(Dis) trusting Statistics: A Mini-Guide

1. What is the source of the statistics?

What person or organization is providing this information? What are its qualifications and area of expertise? What are likely to be its biases, if any? How readily can you check the source – and possibly its sources in turn – for their qualifications, reputation, and consistency with other statistics offered by respected organizations and journals?

2. What is actually being claimed?

Are words and terms clear, and used in a way consistent with definitions in the relevant field? Is the knowledge claim a factual one about the present or past, or is it a hypothetical prediction about the future? Does it report on a single study or a meta-study? If it reports a survey, how large and representative is the sample population? (Become familiar with the following: different kinds of averages; difference between correlation and causation; the terms "statistically significant", "p-value", "p-hacking", "background noise".)

Vampires don't like sunshine. Can you tell?

3. How are the statistics framed in context?

Are the statistics used as supporting evidence for a knowledge claim or argument? (And how valid is that argument?) Are the numbers being used – *instead* or *as well* – to impress in a more emotional way? Do accompanying images or language clarify the significance of the statistics – and/or possibly heighten an emotional impact? Does it seem that other important statistical information has been omitted?

4. What is your own emotional response to the statistics?

Do you notice in your *own* reaction to the statistics any inclination to accept or reject the statistics *even before* you've examined them as above? Do you detect in yourself any signs of *confirmation bias* – the inclination to believe whatever harmonizes with what you already think, or what you wish were true, regardless of the quality of the information?