

Data Visualisation: thinking about design using simple tools

Professor Corri Black

Corri.black@abdn.ac.uk



What is Data Visualisation?

Just by looking at a table of numbers we are pretty good at picking out simple patterns but...it there are too many numbers or the relationships are complex then it becomes difficult.

Data visualisation can be about trying to:

- Represent data in a simple and meaningful way
- Engaging an audience to think and interact with data

Two Schools



Tufte

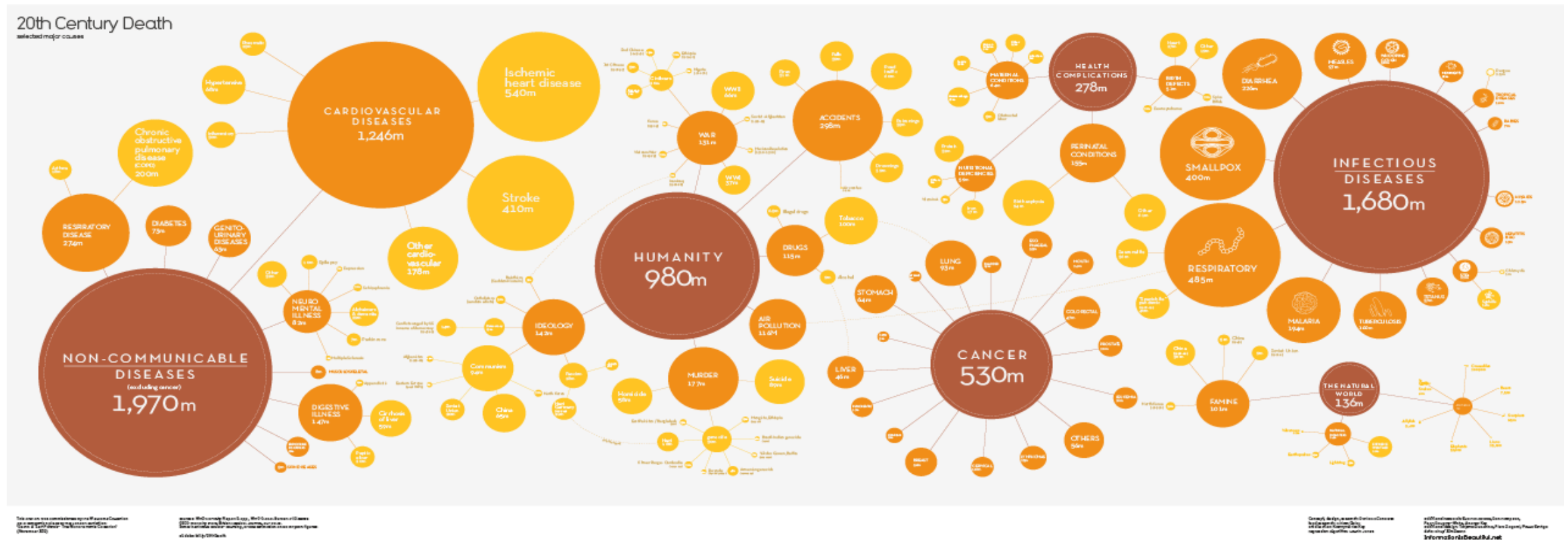


McCandless

Edward Tufte: traditional statistics based approach he focused on clear and accurate data representation. (Hans Roesling's video exemplifies this approach)

David McCandless: a Data Journalist and graphic designer, has a focus on teasing out stories from data and making them visually appealing (the second of your videos)

Know it when we see it



<http://www.informationisbeautiful.net/visualizations/20th-century-death/>



What is Data Visualisation?



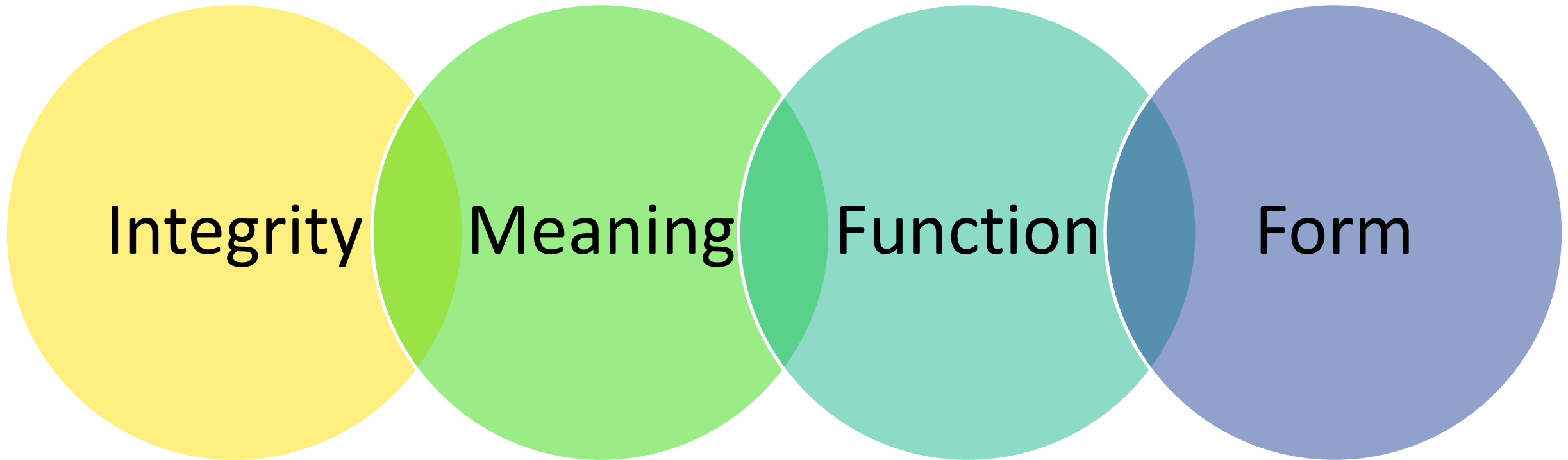
Data

Chart

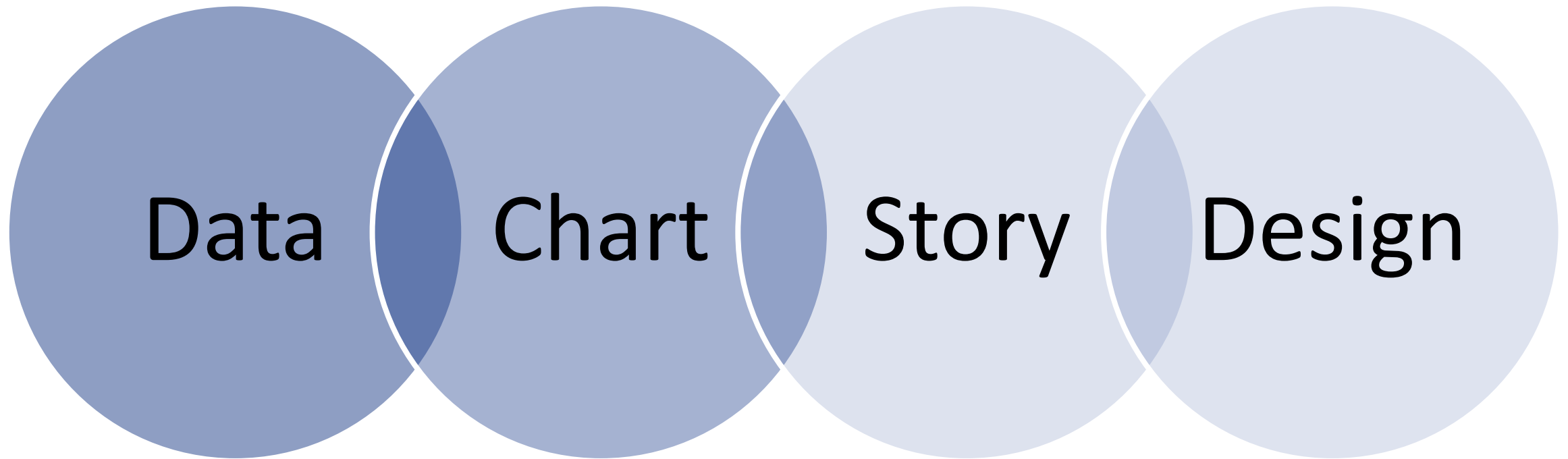
Story

Design

What is Data Visualisation?

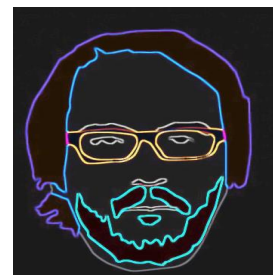


Now...



At the moment you will probably have focused on your data and the analysis of it to understand it.
You may have created some tables and graphs

You may have thought less about the story you want to tell or how you can most effectively convey the story



Evidence

The author of Beautiful Evidence believes that if you notice the chart first and not the data - then you've failed



LOVES

Information

His book Information is Beautiful is an attempt to apply graphic design principles to data journalism.



ROLE

Practitioner

He writes blogs and produces infographics for a range of publications, including the Guardian and Wired.



DISPLAY

Present all data to show top-level trends

Selective use of data to guide reader to key story



Never cheat data



ACCURACY

**Tweak visuals if it
makes the story clearer**

**Design should be minimal
or invisible**



DESIGN

**Design should be used to
emphasise the story**

First loyalty is to data



PRIORITY

First loyalty is to audience

A picture is worth a 1000 words

Creating simple and accurate representations to describe data

- ‘How do I best represent the data’
- ‘What does the data show’

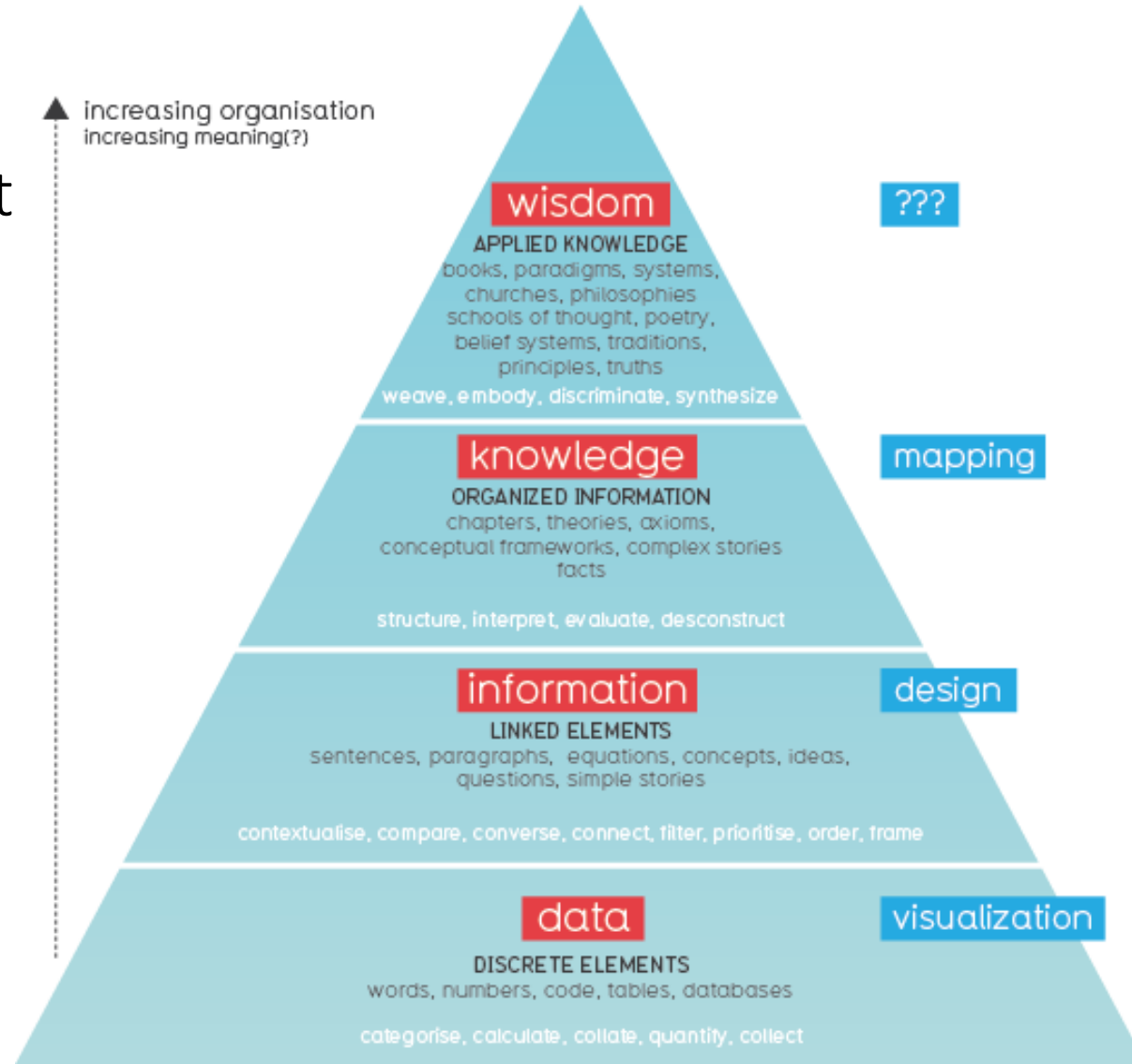
Creating engaging visual displays of the data

- ‘How do I enable my audience to engage with the data’
- ‘What is this telling me, do I agree, how can I find out more?’

Hierarchy Of Visual Understanding?

Just playing. Something in this?

- Food for thought



David McCandless // v 0.1 // work in progress

InformationIsBeautiful.net

*Understand and
applying the principles
of data visualisation*

- *Principles*
- *Styles*
- *Critical thinking*