



AS I SEE IT

Tenure, the Canadian tar sands and 'Ethical Oil'

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ABSTRACT: Canada, despite its long democratic tradition, has a record of attempts to suppress inconvenient scientific findings. This has intensified since 2006, when the new conservative government of Canada began its systematic and well-documented assault on the functioning, independence and integrity of the environmental science performed in federal governmental laboratories, which is largely attributed to its focus on developing Canada's tar sands and Arctic offshore oil, while denying the reality of global warming. Academic tenure, still a major feature of Canada's research universities, appears to be one of the few obstacles to this strategy of silencing environmental scientists concerned about this course of action.

KEY WORDS: Oil development · Climate change · Muzzling of scientists · Fisheries act

INTRODUCTION

Academic tenure is a difficult topic and while it is easy to get on one's high horse and claim that it is a vital element of higher education, it may also be that, with some, tenure encourages sloth. This contribution, however, does not address the fraught relationship between tenure and education, but the role of academic tenure at research universities in contemporary Canada, and, even more specifically, its potential role in maintaining the integrity of the environmental sciences.

Canada, despite its long democratic tradition, has a record of attempts to suppress inconvenient scientific findings. One well-known case is the 'Olivieri Affair', which outlined the extent of the ethical swamp into which university leaders — especially in medicine — will step to protect lucrative associations with the pharmaceutical industry (Viens & Savulescu 2004). Here, however, this paper will emphasize the plight of the beleaguered scientists in Canadian government laboratories.

Since 2006, Canada is benighted by a conservative government which has magnified a pre-existing tendency for the heads of government agencies and

laboratories to prevent 'their' scientists from speaking up about issues in their areas of expertise (see Hutchings et al. 1997). This tendency was vividly illustrated to the author, then new to Canada, by a former high ranking official of the Canadian Department of Fisheries and Oceans (DFO) at a public debate at the University of Ottawa, who asserted that DFO staff owe loyalty to the Queen (this is Canada!) and thus to the Queen's Minister, and not to the citizenry. This occurred only a few years after the 1992 collapse of the northern cod fishery, which put 50 000 people out of a job (but not the Queen) and required immense amounts of taxpayers' money to mitigate.

PRE- AND POST-2006 CASES OF MUZZLING SCIENTISTS

Thus, a well-known DFO scientist who had the audacity to argue that the collapse of northern cod was not due to abnormally cold temperatures, and not to hungry seals (the perennial villains in Canada, see Pannozzo 2013), but to government-sanctioned overfishing, was officially reprimanded for speaking up, although it is now well established that he was

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right (Walters & Maguire 1996), and that fisheries management in Canada is below par (Hutchings et al. 2012). R. A. Myers, the scientist in question, then took refuge at a university, where he became a tenured faculty member, and played a critical role in convincing the world that northern cod had not been the only formerly abundant fish stock reduced by overfishing to a shadow of its former self (Pauly 2007).

While it is legitimate for governments everywhere to expect restraint from civil servants, the conditions under which Canadian government scientists, and particularly those working on environmental issues, are now so constrained (see Anonymous 2006), at least in comparison to those of other Western democracies, that they have become a topic in respected international scientific outlets (O'Hara 2010, Jones 2013), a book titled 'War on Science' (Turner 2013), and numerous articles and editorials in Canadian media (e.g. *The Globe and Mail* 2013, Bolen 2014a,b).

TWO CANADIAN DISCOVERIES: VIRUS IN FARMED SALMON AND 'ETHICAL OIL'

The absurdly high level of pressure exerted on government scientists may be illustrated here in the events following the discovery of a viral signature in (wild) sockeye salmon (Miller et al. 2011), already threatened by the metazoan parasites emanating from farming operations relying on introduced Atlantic salmon (Morton et al. 2008), and also the likely source of the virus in question, via infected eggs imported from Norway, where it is common. DFO is mandated to encourage this risky form of aquaculture, and thus the first author of the paper in question, a DFO staff member, was not permitted to talk about her discovery publicly, under the pretext that she would later testify at the 'Cohen Commission', set up to investigate the decline of wild Pacific salmon in British Columbia. Her eventual (filmed) deposition, consisting mostly of monosyllabic answers, was typical of what occurs when people are afraid (see www.salmonconfidential.ca); such degrading situations should not occur in science and certainly not in democracies.

Since the ascent of a government which, after its successful renaming of 'tar sands' to 'oil sands', attempted to rename the muck extracted from Canadian tar sands 'ethical oil' (because it originates in a country where women can drive cars, as opposed to Saudi Arabia, where women are not permitted to do

so), stories such as this abound. There are too many cases of government scientists being able to speak to the press only with government minders present, i.e. 21st century political commissars. Entire laboratories specialized on ecotoxicology and Arctic ecology have been closed, so that no one is left to study the effects on the health of humans and ecosystems of exploiting the Canadian tar sands and drilling for oil in the high Arctic. The Fisheries Act was defanged, i.e. the protection of freshwater fish and their habitats was lifted (Ecojustice 2013, Hutchings & Post 2013), and so oil development can proceed without hindrances such as laws protecting the environment. Obviously, the Canadian cabinet is, with regard to global warming, firmly in the denialist *laager*, despite the absurdity and destructiveness of this position (Oreskes & Conway 2010, 2014), which has diminished Canada's standing in the world community.

A KEY ROLE OF TENURE

The question now is, under these circumstances, who can speak truthfully for science in Canada? To the extent that the autonomy of universities is still respected and the tenure system still works, there is at least one group of scientists in Canada who can object to the silencing of scientists and to what appears to be preparing the ground for turning the country into a petro-state. Indeed, one might argue that tenured faculty, because they can express their finding and views with relative impunity, have a duty to do so when their colleagues in governments are being muzzled. By extension, scientific organizations, comprised of mostly tenured academics, such as the Royal Society of Canada (Academy of Science), and/or the Canadian Association of University Teachers, can bring egregious breaches of scientific integrity to the attention of the media and the public. Indeed, such groups, which, for environmental science, would include the Canadian Society for Ecology and Evolution, the Society of Canadian Limnologists, and the Canadian Society of Zoologists, among others, have communicated with the media about the matters discussed here. The societies provide an important vehicle for non-tenured to add their voices to the debates and discussions without risking retaliation.

Generalizing, one can also note that academia, as shaped by tenured faculty, is one of the few sectors in Canada (and even more so in the US) that is not in the hands of corporations — though the increasing privatization of the higher education sector, and reliance on non-tenured or sessional lecturers (Stergiou & Tsikli-

ras 2013) is gradually undermining this bulwark as well. Similar considerations will apply in many other parts of the world, and they may also be relevant when discussing the tenure system in education.

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LITERATURE CITED

- Anonymous (2006) Communication policy of the government of Canada. www.tbs-sct.gc.ca/pol/doc-eng.aspx?section=text&id=12316
- Bolen M (2014a) Tories accused of banning meteorologist from discussing climate change. www.huffingtonpost.ca/2014/05/30/canadian-scientists-muzzled_n_5420607.html?utm_hp_ref=stiffling-science
- Bolen M (2014b) Mercer: Tories don't even understand the science they silence. www.huffingtonpost.ca/2014/11/20/rick-mercerc-science-conservatives-video_n_6192852.html
- Ecojustice (2013) Legal backgrounder: Fisheries Act. www.ecojustice.ca
- ▶ Hutchings JA, Post JR (2013) Gutting Canada's Fisheries Act: no fishery, no fish habitat protection. *Fisheries* (Bethesda, Md) 38:497–501
- ▶ Hutchings JA, Walters CJ, Haedrich RL (1997) Is scientific inquiry incompatible with government control? *Can J Fish Aquat Sci* 54:1198–1210
- Hutchings JA, Côté IM, Dodson JJ, Fleming IA and others (2012) Sustaining Canadian marine biodiversity: responding to the challenges posed by climate change, fisheries, and aquaculture. RSC expert panel report prepared for the Royal Society of Canada, Ottawa. Available at <http://rsc-src.ca/en/expert-panels/rsc-reports/sustaining-canadas-marine-biodiversity>
- Jones N (2013) Canada to investigate muzzling of scientists. 02 Apr 2013. <http://blogs.nature.com/news/2013/04/canada-to-investigate-muzzling-of-scientists.html>
- ▶ Miller KM, Li S, Kaukinen KH, Ginther N and others (2011) Genomic signatures predict migration and spawning failure in wild Canadian salmon. *Science* 331:214–217
- ▶ Morton A, Routledge R, Krkosek M (2008) Sea louse infestation in wild juvenile salmon and Pacific herring associated with fish farms off the east-central coast of Vancouver Island, British Columbia. *N Am J Fish Manag* 28: 523–532
- ▶ O'Hara K (2010) Canada must free scientists to talk to journalists. *Nature* 467:501
- Oreskes N, Conway EM (2010) *Merchants of doubt: how a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Press, New York, NY
- Oreskes N, Conway EM (2014) *The collapse of western civilization: a view from the future*. Columbia University Press, New York, NY
- Pannozzo L (2013) *The devil and the deep blue sea: an investigation into the scapegoating of Canada's grey seal*. Fernwood Publishing, Black Point, NS, and Winnipeg, MB
- ▶ Pauly D (2007) Obituary: Ransom Aldrich Myers (1954–2007). *Nature* 447:160
- Stergiou KI, Tsikliras AC (eds) (2013, eds) *Global university rankings uncovered*. *Ethics Sci Environ Polit* 13: 59–213
- The Globe and Mail (2013) Editorial: closing of research stations belies Ottawa's claim that it is protecting the environment. March 19, 2013
- Turner C (2013) *The war on science: muzzled scientists and willful blindness in Stephen Harper's Canada*. Greystone Books, Vancouver, BC
- ▶ Viens AM, Savulescu J (2004) Introduction to the Olivieri Symposium. *J Med Ethics* 30:1–7
- Walters CJ, Maguire JJ (1996) Lessons for stock assessments from the northern cod collapse. *Rev Fish Biol Fish* 6: 125–137

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