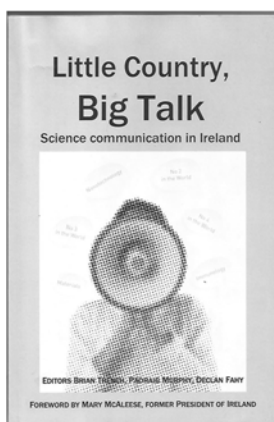


BOOK REVIEWS



Title: *Little Country, Big Talk: Science Communication in Ireland*

Publisher: Pantaneto Press with Celcius Group, Dublin City University

Editors: Brian Trench, Padraig Murphy, Declan Fahy

Pages: 216

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The title *Little Country, Big Talk* is evocative. Ireland is a little country, having a tiny population of just 4.64 million, a quarter of New Delhi's; but its contribution to the global science quality-wise is 'big'. From the yardstick of patents, its resident scientists acquired 357 patents in 2015 compared to India's 822, a country which is the third largest economy on purchasing power parity parameter of rupee, and houses the second largest population in the world. And look at the Global Innovation Index: Ireland ranked 10th among the 130 countries that were surveyed in 2017 compared to India's 60th.

Ireland's achievement sounds more amazing when Declan Fahy, one of the editors of the book under review, informs that the country did not give proper attention to science soon after its independence from the UK in 1922. Science had remained ignored even before this, in the 19th century as the Irish people took pride in being a literary culture, a country of poets and dreamers.

Science wasn't a policy priority until the late 1960s. Then suddenly, Ireland's profile changed in science, technology and innovation so much so that in January 2016, it claimed the first rank in the world on the basis of citations per paper for its research in nanoscience, second in computer science and immunology, third in animal and dairy science and fifth in materials science.

Perceptible contours of this achievement can be traced in the article 'The Rocky Road of Science Communication' penned by Brian Trench, the current president of the international Public Communication of the Science and Technology network. Irish Research Scientists' Association in order to build pressure on policy makers lobbied for getting a white paper published on the state of Science, Technology and Innovation in the country. Not just the concentration on S&T research, the government policy statement titled 'Innovation 2020' emphasised the need to set a high target of public awareness through public communication of science. The goal was to ensure that 60 percent of the population should be aware of research and development in science, technology, engineering and mathematics. Big goal indeed!

Brian Trench gives a detailed account how thanks to the efforts of individuals, businesses, institutions, government departments and agencies, and others, science communication got embedded in higher education and research system. The country began witnessing activities like Young Scientists and Technology Exhibition, National Science Week, Maths Week, Engineers Week and so on.

'Dublin City of Science' was launched in 2012 where science became fun, exciting and entertaining to all. Dublin City University and University of Belfast jointly started professional education in science communication bridging the gap between hard sciences and humanities. Postgraduate level courses included research topics on science policy and science ethics. Not just higher education and research institutes, government departments, cultural institutions, professional societies and networks and non-government organisations played their roles in science communication.

Science journalism also began to transform though not to the desirable extent. Declan Fahy, a journalist and science communication researcher, has highlighted the fragile culture of science journalism in Ireland where there were few dedicated science journalists and a clear shortfall of science coverage. He comments, "...although Ireland has a mature culture of science and a developing culture of science communication, it has a fragile culture of science journalism."

He opines that science is a vast commercial enterprise, a pillar of policy formulation, and a recipient of vast public funds, therefore, it merits critical scrutiny from journalists who as part of

their job, hold institutions of power to account. Yet, in Ireland, 'there are no full-time science journalists in mainstream newspapers and broadcasters'. He accuses that Irish media in their reporting of science have failed in bringing civic issues into the public domain and just maintained a celebratory or economic relation with science.

The chapter 'Public Engagement in Contested S&T' is a useful read for all science policy makers and managers. Padraig Murphy, another editor, gives here an account of a few prominent cases of public resistance, namely Nuclear Power, GM potato, Biopolitics of embryos and Fracking giving a sense of how science communication leads to an informed debate on policy issues and how sometimes the resistance can develop into a formidable protest overturning the policy initiatives promoted by commercial or economic interests. Other issues like wind farms, pylons, incinerators, stem cell research got NGOs involved and led to polarisation of opinion.

Marie Boran, a PhD researcher in science communication, gives a detailed analysis of social media use among scientists to engage directly with audiences through blogs, Facebook, YouTube and Twitter citing several research-findings. Social media has indeed challenged the one-way, top-down approach to science communication and opened a floodgate of possibilities of genuine bi-directional engagement with 'multiple publics'. Some scientists, however, gripped by the 'Sagan effect' fear the use of social media as it may lead to conspiracies once they become popular among people. Her chapter 'Scientists in Social Media', I presume, will definitely not go unread by scientists.

Maria Delaney, a science and health journalist, in her piece 'Blogging for a Growing Public Appetite' gives her own account how she switched from short blogs to full length reporting of the nuances of science to the public. She tells about how Twitter verse was used to share ideas and descriptions of scientific facts and explanations and how a project led to compilation of Tweets in the best-selling book, *A Neutron Walks into a Bar*.

Caitriona Mordan, a communication consultant, in her paper 'Changing Models for Young People's Engagement' asserts that the best way of science communication is to let students themselves explore science. Thus, science exhibitions, career fairs

and science and engineering weeks become good tools. In Ireland, these were tried vigorously along with organising seminars for second-level students. The experiment of 'Engineers Ireland' launching an outreach programme through STEPS (Science, Technology & Engineering Programme for Schools) is an example.

Ian Brunswick, the head of programming at Science Gallery Dublin, has unravelled the latest and highly popular mode of science communication in the article titled 'Genesis of Science Gallery'. The idea of science gallery initially came from literature Nobel Laureate, Orhan Pamuk who was the founder of the 'Museum of Innocence' in Istanbul exhibiting ephemera from fictional lives depicted in his novel of the same name. Pursuing his idea Irish science communicators created the world's first Science Gallery which was truly more 'experimental, economical and a science novel among epics'. Many such galleries are in the process of being replicated across the world. Five are already in various stages of development in London, Melbourne, Venice, Detroit and Bengaluru. Bengaluru's is the first in Asia.

The editors have compiled 19 essays, personal reflections and analyses put down by science communicators, journalists, writers, teachers and consultants in the book which offers a broad-spectrum account of how things evolved in the last 20 years once the Irish government launched a programme to promote public awareness of science. One finds a motley view of various programmes designed and crafted to increase science and technology awareness among people. It's no 'Big Talk', it's 'Big Deed' indeed.

The book, however, should not be shelved as just relevant to Ireland. It can be recommended as a critical evaluation or case study of what were the science communication policies, methods, education and practices and with what outcomes. Things experimented in Ireland can definitely be useful in other countries as well.

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