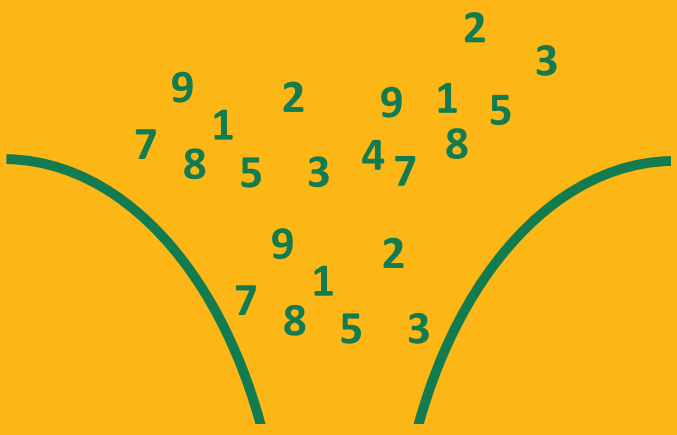
PRESENTING DATA

How to Communicate Your Message Effectively

Ed Swires-Hennessy



Population

Country	Millions
Germany	81.5
United Kingdom	58.5
France	58.0
Denmark	5.2
Luxembourg	0.4
Total	203.7

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Introduction

Data are everywhere! Data provide the vital evidence to develop modern society and there has been a boom in the number of people and organisations collecting, handling and trying to interpret data. However, many do not recognise the issues of presenting data. The result is that there is often poor public understanding of the data and statistics presented.

It is most important that the handling, interpretation and communication of data and the statistics derived from them are made as easy as possible for the wide and diverse audience of people who try to understand and use statistics and data.

The importance of making presentation as clear as possible has been magnified since the Internet has made data and statistics even more widely available to audiences for whom they might not originally have been intended. There is no hiding the fact that the data and statistical skills of the majority of the population are weak. Therefore, the more help that is given through good presentation, the better chance that the message will be understood. It must not be assumed that, without the help of clear presentation, the audience will be able quickly to grasp the message, meaning or relevance of the data or statistics.

The aim of this book is to look at numerical information through the eye of the audience or user. It builds on the fundamentals of numeracy that are taught in schools to all and examines cases where the interpretation would be helped by better presentation.

The subject of this book rarely appears on any university or college course and hence the principles of effective presentation are virtually unknown. This results in ineffectively and poorly presented numerical information which can mislead the audiences and could lead to incorrect decisions being made.

Current society is shaped by decisions based on evidence driven by data. At the least, misinformation gathered from ineffectively and poorly presented numerical information can lead to the main and fundamental message of the information being lost with time wasted in seeking to identify what the presenter is trying to communicate. Wrong decisions taken on poor or poorly presented data could be very costly.

Conversely, efficiently and well-presented numerical information can be assimilated quickly and accurately leading to a better and correct understanding of the message

from the information. Linked to decisions, such information will form the justification and rationale.

Throughout the book, four basic principles are applied – all beginning with the letter C.

- Correct. The assumption is that all of the data being presented has been checked by the producer before dissemination. Examples are given where this is not the case.
- Clear. The presentation should always have a specific aim and the resulting presentation of information should meet the aim – whether in tables, charts or text.
- Concise. The producer is often tempted to present more information than is actually necessary. This may be the result of pride that a great deal of effort has been expended in the collection of detailed data and thus should be shown. Detail here could either be more numbers than necessary to communicate the message or the inclusion of more digits in numbers than required to distinguish differences. However, such presentation can often obfuscate the basic message.
- Consistent. Presented information should be consistent in units shown when asking a user to compare data (don't ask a user to compare a number rounded to thousands with a number rounded to millions). Further, when abbreviating words, the same abbreviation should be used throughout an organisation – not just within a report. One example quoted in Chapter 4 shows the formatting of financial year in three different ways in the same paragraph! Consistency also should be seen in the presentation of data: if a country's national statistical institute uses a full stop for the thousands separator and a comma for the decimal separator, this should be the case for all of the information presented by that office. From a table of seven indicators for one country[i], the following was extracted:

Indicators	
The rate of change in the Consumer Price Index (CPI)	−0,9 %
The rate of change in the index of industrial production (vol)	5.1%
The rate of change in the index of industrial production (vol)	−1.9%

The first figure used a comma for the decimal separator and the other two a full stop. Further, the first figure had a space after the number and before the '%' symbol. The table was mixed numbers and percentage data so the percentage symbols

[i] http://www.bhas.ba/?lang=en on 30 September 2013.