Abstracts for
"Cognitive Capacity & Knowledge Resistance", 22/11-2019

The four horsemen of numeric knowledge resistance: Innumeracy, affect-richness, compelling stories, and motivated numeracy

Ellen Peters, University of Oregon

Certain kinds of information processing are so threatening to evidence-based decision making that I call them the Four Horsemen of numeric knowledge resistance. These four horsemen clip-clop into the heart of decisions through innumeracy, affect-richness, compelling stories, and motivated numeracy. They influence decisions across domains, and may be used to target the public when numbers convey inconvenient truths. Strategies to rein in the four horsemen will be discussed, but need to be modified and studied for the current era's post-truth strategic communications.

Good lawyers versus bad philosophers: On the source of reasoning errors

Gordon Pennycook, University of Regina

The alarming spread of entirely fabricated news stories - "fake news" - during the 2016 US Presidential election is a salient example of how human reasoning often fails. How do we explain such errors? I will outline two broad perspectives on this question with different implications for understanding cognitive capacity and knowledge resistance. One argues that humans reason like good lawyers, and that cognitive sophistication increases political polarization. The other argues that humans reason like bad philosophers, and that cognitive sophistication increases accurate belief formation. I will attempt to adjudicating between these two perspectives by drawing on research from a variety of domains, and describe in detail my work on the recent phenomenon of fake news as a particularly interesting test case.

Information neglect in judgment and decision making

Daniel Västfjäll, Linköping University

Classic economic theory (i.e. Homo Economicus) argues that information is utility (especially if the information is free). Despite this, people often passively do not attend to relevant information, actively avoid threatening information, and distort information to conform to their worldviews and beliefs (i.e. Homo Ignorans). What are the psychological underpinnings of Homo Ignorans? In this talk I will present research contrasting how two psychological pathways, motivated reasoning-as-feelings and motivated reasoning-as-analysis, jointly produce information neglect in the context of individual decisions in different domains as well as policy decisions. Individual differences in cognitive and emotional abilities underlying information neglect will also be discussed.

The complexity of navigating credible, biased and false news

Thomas Nygren & Mona Guath, Uppsala University

Today, in Sweden, media and information literacy is described as central to education aimed at promoting knowledge, equality and active citizenry. In a world of credible, biased and false

information our research shows that the challenge of evaluating digital information is greater than that of accessing news. In Sweden, young people read and share primarily credible news from established news media. However, both teenagers and adults struggle to separate credible news from biased and fake news. We find that skills of determining credibility of digital news are associated especially with higher education, education in the humanities and art, and appreciating credible news. Overconfidence in one's ability to assess the credibility of online information is associated with poor performance among young Swedes.

We will talk about the need to develop evidence-based materials and methods to promote critical and constructive mindsets among citizens, mindsets that are based on scientific curiosity, not overconfidence and maladaptive heuristics. We currently address this issue by developing digital and educational support people to navigate online news in ways similar to fact-checkers. Specifically, we test and develop materials and methods to support civic online reasoning and technocognition in both large-scale impact studies and smaller experimental studies. Our most recent findings highlight the complexity of promoting skills and attitudes linked to successful strategies to assess online information. In our presentation, we will show how classroom activities may promote attitudes but not skills. We will also present and, hopefully discuss, preliminary findings from an experimental study with a digital self-test designed to support lateral reading and the ability to debunk deep fake.

Resisting the Knowledge Dementors

Stephan Lewandowsky, University of Bristol

We are said to live in a "post-truth" era in which "fake news" has replaced real information, denial has compromised science, and the ontology of knowledge and truth has taken on a relativist element. I argue that to defend evidence-based reasoning and knowledge against those attacks, we must understand the strategies by which the post-truth world is driven forward. I depart from the premise that the post-truth era did not arise spontaneously but is the result of a highly effective political movement that deploys a large number of rhetorical strategies. I focus on three strategies: The deployment of conspiracy theories, the use of "micro-targeting" and "bots" online, and agenda-setting by attentional diversion. I present evidence for the existence of each strategy and its impact, and how it might be countered.