

THE WAR ON FACTS

Fake news, an all-too-common and, to me, rather frightening catchphrase these days, has been used repeatedly by the U.S. President and embraced ad nauseum by his entourage in recent months. Sadly, it has also worked its way into the lexicon far beyond the White House. For proof, one need only look at the comments on any online CBC news article involving the political goings-on south of the border.

How could a mere catchphrase be frightening? Because in this case, its use invariably signals an attempt to blur the lines between truth and falsehood, between inconvenient fact and fiction inspired by wishful thinking.

Propaganda has been around since the dawn of civilization. Yet, until recently, disseminating it has been too expensive in terms of both money and effort for it to run rampant. The democratization of communication through the internet has made the distribution of ideas essentially free. Similar observations were made in earlier times, when the printing press and photocopy machine became commonplace. While the benefits of such technological game-changers are undeniable, they are not without danger. Returning to the present, there is no quality control on the internet, so anyone with the will to do so can say almost anything and, with little effort, they can do it in a way that makes their message, no matter how preposterous, appear legitimate to the uncritical eye.

With fake news comes the idea of “alternative facts”, harbinger of an all-out war on the truth. The stakes are dangerously high, with the very credibility of the mainstream media and of science and scientists called into question.

News organizations cannot get too much more mainstream than CNN and the BBC; yet both have been called fake news outlets. (Fox, we are told, is not.) The media more generally has been branded “the enemy of the people” by the current U.S. administration.

We could perhaps laugh such pronouncements off, yet many of those who voted for the current President believe

what he says. When he quotes a discredited Fox News story regarding a preposterous wiretapping claim, they have blind faith in his statement. When he tells us demonstrably true statements by major news outlets are fake news, his denial of the truth becomes their denial of the truth.

More directly related to the CAP, the overwhelming majority of serious scientists who express concern about anthropogenic climate change, calling for immediate action to reduce it, are ignored in favour of more convenient fringe opinions dismissive of any call for action, and indeed dismissive of the very legitimacy of climate change itself, in spite of mountains of evidence to the contrary. It is a hoax put forth by the Chinese, we were told during the American election campaign.

We are relatively lucky in Canada, with a 2017 budget that, while not offering much in terms of new science funding, at least does no harm. Yes, we would have liked to see an increase of funding to the research councils, and, in particular, to the NSERC Discovery envelope¹, but we could have done worse than the status quo². The Government has begun its search for a Chief Science Advisor as announced in the mandate letter to Minister Kirsty Duncan soon after the election, and it maintains its assurance that evidence will be used to formulate government policy. Evidence-based decision making, rather than decision-based evidence making.

Things are not so rosy south of the border. The budget proposal submitted to Congress by the White House on 16 March 2017 includes some very bleak news, including a whopping 31% reduction to the Environmental Protection Agency (now headed by a man hostile to the idea of climate change, and indeed hostile to his own agency!), with smaller but nonetheless damaging cuts to the Department of Education, the National Institutes of Health, NASA, and the Department of Energy’s Office of Science. The National Science Foundation did not even garner mention in the budget proposal; one can only guess what that omission implies.

Scientific, academic and professional societies across the US, and to a lesser extent around the world, are justifiably outraged. A compilation of reactions to the U.S. budget proposal, both from politicians and from scientific society



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1. See the CAP budget submission at <https://www.cap.ca/publications/cap-news/cap-makes-submission-house-commons-standing-committee-finance-2018-federal-budget/>
2. See the CAP analysis of the budget at <http://www.cap.ca/en/news/2017-03-23/2017-federal-budget>.

leaders, assembled by the American Institute of Physics makes for an interesting read.³

Although the budget itself may not affect Canada and Canadian science directly, it does have an indirect effect across the world. Yet it is the caustic ideas and ideology behind the budget proposal that are very distressing. Ideas

know no borders; a war on truth originating in the U.S. is easily exported. And a war on truth has many facets, one of which is a war on the credibility of science, scientific research and indeed scientists themselves. We should all be concerned.

3. <https://www.aip.org/fyi/2017/trump-science-budget-reactions-congress-and-scientific-community>

DOCTORATS DÉCERNÉS

PHD DEGREES AWARDED IN CANADIAN UNIVERSITIES*

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DECEMBER 2015 TO DECEMBER 2016 / DÉCEMBRE 2015 À DÉCEMBRE 2016

UNIVERSITÉ DE MONTRÉAL

BELLETTÈTE, J., « Représentations et fusion des algèbres de Temperley-Lieb originale et diluée », (Y. Saint Aubin), Septembre 2016, maintenant suit une Post-doctorale à CEA, Saclay, France.

BERTRAND GRENIER, A., « Suivi par élastographie ultrasonore après réparation endovasculaire d'anévrisme aorto-iliaque: étude de faisabilité in vivo », (G. Soulez & G. Cloutier), September 2016, maintenant un Physicien médical (poste temporaire de remplacement) au Centre hospitalier régional de Trois-Rivières, QC, Canada.

CÔTÉ, S., « Développements et applications de méthodes computationnelles pour l'étude de l'agrégation des protéines amyloïdes », (N. Mousseau), March 2016, professeur dans des cégeps de la région de Montréal, QC, Canada.

GÉLINAS, G., « Comprendre et maîtriser le passage de type I à type II de puits quantiques d' $\text{In}(x)\text{Ga}(1-x)\text{As}(y)\text{Sb}(1-y)$ sur substrat de GaSb », (R. Leonelli & P. Desjardins), September 2016, now a Research scientist at 5N PLUS Inc., Saint Laurent, QC, Canada.

GIAMMICHELE, N., « Exploitation du potentiel sismique des étoiles naines blanches », (G. Fontaine

& P. Brassard), April 2016, maintenant cherche une bourse post-doctorale à l'Université de Toulouse en France.

GUIHARD, M., « Effets des recuits ultra-rapides (10^5 K/s) sur la formation de siliciures métalliques en phase solide », (F. Schiettekatte & S. Roorda), March 2016.

REZASOLTANI, E., "Excitonic Behaviour in Polymeric Semiconductors: The Effect of Morphology and Composition in Heterostructures", (C. Silva), April 2016, now following a postdoctoral fellowship at the Imperial College London, Kensington, United Kingdom.

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