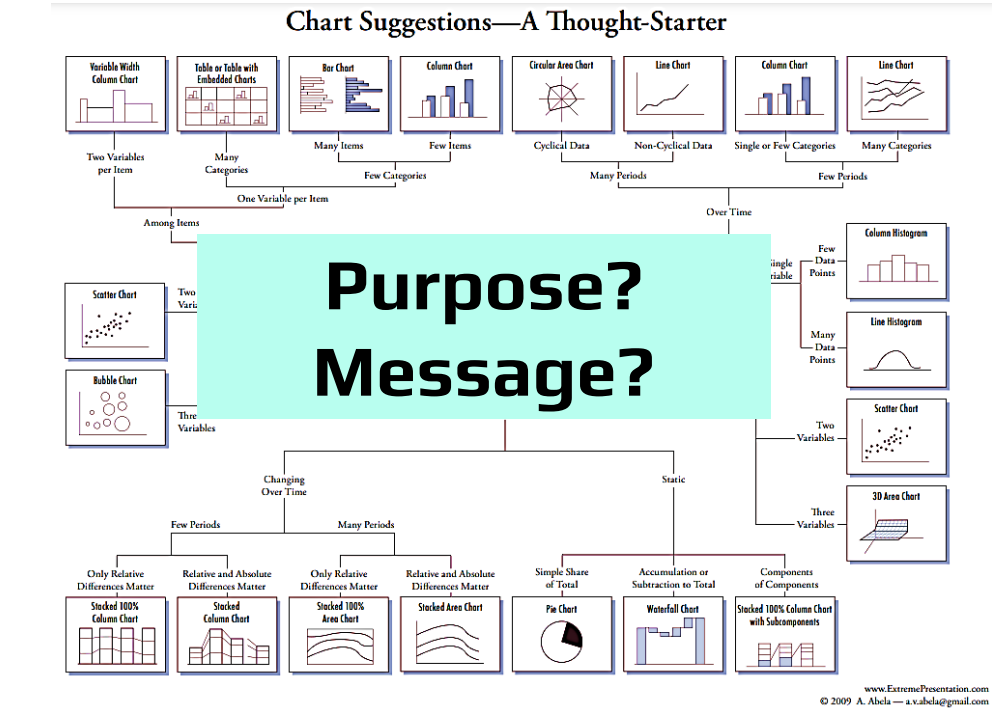
Chart Suggestions—A Thought-Starter
Purpose?
Message?
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Visualizing data with Excel & Google Sheets

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Overview and key findings of the 2023 Digital News Report

Nic Newman

14th June 2023

This year's report comes against the backdrop of a global cost-of-living crisis, a continuing war in the heart of Europe, and further climate instability across the world. In this context, a strong supply of accurate, well-funded, independent journalism remains critical, but in many of the countries covered in our survey, we find these conditions challenged by low levels of trust, declining engagement, and an uncertain business environment.

8

Correlation Coefficient (r)	Description (Rough Guideline)
+1.0	Perfect positive + association
+0.8 to 1.0	Very strong + association
+0.6 to 0.8	Strong + association
+0.4 to 0.6	Moderate + association
+0.2 to 0.4	Weak + association
0.0 to +0.2	Very weak + or no association
0.0 to -0.2	Very weak - or no association
-0.2 to – 0.4	Weak - association
-0.4 to -0.6	Moderate - association
-0.6 to -0.8	Strong - association
-0.8 to -1.0	Very strong - association
-1.0	Perfect negative association

Correlation coefficient

9

Visualizing data with Datawrapper

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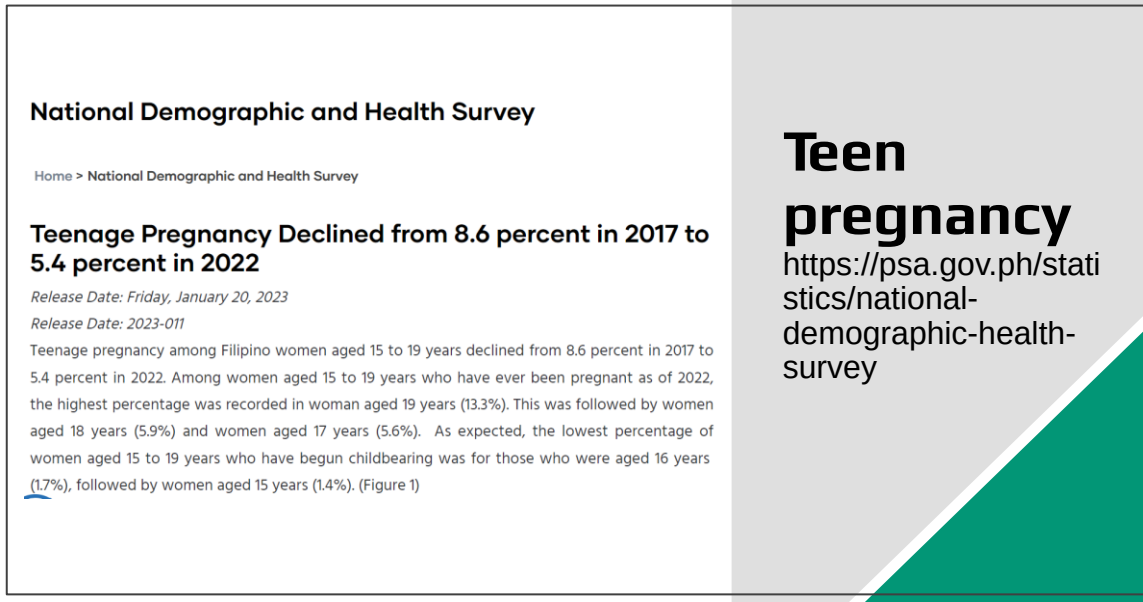


National Demographic and Health Survey

Home > National Demographic and Health Survey

Teenage Pregnancy Declined from 8.6 percent in 2017 to 5.4 percent in 2022

Release Date: Friday, January 20, 2023

Release Date: 2023-011

Teenage pregnancy among Filipino women aged 15 to 19 years declined from 8.6 percent in 2017 to 5.4 percent in 2022. Among women aged 15 to 19 years who have ever been pregnant as of 2022, the highest percentage was recorded in woman aged 19 years (13.3%). This was followed by women aged 18 years (5.9%) and women aged 17 years (5.6%). As expected, the lowest percentage of women aged 15 to 19 years who have begun childbearing was for those who were aged 16 years (1.7%), followed by women aged 15 years (1.4%). (Figure 1)

Teen pregnancy

https://psa.gov.ph/statistics/national-demographic-health-survey

11

Good data viz

12

‘Data looks better NAKED’

—Joey Cherdarchuk

‘DATA-INK is the non-erasable core of the graphic’

—Edward Tufte

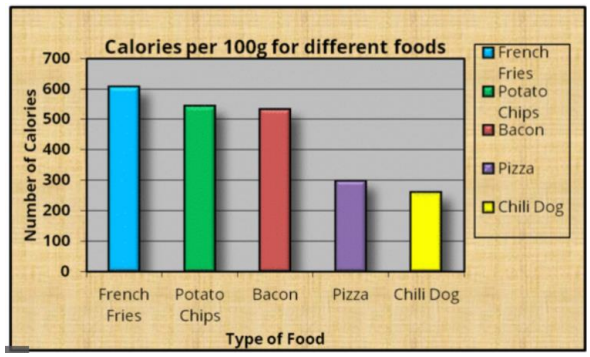
13

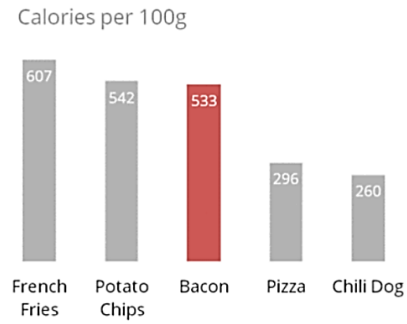
Remove
to improve
(the **data-ink** ratio)

Created by Darkhorse Analytics www.darkhorseanalytics.com

https://www.darkhorseanalytics.com/blog/data-looks-better-naked

14





15

https://www.darkhorseanalytics.com/blog/salvaging-the-pie

https://www.darkhorseanalytics.com/blog/clear-off-the-table

https://www.darkhorseanalytics.com/blog/data-looks-better-naked-maps-edition

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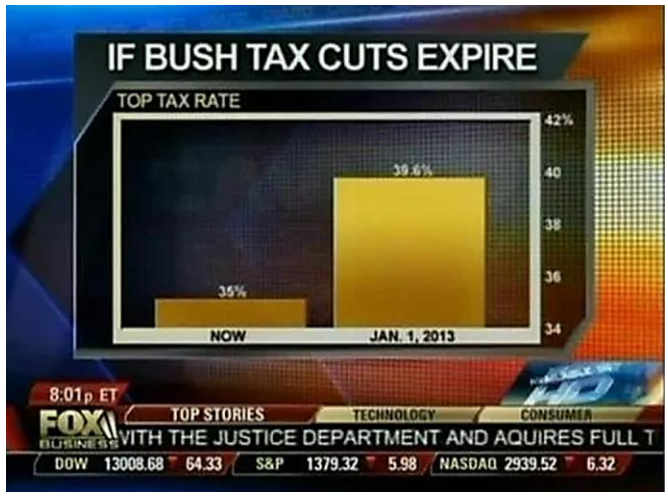
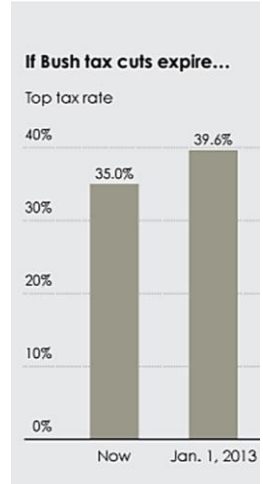
Effect of truncating or ‘baseline failure’





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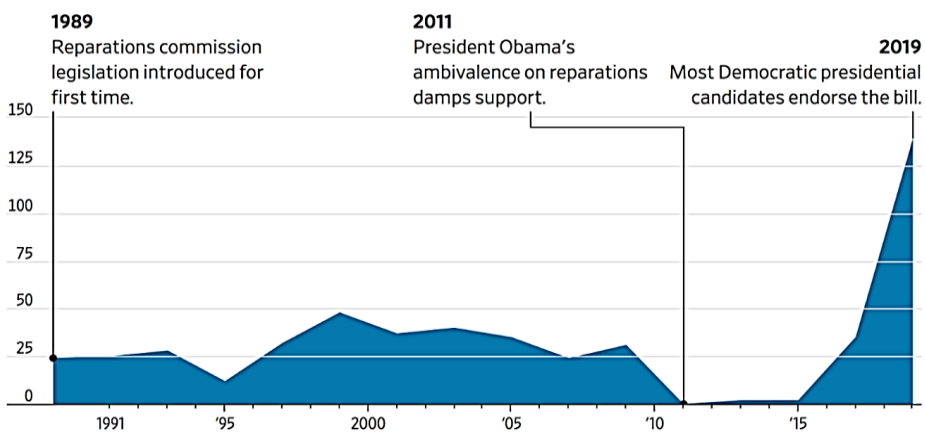
Slavery Reparations

Support is rising in Congress for legislation creating a commission studying reparations to Black Americans for slavery and discrimination, raising prospects for House passage this year.

Number of co-sponsors for House reparations legislation



* As of July 21

Source: Congress.gov

Wall Street Journal

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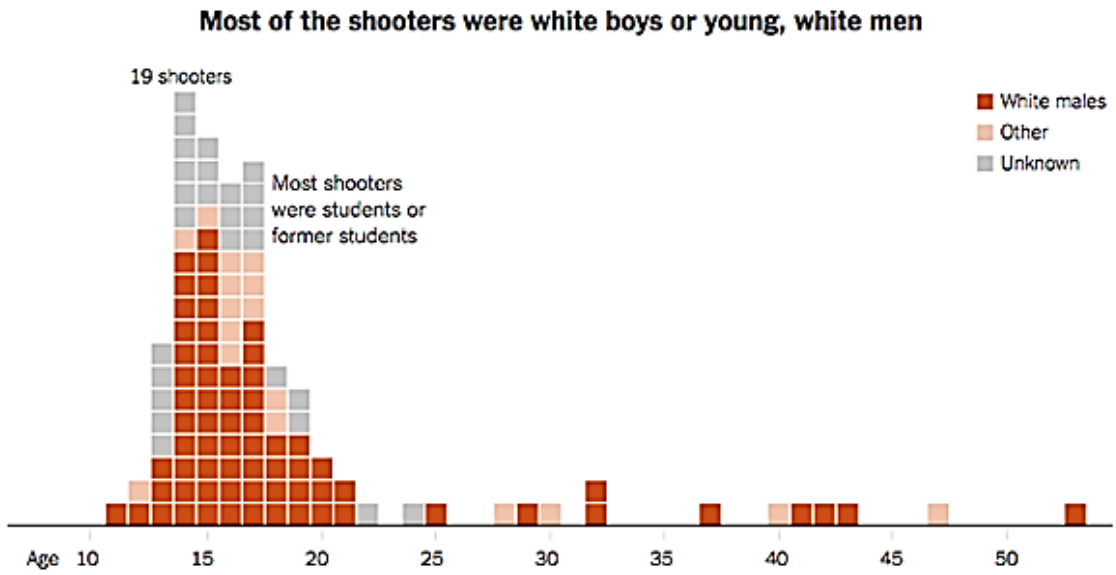
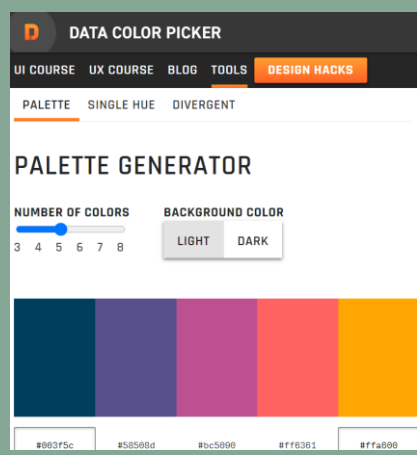
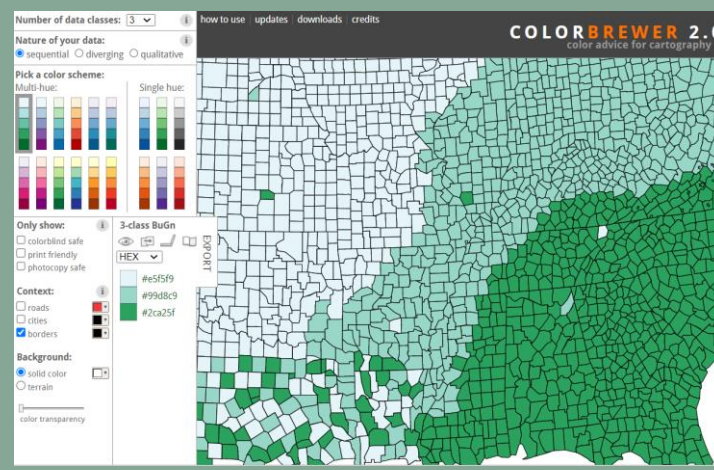


New York Times

19



https://www.learnui.design/tools/data-color-picker.html



https://colorbrewer2.org/#type=sequential&scheme=BuGn&n=3

20

‘Learn the rules like a pro, so you can break them like an artist’

-- attributed to Pablo Picasso

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