History of Charts

1786

LINE, AREA & BAR CHART

William Playfair

1873

HEATMAP

Toussaint Loua

1885

PARALLEL COORDINATE

Philbert Maurice d'Ocagne

1891

HISTOGRAM

Karl Pearson

1971

BIPLOTS

Kuno Ruben Gabriel

1977

BOXPLOT

John Tukey

1981

CLEVELAND DOT PLOT

William S Cleveland

1983

SLOPE GRAPH

Edward Tufte

2005

WORD CLOUD

Jonathon Feinberg

History of Charts

Line, Area Bar Chart, Pie Chart: William Playfair

- In 1786, William Playfair invented the line, area and bar chart. In 1801, he also invented the pie chart.
- He was Scottish and had a vast amount of careers including accountant, economist, translater and silversmith.
- He was a secret agent for Great Britain during the French Revolutionary Wars in 1793. He spearheaded a plan to make counterfeit assignats (French currency) and then distribute these assignats to France. This eventually caused turmoil with the French government as their currency became worthless.
- Playfair helped create one of the first modern statistical charts. However, these charts were seen as childish and would not become popular until later. This may be due to the technological difficulties when trying to produce these charts in academic papers.

Heatmap

- In 1873, Toussaint Loua used a heatmap to better see the social statistics of districts in Paris.
- In 1991, the software developer Cormac Kinney trademarked the word heatmap but the trademark was not renewed.

Parallel Coordinate Plot

- In 1885, Philbert Maurice d'Ocagne is thought to have invented parallel cooridinates. Similarly, Henry Gannetts of 1880 and Henry Gannets of 1898 introduced other methods using parallel cooridinates. However, the visualization techniques we use today by Alfred Inselberg in 1959.
- Alfred Inselberg was an American-Israeli computer scientist. He worked at IBM where he came up with the mathematical model of the ear.

Histogram: Karl Pearson

- Karl Pearson introduced the term histogram in 1891.
- Albert Einsten read Pearson's book The Grammar of Science in his study group. Many of his ideas presented in this book would influence Einstein.
- Pearson also created the chi-squared test and the correlation coefficient. He is also of having one of the earliest uses of the mode.
- Pearson was also a eugenicist.

Biplots: K Ruben Gabriel

- Kuno Ruben Gabriel invented the biplot in 1971.
- He also worked on statistical meterology.

Boxplot: John Tukey

- In 1977, Tukey invented the boxplot. In addition, he is credited with inventing the multiple comparison test, Tukey's honest significance test, the five number summary and encouraging the use of exploratory data analysis.
- Tukey coined the terms software and bit.
- He worked at Bell Labs. He also worked with Samuel S Wilks at the math department in Princeton. (Wilks contributed to the development of the Shapiro-Wilks test.)

Cleveland Dot Plot: William S Cleveland

- William S Cleveland invented the Cleveland dot plot in 1981.
- He also worked at Bell Labs

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Slope Graph: Edward Tufte

- In 1983, in his book The Visual Display of Quantitative Information Edward Tufte explained what a slope graph is, but the term itself was only coined around 2011.
- In 2010, he was appointed by President Obama to be in the American Recovery and Reinvestment Act's Recovery Independent Advisory Panel so that there would be transparency in the use of recovery-related funds to provide relief for families in the Great Recession.
- As a professor in statistics at Yale, he has done much work on how to present information graphics. He criticizes the use of Microsoft Powerpoint due to its simple charts and inadequate default settings and templates.

Word Cloud: Jonathon Feinberg

- When he was working on a social bookmarking app at IBM, Jonathon Feinberg invented the word cloud in 2005.
- In 2008, he also created Wordle.

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