

The history, politics, and practice of science outreach – how the politics of different sciences shapes communication by scientists.

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The New Zealand government clearly values science communication: the Prime Minister's Prize in Science Media Communication has been awarded annually since 2009, and the Prime Minister's Science Advisor is charged with promoting 'the public understanding of science'. In March 2013, the National Science Challenges Panel concluded that addressing 'deficits' in the public's 'appreciation and understanding of science' was 'of the highest priority' and suggested greater investment in the communication of science to the public as part of the remedy¹. But what is all of this communication – or 'outreach' – meant to accomplish? The literature on outreach in the fields of science communication and informal education is heavily focused on the audiences or methods of outreach. It does not, in general, question the goal of improving the public's understanding of science; rather, it focuses on how best to accomplish this. Literature in the field of Science and Technology Studies has taken a more critical perspective on the promotion of public engagement with science, questioning the interests, assumptions, and goals of those (typically, governments) driving public engagement. We argue that there is a missing conversation here, which explores the communication of science by scientists (often referred to as science outreach) from multiple perspectives and illuminates the practice of outreach, its history, and the political context in which it takes place. This conversation needs to be held if we are to intelligently evaluate and reflect upon the role of science outreach efforts, particularly when it comes to communication of controversial science.

This research is a collaboration between a scientist communicator with a positive attitude to outreach, who works in the field of climate change²; a political theorist with expertise in public dialogue around biotechnology and who has been critical of motivations for engaging the public with science³; and a science historian and science communicator, who has uncovered surprising and significant changes in public attitudes towards nuclear science and technology in New Zealand through the second part of the twentieth century⁴. By exploring outreach through these diverse disciplinary lenses, and applying these approaches to fields of science that are or have been highly controversial for different reasons, this new research project will illuminate the politics, practice and history of outreach in New Zealand, while at the same time providing a new approach to the study of outreach internationally. In this paper we will outline our preliminary work and future directions on this exciting new research collaboration.

[1] National Science Challenges Panel, *Report of the National Science Challenges Panel*. 27 March 2013 p.33-35, available from: <http://www.msi.govt.nz/assets/Update-me/National-Science-Challenges/Peak-Panel-report.pdf>

[2] **Salmon, R.A.** et al., *Education, outreach and communication during the International Polar Year 2007–2008: stimulating a global polar community*. The Polar Journal, 2011. 1(2):

265-285; **Salmon, R.A.**, Evaluation Report on *Our Far South - Beyond Stewart Island*, 2012; **Salmon, R.A** Evaluation of *New Zealand IceFest Science & Education Programme*, commissioned by Christchurch City Council, 2013; **Salmon, R.A**; *Is climate science gendered? A reflection by a female 'climate scientist'*; *Women's Studies Journal*, Volume 27 Number 1, December **2013**: 50-56. ISSN 1173-6615

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[4] **Priestley, R.**, *Mad on Radium: New Zealand in the Atomic Age*. 2012: Auckland University Press; **Priestley, R.** *Ernest Marsden's Nuclear New Zealand: From Nuclear Reactors to Nuclear Disarmament*. in *Journ. and Proc. of Royal Society of New South Wales*. 2006. **139**: 23-28; **Priestley, R.** (2008). *The Awa Book of New Zealand Science*. Awa Press.