The Realm of Truth

The Realm of Enlightenment Truth is robust and has strong defenders. It is protected by ancient and profound principles

and activities, but they can drift or sink in the Ocean of Untruth and be drowned by corrupt purposes, if there are not active safeguards and vigilant citizens.

The extent of the toe-hold in the Realm of Truth, and the fall into Bullshit* and Untruth, varies from country to country; in some, the toe-hold in the Realm of Truth is tenuous or non-existent.

Two plus two makes five -

or any number you please

The future of evidence in a post-truth age of alternative facts

This poster analyses some of the principal threats to the world of facts and evidence; examines the cognitive, psychological and social factors that make us vulnerable, and offers tentative directions for the campaign to restore the public credibility of the Realm of Truth



Trusted guardians and communicators · Evidence · Dispassionate secular reason · Precedence of System 2 thinking (reflective, evaluative) · Scientific method · The spectrum of uncertainty · Data Scepticism and open-mindedness · Transparency · Peer review · Replicability of findings · The Fourth Estate (investigative journalism) · Freedom of speech · The management of bias The evolution of knowledge · The valuing of truth as a cultural priority · Institutional integrity · Absence of political interference · Independence of funding · The admission of error

The way forward in education and communication

The rational and information-deficit models are ineffective for many, maybe most human interactions. We should pursue these approaches:

- Openness, transparency, honesty, authenticity, substance; economy, clarity and simplicity
- ✓ Understanding and engagement with underlying values, motives and causes for specific questions; troubles not issues (Rosen); empathy
- Recognition of individual and tribal identities; communication that does not challenge worldview or identity
- Provide liked and trusted messengers; promote authenticity, openness and humility
- Novel, agile methods of communicating in a fast-changing environment
- Co-opt the power of stories, anecdotes, pictures, graphics and emotional appeal; develop narratives; dramatise
- Address the unpersuaded; co-opt allies and champions
- Fill the gaps in disrupted narratives (untruth is preferred to incompleteness)
- Focus on facts; assert true consensus, avoid bandwagon effects
- Encourage scepticism, critical thinking; educate in scientific method, statistics and causality

We should avoid these practices:

- X Controlling, managerial, top-down bureaucratic style of communicating and tired old language of political discourse, spin; the assumption of privilege
- X Cascading facts, myth-busting, branding or disparaging individuals or groups; lecturing and hectoring
 - X Focusing on differences, characterising others as the enemy
 - Deceptive or complex statistics (relative risk, p values, etc); cherry-picking data
 - Wishful thinking, short-term benefits

*'...indifference to how things really are...'

This was Princeton philosopher Harry Frankfurt's definition of bullshit, in his original essay (1984), On Bullshit, later an influential book with the same title (2005).

'...bullshit is a greater enemy of the truth than lies are.' (Frankfurt) Here, we employ the term to include every form of communication that disregards evidence and the truth as far as it is known, or that is dissociated from it, naïvely or intentionally. The term excludes lying. It includes fake news, junk science, alternative facts, spin, disinformation, propaganda, and much more. (See references for examples of academic treatment and research.)

> Filter bubbles Hyper-aggressive partisan campaigning Instantaneous Disillusionment with Narrative beats facts connection, experts and authority figures judgement, sharing Vulnerable **Engine of war against** population New media the Realm of Truth amplification Known errors of Tribal divisions; identity issues; fuelled by grievance Diminished trust Social inequality, exclusion Economic deprivation and alienation Clickbait advertising and uncertainty Politicisation Predominance of Charismatic and

> > Crisis of survival of old media Business model promotes bullshit

emotion over reason

celebrity leadership

Democratisation of access to knowledge; disappearance of gatekeepers

of science

Cognitive weaknesses, fallacies and traps

Deliberative System 2 overwhelmed by automatic System 1 processes Failure to check veracity of views we agree with Unreliable risk assessment (over- and under-estimations) Irrationally differential risk perception Poor grasp of statistics and causality; fooled by randomness Vulnerability to biases and fallacies

and back-fire effects

Our vulnerability: social, psychological, behavioural effects on cognition

Dominance of rapid, reflexive System 1 responses Primary influence of stories, anecdotes, emotional appeals Group and tribal identities; belonging over truth

Rapid sharing and amplification Charismatic and celebrity leadership Confirmation bias and filter bubbles Resistance to facts and evidence Intensification and polarisation through opposition

Incorrect model preferred over an

half-truths to outright bullshit, the weapons are fearsome and the potential risks to Truth's survival, serious. Some agents do have a toehold in fact and reality, but are all the more dangerous for their duplicity.

The brave crew navigating the ship of the Realm of Truth is

under threat from multiple agents in the Ocean of Untruth,

most of which have little or no interest in reality. From lies to

Real and present danger

Enlightenment values and rational discourse are losing traction as fantasy and emotion seize the public mind. We are called to resist, and to rebuild the structures in which the pursuit of rationality and truth can flourish.

Spurious alternative medicine Selective conspirac



Uppsala Monitoring Centre (UMC) Box 1051, SE-751 40 Uppsala, Sweden +46 18 65 60 60 www.who-umc.org This poster aspires to embody the core Enlightenment value of dispassionate secular reasoning. It accepts largely the intelligibility of nature to science and the central place of good scientific evidence as a basis for civilised living. Its biases are those of a liberal atheist.

We acknowledge with thanks the inspiration of Roger Kastel's original poster for the film, JAWS. Design: **UMC Global Communications**

Full resolution poster: https://goo.gl/jpX5nv

Baggini, J (2016). The Edge of Reason: A rational skeptic in an irrational world. Yale University Press Ball J, (2016). Post-Truth, How bullshit conquered the world . Biteback Publishing, London

Brandolini, Alberto. Bullshit Asymmetry Principle. Twitter.com. January 2013. Carnegie, D (2006). How to win friends and influence people (1937). Vermilion Cialdini R (2016). Presuasion, A revolutionary way to influence and persuade. Random House. London

D'Ancona, M (2017). Post Truth, The new war on truth and how to fight back. Ebury Press. London Davis E (2017), Post Truth. Why we have reached peak bullshit and what we can do about it. Little Brown, London Frankfurt H G. On Bullshit. Raritan Quarterly Review 6, no. 2 (Fall 1986), and, On Bullshit, Princeton University Press, 2005. Helfand, David J (2016). A Survival Guide to the Misinformation Age. Columbia University Press Kahnemann D, (2011). Thinking fast and Thinking slow. Farrar, Straus and Giroux

Nichols Tom (2017). The Death of Expertise, The Campaign Against Established Knowledge and Why it Matters, OUP USA

Penny, L (2005). Your Call Is Important to Us: The Truth About Bullshit. Crown Pennycook G, Cheyne JA, Barr N, Koehler DJ, Fugelsang JA. On the reception and detection of pseudo-profound bullshit. Judgment and Decision Making, Vol. 10, No. 6, November 2015, pp. 549–563 Postman, N (1985). Amusing Ourselves to Death: Public Discourse in the Age of Show Business. Penguin Books (2005) Rosenbaum, L. Resisting the Suppression of Science. N Engl J Med 2017; 376:1607-1609.

http://www.nejm.org/doi/full/10.1056/NEJMp1702362?query=TOC& University of Washington, Calling Bullshit: Data Reasoning for the Digital Age. Course: INFO 198 / BIOL 106B, Autumn 2017.

http://callingbullshit.org/syllabus.html#Ecology