

Internet as evidence

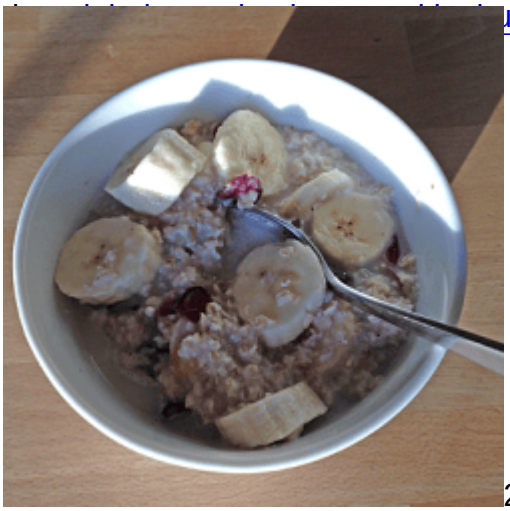
Description

default watermark

â??The Internet is a petri dish for the growth and spread of misinformationâ?• warns Anne Mintz.

People search the Internet for health advice, to refute what they get told at school, to find out whatâ??s â??trending,â?• and to seek out support for their particular point of view. In other words people will use the Internet as a source of ***evidence***. Hereâ??s how.

1. Thereâ??s a lot online thatâ??s already gathered and processed from various sources, eg evidence [illegible] human activity. You can easily search for such â??secondary



2. You can use Internet search to gather â??primaryâ?• evidence. If you google â??health benefits of shortbreadâ?• you get nothing of consequence. â??Health benefits of porridgeâ?• returns over 1,000 results. We could take a punt and guess that Internet evidence supports the view that porridge is healthier than shortbread.

3. I might add weight to the evidence by reading what people say about each, assess the authority of the sources, and call on my own knowledge and inferences. If the Internet evidence appears weak, then at least it provides strong support for the view that people who post on line ***have more to say***

about the health benefits of porridge than shortbread.

4. We can also use web metrics as evidence: hit counts, likes, followers, star ratings, citation counts, numbers of search results returned. Iâ??m not patient enough to compare the number of likes of Facebook pages dedicated to porridge as opposed to shortbread. Itâ??s easier with films. You can find evidence in support of the quality of a particular film on aggregator sites such as Rotten Tomatoes.

4. You can also draw on accurate and verifiable open data sets online, including census data, and results from surveys, etc. You can also gather your own data through online surveys.

5. People with the right know-how can mine the web and social media using sophisticated search algorithms, semantic recognition, machine learning techniques, etc. Presumably thatâ??s part of what the armyâ??s new Joint Cyber Reserve Unit will do, looking for evidence of online threats to national security.

Whatâ??s logical about online evidence?

default watermark

The Internet brings evidence and its characteristics into sharp relief. So does logic. Logic is a formal language for making assertions and by which inferences can be drawn, and in a manner that is reproducible. That is, anyone else could reach the same conclusions by the same process.

If I assert that all swans are white, and that the object hidden in the cupboard under my desk is a swan, then it follows by logical ***deduction*** that the object must be white. No amount of observation would invalidate the deduction. Of course, the initial assertions can be refuted by simple observation.

Logic admits another kind of inference that is less certain. Thatâ??s ***induction***, the derivation of a general rule, such as *all swans are white*, from a large number of observations of swans swimming around in lakes.

Abduction is much more interesting. Thatâ??s the process by which you might derive that a creature hidden under my desk is a swan from knowing that thereâ??s something down there thatâ??s white. Considering all the white objects in the world you would want to gather other evidence (shape, sounds, size). Without other strong evidence the odds that itâ??s a swan would be pretty slim.

What are the odds?

Abductive reasoning is also known as ***plausible inference*** and involves the gathering of a range of evidence from different sources. Computer programs that attempt to automate this process calculate probabilities. The distinction between *deduction*, *induction* and *abduction* was articulated by the Pragmatic philosopher Charles Sanders Peirce (1839-1914).

As a source of evidence the Internet is not so different to the world at large. The Internet is an aspect of society after all: varied, contradictory, misinformed and dependent on the processes of interpretation.



Notes

default watermark

- Itâ??s well known that people are pretty lax in their use of formal logic, and thereâ??s a cultural dimension to it. Neuropsychologist Alexander Luria put the following propositions to a Uzbek peasant, and received an answer.
  - Assertion 1: In the Far North, where there is snow, all bears are white.
  - Assertion 2: Novaya Zemlya is in the Far North.
  - Question: What color are the bears there?
  - Answer: I donâ??t know what color the bears there are, I never saw them.
- According to cognitive scientist Roger Schank, â??Humans are not ideally set up to understand logic; they are ideally set up to understand stories.â?• This quote is floating around the Internet, but I donâ??t know where he says it.
- In fact, formal logic is pretty lax in representing human cognition. Also see Accentuate the negative about confirmation bias, What has science got to do with it on scientism, and posts tagged interpretation.

References

- Luria, A. R. Cognitive development, its cultural and social foundations. Cambridge, MA: Harvard University Press, 1976.
- Mintz, Anne P. (ed). 2012. *Web of Deceit: Misinformation and Manipulation in the Age of Social Media.* Medford, New Jersey: Cyber Age Books
- Peirce, Charles Sanders. 1885. On the algebra of logic: A contribution to the philosophy of notation. American Journal of Mathematics, (7) 2, 180-196. http://www.textlog.de/7664-2.html

Category

1. Media

Tags

1. evidence
2. interpretation
3. logic

4. Peirce

Date Created
September 28, 2013
Author
rcoyne99

default watermark