



Managing Misconceptions ... and Misinformation

Elena Lengthorn highlights the value of a factfulness approach.

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The Covid 19 experience has highlighted the need for us all to have better skills in engaging with facts, statistics and the visual representation of them.

There have been many graphs comparing the state of C-19 in different countries. This [short video explaining a Covid 19 graph](#) features four things we need to know. A useful stimulus?

We are seeking articles with ideas for classroom use about the role of statistics in understanding what is going on in the world. Please get in touch. Elena makes a start here

A remedy in Factfulness ...

According to Hans Rosling, the founder of Gapminder (the Swedish fact-tank fighting global ignorance), Factfulness is a relaxing habit for critical thinking that helps you maintain a fact-based worldview. Hans wrote, in his posthumous legacy 'Factfulness', that this approach teaches us how to recognise and avoid the most common ways information gets misinterpreted. In an age of readily-accessible, super-abundant information, is it any wonder that misconceptions and misinformation arise?

Some people suggest that we have entered a terrifying post-truth era, one of calculated misinformation, whereas Harari (2018), in his 'Lessons for the 21st Century' book, invites us to remember that propaganda and disinformation are not new. He describes homo sapiens as a post-truth species who have conquered the planet in part due to our ability to spread fictions. Harari equates entire religions with fake news and describes Joseph Goebbels as something of a 'Nazi propaganda maestro' sharing Goebbels alleged approach of 'a lie told once remains a lie, but a lie told one thousand times becomes the truth.' Daniel Kahneman (2011), concurs, suggesting that "A reliable way of making people believe in falsehoods is frequent repetition, because familiarity is not easily distinguished from truth." As epistemic bubbles form on our social media feeds and echo chambers lead to distrust: polarization increases in our communities.

Environmental misinformation was highlighted decades ago by Rachel Carson, in her seminal text 'Silent Spring' (1962), where she describes the undocumented claims of fire ants in the U.S.A damaging crops and plants being used to justify a mighty propaganda campaign in support of broad insecticide spraying. It led to a deadly and costly campaign of chemical eradication that ultimately led to a massacre of wildlife, poultry, livestock and even the death of household pets. In our time of climate emergency, Sir Mark Rylance, who last year quit the Royal Shakespeare Company in protest over fossil fuel sponsorship, depicted our 'culture of (environmental) misinformation' at the September 2020 Extinction Rebellion Writers Rebel gathering in London (Cain & Murray, 2020). Whilst, Zadie Smith, an English novelist also involved in the campaign, described the corrupt politics and economic exploitation that are occurring in the face of climate breakdown. A habit of Factfulness, using critical tools to navigate misinformation, seems more important than ever!

The **Factfulness** book outlines ten cognitive traps that our brains commonly fall into, cognitive instincts that were survival tools for our hunter gatherer ancestors, but that lead modern day homo-sapiens to jump to conclusions and find non-existent dangers. **Gapminder** have demonstrated, through their global ignorance surveys on wealth, health and poverty, that an over-dramatic world view is widespread. An awareness of these traps, and efforts to temper these cognitive instincts, allow us to question the world more critically.



The first, the Gap Instinct, makes us divide things into two groups. To view the world often as a series of opposites e.g. rich and poor, good and bad, when in reality there exists a broad spectrum with most people and places some-where in between the extremes.

The second, the Negativity Instinct, traps us into taking more notice of the bad than the good.

Whilst the third, the Straight Line Instinct, encourages us to assume that trends will continue in the same direction. Rosling debunked the mega-misconception (described as such because it has such a huge impact on how people misunderstand the world), derived from this instinct, of our population 'just growing' by highlighting how our rate of population increase is continuing to slow.

We all fall into these traps. We need to take action to prevent sinking into them, to control our instincts and an over dramatic world view.

Didau (2018), in his Manifesto for closing the learning gap, reminds us that the generic skill of critical thinking varies from pupil to pupil and that we all get better at things that we practice. Rosling describes a daily practice of Factfulness as equally important as a healthy diet and exercise and the **Gapminder on-line tools** offer an excellent starting point.

He reminds us that we need to ..

"Be humble about the extent of your expertise. Be curious about new information that doesn't fit - and information from other fields."

Gapminder offers:

- ♦ [Student stimulus to explore these instincts](#)
- ♦ [A Teacher guide to factfulness with classroom ideas.](#)

5 **TO CONTROL THE SIZE INSTINCT**
Check the proportions



Is it big in comparison?

6 **TO CONTROL THE GENERALIZATION INSTINCT**
Question your categories



How are they different?

7 **TO CONTROL THE DESTINY INSTINCT**
Notice slow changes



Isn't it always changing slowly?

8 **TO CONTROL THE SINGLE PERSPECTIVE INSTINCT**
Use multiple tools



What other solutions exist?

9 **TO CONTROL THE BLAME INSTINCT**
Resist pointing finger



What system made this possible?

10 **TO CONTROL THE URGENCY INSTINCT**
Take small steps



Can we make decisions as we go?

