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

Sally A. Gore University of Massachusetts Medical School

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Journal of eScience Librarianship

putting the pieces together: theory and practice

### Commentary

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

Sally A. Gore

University of Massachusetts Medical School, Worcester, MA, USA

#### 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

Sally A. Gore, MS, MS LIS, is the Research Evaluation Analyst for the University of Massachusetts Center for Clinical and Translational Science (CCTS) with responsibilities in development, implementation and analysis of evaluation related to the programs and projects of the CCTS.

**Correspondence:** Sally A. Gore: sally.gore@umassmed.edu **Keywords:** data visualization, history **Rights and Permissions:** Copyright Gore © 2018



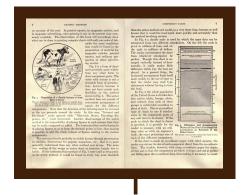
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## **A Brief History of Data Visualization**

(and the role of libraries and librarians)

## 2017

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



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

## 1914

Graphic Methods for Presenting Facts by Willard C. Brinton

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11 . 1 . 1 . 1

Generations of hand-drawn

graphics and visuals.

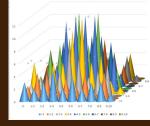
1977

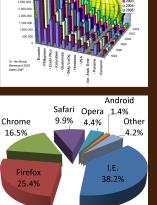


The personal computer arrives.

## 2000 'til todav

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.





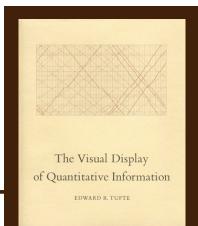
The explosion of "CHARTJUNK."

1987

Microsoft Excel: Spreadsheet software for everyone.

0

## 1983, 1990, 1997...



Application-Controlled Demand Paging for Out-of-Core Visualization by Michael Cox & David Ellsworth

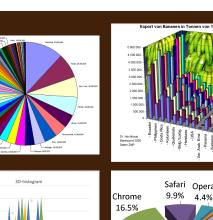
It is not how much empty space there is, but rather how it is used. It is not how much information there is, but rather how effectively it is arranged.

Edward Tufte

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.

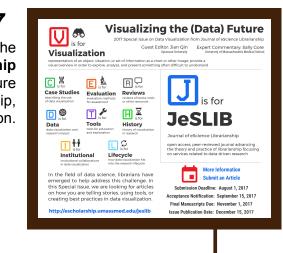
Browser Usage on Wikimedia June 2011

Stephen Few



1990 and beyond

#### JeSLIB 2018; 7(1): e1135 doi:10.7191/jeslib.2018.1135



## $\circ \bullet \circ \circ$ 00 $\bullet \circ \bullet$ 25 1997 David Ellawork MRUNASA Araos Research Caraer vellaworiil no.men govo We call this the problem of big data.

Additional Keywords: computer visualization and all core visualization

This is an extended version of a paper that appeared in Proceedings of Masakaston S7, Phoenix AZ, October 1997.

#### Disclosure

The author reports no conflict of interest.

#### References

Brinton, Willard Cope. 1914. *Graphic Methods for Presenting Facts*. New York, NY: The Engineering Magazine Company.

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.