

Data Visualization

My background

- Geography and Cartography
- Statistical analysis
- Political Science

- It has serious consequences for the course
 - Visualization of spatial data will be included
 - The basic statistics will be necessary
 - It may seem to be a bit complicated
 - Issue of „design“ will be almost neglected
 - I am not familiar with up to date journalist practices

Overview of course

- Several blocs:
 - Data preparation
 - Univariate visualization
 - Visualization of relationship
 - Visualization of time data
 - Visualization of spatial data
 - Visualization of text data
 - Presentation of visualizations
- ASSIGNEMENTS!!! (8 for 60 points)
- Final assignement

Final assignement

- Goal is to provide to vizualize some (important) topic
- Preferably using somethnig from content of course
- It is important for final grade
- 40 points (total is 100)

Used software

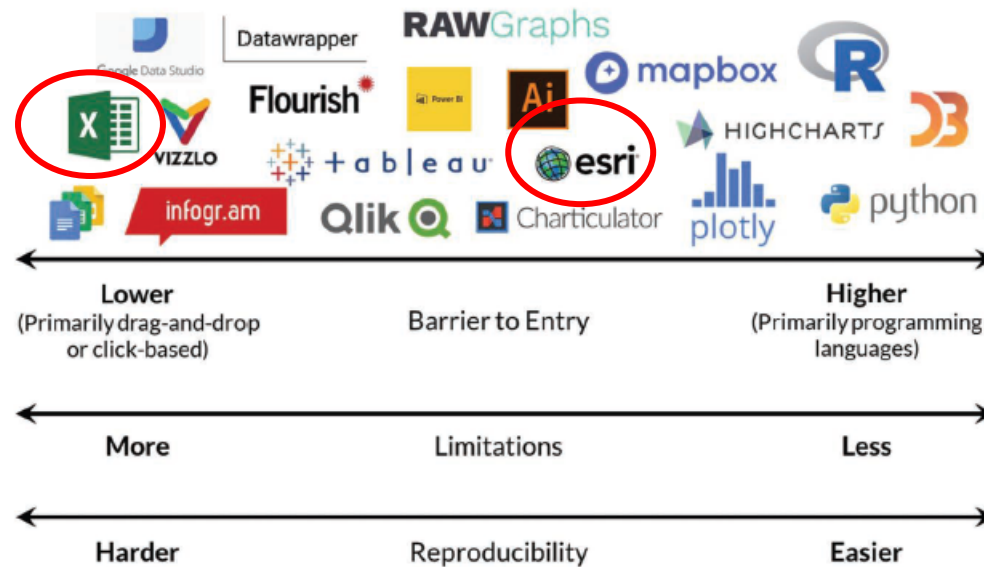


FIGURE 3.1 Source: Based on image from Jonathan Schwabish, *Better Data Visualizations: A Guide for Scholars, Researchers, and Wonks*.

Introduction

- Visualization as academic discipline
 - Theories
 - Methods
- Visualization as daily practise
 - How to make a chart from some data

Visualization as communication tool

- Way how to communicate
 - Who is talking?
 - Who is listening?
 - What is the message?
 - Issue
 - Time
 - Space
 - Kind of data
 - What is a channel?
 - Internet
 - Static
 - Dynamic
 - Paper

How visualization works?

- Data > „**some work**“ > picture
- Something important is missing!
 - STORY TO TELL!!!
- Visual abstraction
 - Selection of „telling“ characteristic of data
- Comparison
 - To give a meaning to certain value










Data

- Information
- In form of table
- Metadata: information about data

- Row = case

- Column = variable

- Name
- Order
- Number

Position	Club	Played	Won	Drawn	Lost	GF	GA	GD	Points	Form
1	 Manchester City	6	6	0	0	16	3	13	18	W W W W W
2	 Liverpool	6	5	1	0	15	5	10	16	W W W W W
3	 Brighton And Hove Albion	6	5	0	1	18	8	10	15	W L W W W
4	 Tottenham Hotspur	6	4	2	0	15	7	8	14	W W W W D
5	 Arsenal	6	4	2	0	11	6	5	14	W D W W D
6	 Aston Villa	6	4	0	2	12	10	2	12	W W L W W
7	 West Ham United	6	3	1	2	11	10	1	10	W W W L L
8	 Newcastle United	6	3	0	3	16	7	9	9	L L L W W
9	 Manchester United	6	3	0	3	7	10	-3	9	L W L L W

Data

- Individual
 - Data are measured on given level
 - Citizens in opinion polls
 - MPs
 - Books, movies, ...
- Aggregated
 - Census
 - Registers
- It is not characteristics of unit
 - Year of establishing of municipality (individual)
 - Unemployment in municipality (aggregate)

Most important typology

- Sample
 - Selection from population
 - Surveys
 - There is some **uncertainty!**
- Population
 - All cases are covered
 - Selection is not „random“

Data sources

- General data about world
- UN: <https://unstats.un.org/unsd/demographic-social/products/>
- UNESCO: <https://uis.unesco.org/>
- ILO: <https://ilostat.ilo.org/data/>
- FAO: <https://www.fao.org/faostat/en/#home>
- WTO: <https://stats.wto.org/>
- WB: <https://databank.worldbank.org/>
- IMF: <https://www.imf.org/en/Data>
- WHO: <https://www.who.int/data>
- OECD: <https://stats.oecd.org/>

- Useful links: ourworldindata.org, www.worldometers.info, www.statista.com

Politics

- Freedomhouse: <https://freedomhouse.org/report/freedom-world>
 - Democracy index
- ParlGov: <https://www.parlgov.org/data-info/>
 - Political parties – mostly Europe
- Idea: <https://www.idea.int/data-tools>
 - Various issues
- CHES: <https://www.chesdata.eu/>
 - Party positions in Europe and Latin America
- Electoral manifesto: <https://manifesto-project.wzb.eu/datasets>

Electoral data

- Electoral results:
 - <https://electiondataarchive.org/data-and-documentation/>
 - http://psephos.adam-carr.net/indexes/index_a.shtml
- Integrity: <https://www.electoralintegrityproject.com/data-1>
- Comparative surveys:
 - <https://cses.org/data-download/download-data-documentation/election-studies/>
 - <https://u.osu.edu/cnep/surveys/surveys-through-2012/>
- Studies from various countries:
 - <https://search.gesis.org/>

Barometer

- Europe, Africa, Latin America, Asia
- Comparative data
- Various quality, timing and scope
- Europe: <https://www.gesis.org/en/eurobarometer-data-service/home>
- Africa: <https://www.afrobarometer.org/data/data-sets/>
- Asia: <https://www.asianbarometer.org/datar?page=d10>
- Latin America: <https://www.latinobarometro.org/latContents.jsp>

Comparative Projects

- International Social Survey Programme
 - Role of Government, Social Networks and Inequality, Family, Gender Roles, Work, Religion, Environment, National Identity, Leisure Time, Health
 - <https://issp.org/data-download/by-year/>
- World Values Survey
 - Wide set of countries, various issues
 - <https://www.worldvaluessurvey.org/WVSContents.jsp>
 - + European Values Survey
- European Social Study
 - <https://ess-search.nsd.no/>

Public Opinion Survey Data

- World

- <https://ukdataservice.ac.uk/help/other-data-providers/data-archives/other-worldwide-data-archives/>
- <https://www.pewresearch.org/tools-and-resources/>

- Europe

- <https://www.CESSDA.eu/About/Consortium>
- <https://datacatalogue.CESSDA.eu/>

- Czech

- <http://nesstar.soc.cas.cz/webview/>

Parliaments

- IPU: <https://data.ipu.org/content/parline-global-data-national-parliaments>
- EP: <https://data.europarl.europa.eu/en/home>
- Czech: <https://www.psp.cz/sqw/hp.sqw?k=1300>

Media

- Media monitor (only Czech)

<https://ezdroje.muni.cz/prehled/hledej.php?dotaz=newton+media&lang=cs>

Searching on google

- " " – exact combination of words
- OR - logical or
- "data about media" OR "data about culture" – pages containing first or second or both statements
- And - Logical and
- "data about media" AND "data about culture" – only pages containing both statements
- - Minus "data about media" -culture – only pages containing "data about media" without mentioning culture
- * asteriks " data about * " – data about anything.
- () – gives priority to certain word
- "data about culture" 2016..2020 – two dots represents number line (2016, 2017, 2018, 2019, 2020), works in same sense as OR
- filetype:xlsx (other options pdf, doc, xls, docx)
- site:unstats.un.org - searching on given page site:unstats.un.org



WE ARE DROWNING
IN INFORMATION
BUT STARVED OF
KNOWLEDGE