

09:30 – 12:30, Friday 17 October 2014



Photo credit: Masters of Media

*This workshop is co-organized by the Reuters Institute of Journalism, the Department of Politics and International Relations, and the Alliance for Useful Evidence.*

# MAKING RESEARCH USEFUL VIA VISUALIZATION: THE CURRENT CHALLENGES AND BEST PRACTICES OF POLICY-ORIENTED AND POLITICAL VISUALISATION

### **What is data visualisation?**

‘Data Visualisation’ refers to the visual representation of statistical and other types of numeric and non-numeric data through the use of pictures and graphics. It is used to transform (often) large quantities of data into images that can more clearly illustrate patterns, gaps, schemes, regularities, and connections.

One of the basic foundations of data visualisation is the understanding that types of graphs should follow from both, the type of data used and the theory/goal in place.

Although graphics are generally associated with bars, lines, and numbers, data visualisation can take many forms. Calendars, maps, timelines, mind-maps, and illustration diagrams are just a few types of graphics that we may use on a daily basis.

Among static graphs for statistical display, we consider the most common types to be: bar charts, histograms, line graphs, and, pie charts.

Technological developments and the rise of online media as a popular form of information distribution have also led to an

increase in the use of interactive graphics as a form of data presentation, which are generally based on one (or more) of the graphic forms described above, but allow for reader interactivity (e.g., show change of variable values overtime).

Finally, infographics are a static form of data presentation, which generally uses more than one type of graphic, as well as illustrations, to tell an encompassing story about a given topic.

# USEFUL BIBLIOGRAPHY

## SOCIAL SCIENCES

Badie, Bertrand, Dirk Berg-Schlosser, Leonardo Morlino. 2011. "Data Visualization" in *International Encyclopedia of Political Science*, Vol. 1, Thousand Oaks, CA: Sage Publications, pp. 537-544.

Harris, Robert. 2000. *Information Graphics: A Comprehensive Illustrated Reference*, Oxford, UK and New York, NY: Oxford University Press.

Kirk, Andy. 2012. *Data Visualisation: A Successful Design Process*, Birmingham, UK: Packt Publishing.

Tufte, Edward R. 2006. *Beautiful Evidence*, Cheshire, CT: Graphics Press.

---. 1997. *Visual Explanations: Images and Quantities, Evidence and Narrative*, Cheshire, CT: Graphics Press.

---. 1995. *Envisioning Information*, Cheshire, CT: Graphics Press.

---. 1983. *The Visual Display of Quantitative Information*. Cheshire, CT: Graphics Press.



## PUBLIC POLICY

Cairo, Alberto. 2012. *The Functional Art*, Berkeley, CA: New Riders.

Few, Stephen. 2009. *Now You See It* Oakland, CA: Analytics Press.

---. 2006. *Information Dashboard Design*, Sebastopol, CA: O'Reilly.

Gray, Jonathan, Lucy Chamber, and Liliana Bounegru. 2012. *The Data Journalism Handbook*, Sebastopol, CA: O'Reilly.

LeGates, Richard. 2005. *Think Globally, Act Regionally*. New York, NY: ESRI Press.

Wainer, Howard. 2011. *Picturing the Uncertain World*, Princeton, NJ: Princeton University Press.

## ART & INFORMATION DESIGN

McCandless, David. 2009. *Information is Beautiful*, London, UK: Collins.

Meirelles, Isabel. 2013. *Design for Information*, Beverly, MA: Rockport Publishers. 2013.

Rendgen, Sandra, Julius Wiedemann, eds. 2012. *Information Graphics*, Cologne, Germany: Taschen GmbH.

Segaran, Toby, ed. 2009. *Beautiful Data: The Stories Behind Elegant Data Solutions*, Sebastopol, CA: O'Reilly.

Steele, Julie, and Noah Illinsky, eds. 2010. *Beautiful Visualization*, Sebastopol, CA: O'Reilly.

# RELEVANT ACADEMIC BLOGS

The Functional Art - <http://www.thefunctionalart.com>

Visualising Data - <http://visualisingdata.com/>

EagerEyes - <http://eagereyes.org>

Flowing Data - <http://flowingdata.com/>

Storytelling with Data - <http://www.storytellingwithdata.com/>

Michael Babwahsingh - <http://michaelbabwahsingh.com/>

Perceptual Edge - <http://www.perceptualedge.com/blog/>

Telling Information - <http://lulupinney.co.uk>

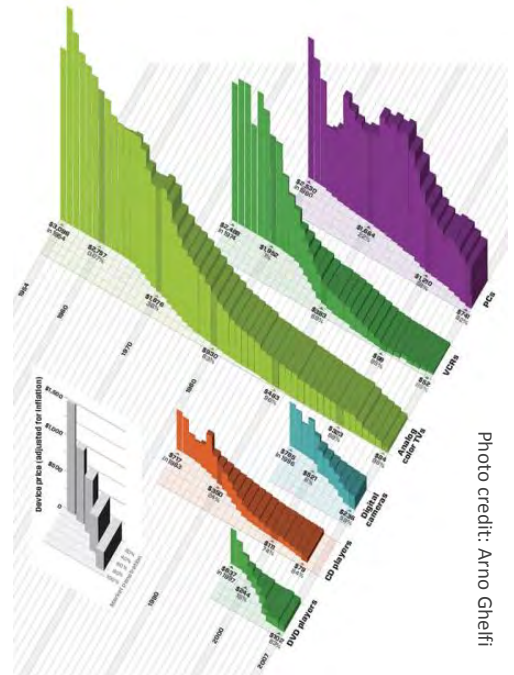


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## AT OXFORD

“Things to do with Data” lunchtime series. Wednesdays at 12:30, from weeks 2 to 7 at IT Services.

<http://blogs.it.ox.ac.uk/acit-rs-team/advice/rdmcourses/datatalks>

Oxford Information Geographies

<http://geography.oii.ox.ac.uk/>

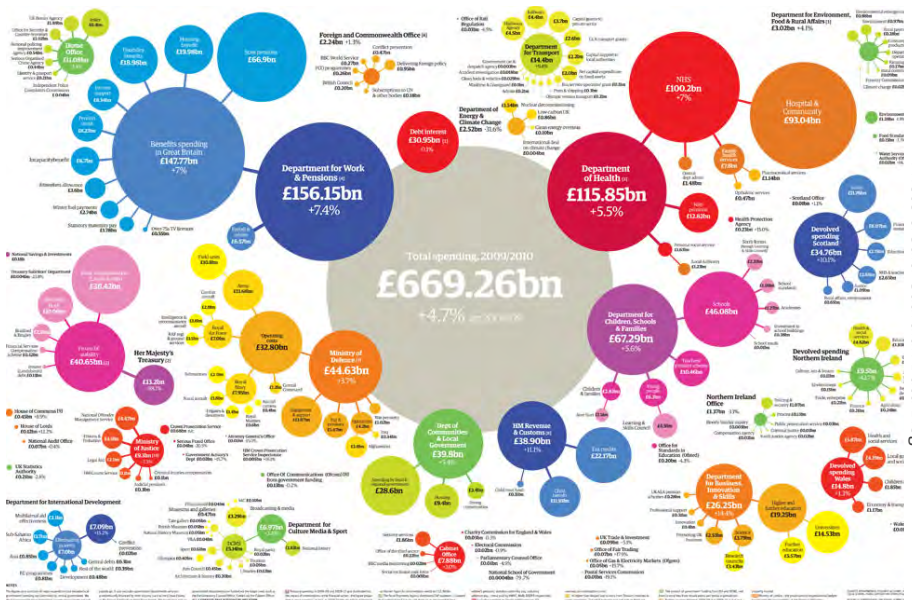


Photo credit: Guardian Data Blog

## DATA VISUALIZATION IN MEDIA

Guardian - <http://www.theguardian.com/news/datablog>

The Telegraph – <https://www.telegraph.co.uk/news/data/>

BBC - <http://data-art.net>

New York Times - <https://twitter.com/nytgraphics>

Washington Post - <http://postgraphics.tumblr.com>



## FREE TOOLS

R (coding required) - <http://www.r-project.org/>

Gap Minder - <http://www.gapminder.org/>

Visualize Free - <http://visualizefree.com/index.jsp>

Gephi - <https://gephi.org/>

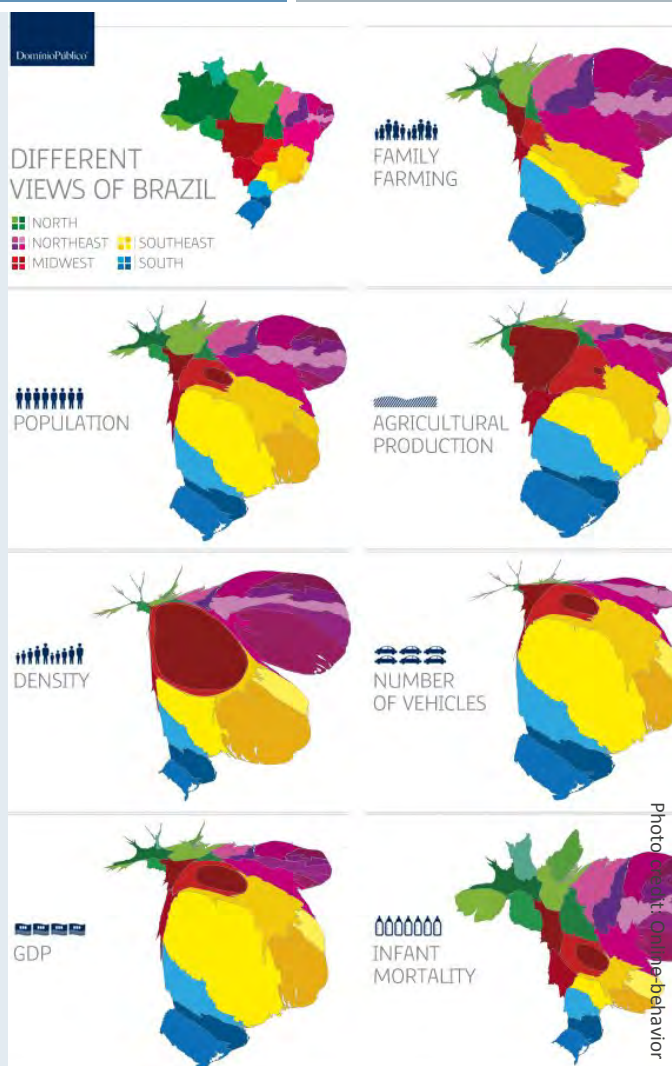
Easel.ly - <http://easel.ly>

Venngage - <https://venngage.com/>

Modest Maps - <http://modestmaps.com/>

Instant Atlas - <http://www.instantatlas.com/>

Dipity - <http://www.dipity.com/>



## PAID TOOLS

STATA (coding required) - <http://www.stata.com/>

SPSS - <https://www.ibm.com/analytics/spss-statistics-software>

Matlab (coding required) - <https://www.mathworks.com/products/matlab.html>

NVivo - <https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home>

ZingChart - <http://www.zingchart.com/>

iChart - <http://www.icharts.net/>

Piktochart - <http://piktochart.com/>

Digital Reasoning - <https://digitalreasoning.com/technology/>