A Brief History of Data Visualization (and the role of libraries and librarians)

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Journal of eScience Librarianship
putting the pieces together: theory and practice

Commentary

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Abstract

Graphics, illustrations, charts, and tables have accompanied scientific works for as long as people have been reporting findings and publishing papers. Once the purview of researchers and graphic illustrators, today finds libraries and librarians involved in many aspects of data including access, management, preservation, and visualization.

This illustrated timeline traces the history of data visualization from generations of hand-drawn images to today's exploding arena of data production and visualization tools, highlighting the efforts and opportunities for information professionals and introducing this special issue of *Journal of eScience Librarianship* devoted to data visualization.

About the Author

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A Brief History of Data Visualization

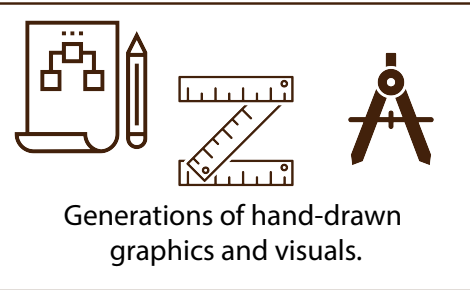*(and the role of libraries and librarians)*
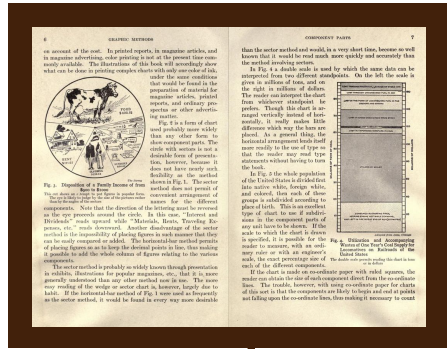
1914

Graphic Methods for Presenting Facts

by Willard C. Brinton

The principles for a grammar of graphic presentation are so simple that a remarkably small number of rules would be sufficient to give a universal language.
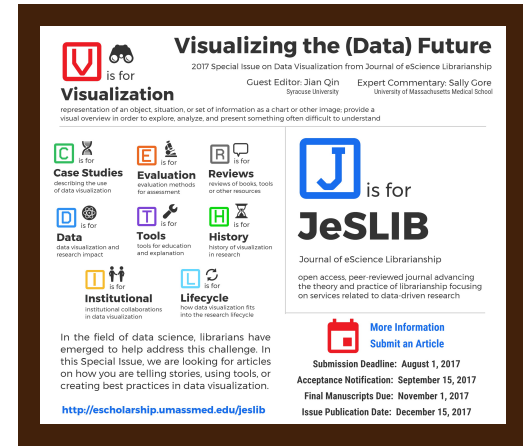
Willard C. Brinton

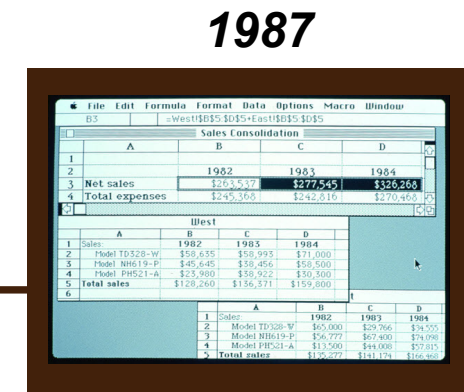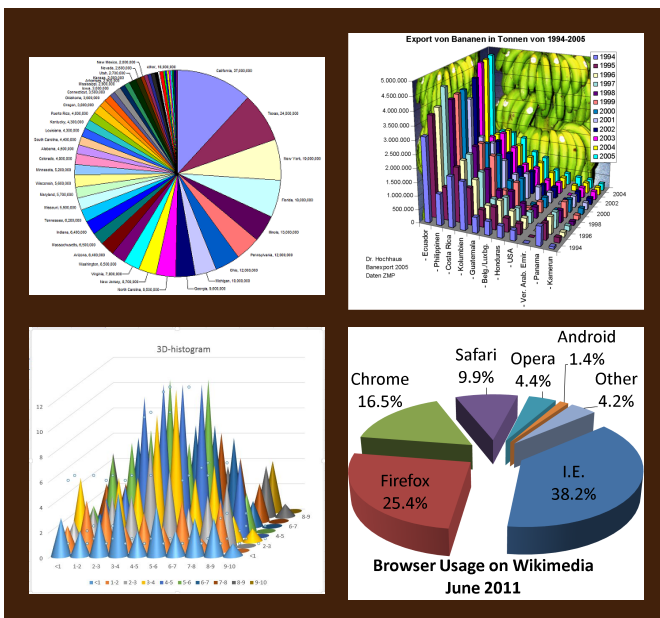Generations of hand-drawn graphics and visuals.

1977

The personal computer arrives.

2017

A special issue of the **Journal of eScience Librarianship** is published, highlighting the future of librarians, librarianship, and data visualization.
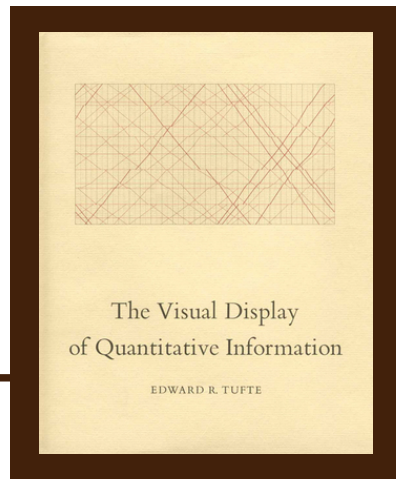
1987

Microsoft Excel: Spreadsheet software for everyone.

2000 'til today

Rapid expansion of data generating, data analysis, data sequencing, and data visualizing tools. Access, management, and preservation of data becomes a key concern and disciplines emerge to address these different aspects related to data including **libraries and librarians.**

1990 and beyond

Browser Usage on Wikimedia June 2011
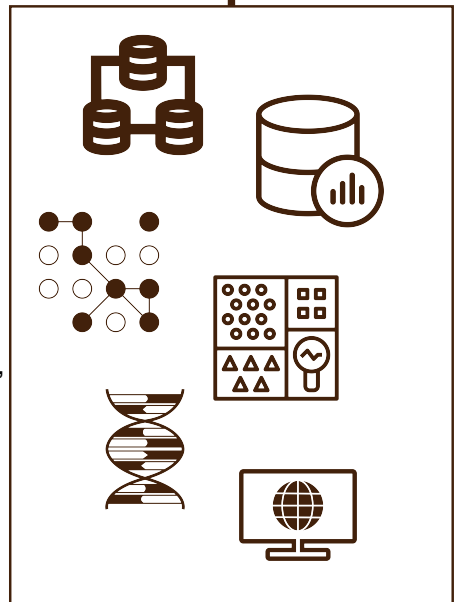
The explosion of "CHARTJUNK."

Having the means to create graphs with a computer doesn't guarantee that we'll do it effectively any more than having word processing software makes us great writers.

Stephen Few

1983, 1990, 1997...

The Visual Display of Quantitative Information

EDWARD R. TUFTE

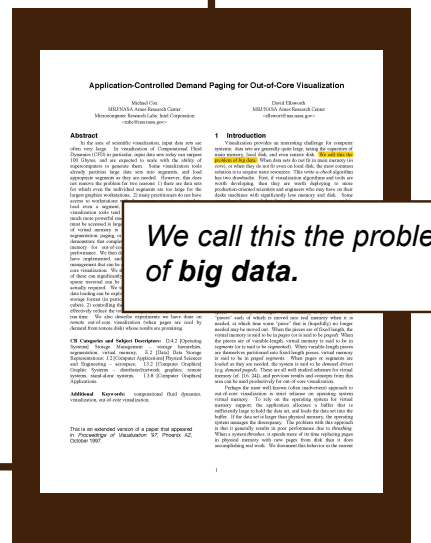*It is not how much empty space there is, but rather how it is used. It is not how much information there is, but rather how effectively it is arranged.*

Edward Tufte

1997

Application-Controlled Demand Paging for Out-of-Core Visualization

by Michael Cox & David Ellsworth

*We call this the problem of **big data.***

Disclosure

The author reports no conflict of interest.

References

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Cox, Michael and David Ellsworth. 1997. *Application-controlled demand paging for out-of-core visualization (NASA Report NAS-97-010)*. Moffett Field, CA: NASA Ames Research Center. https://www.nas.nasa.gov/publications/reports/1997/1997.html

Few, Stephen. 2012. *Show Me the Numbers: Designing Tables and Graphs to Enlighten*. Burlingame, CA: Analytics Press; Second edition.

Tufte, Edward R. 1984. *The Visual Display of Quantitative Information*. Cheshire, CT: Graphics Press.