

SCIENCE COMMUNICATION: FREQUENTLY PUBLIC, OCCASIONALLY INTELLECTUAL

Babelfish and the peculiar symbiosis of public intellectualism and academia

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Abstract

Arthur Dent's reluctant hitchhike through the Milky Way would not have been possible without the babelfish, which was nourished by his brain waves and in return decoded foreign languages for him. In much the same way, public intellectuals serve as science and technology academia's babelfish for the non-STEM savvy. While STEM academics continue to push back the frontiers of knowledge, public intellectuals equip the community with the knowledge we need to make big decisions, both for our own individual lives and for our society.

Keywords

Public engagement with science and technology; Public understanding of science and technology; Representations of science and technology

Arthur Dent's reluctant hitchhike through the Milky Way would not have been possible without a little fish in his ear which was nourished by his brain waves and in return handily decoded foreign languages for him. Without the babelfish, Douglas Adams' famous Hitchhiker would have been reduced to an incommunicative ignoramus.

In much the same way, public intellectuals serve as science and technology academia's babelfish for the uninitiated; the non-STEM savvy.

Academics are deep thinkers. They are absolutely essential to civilization. Academics help society to examine itself, to know itself, to keep itself accountable, to expand its knowledge of the world, and to evolve.

Public intellectuals love the deep thinking done by academics, but themselves are often more akin to translators. They distill the knowledge of academics and interpret it for a broad audience, and in this way they help academics connect with the society they study. Public intellectuals explain how to apply the academics' findings and thinking, they help justify society's investment in research, and they explain in plain and persuasive language the subtleties and arcana of traditional intellectualism.

Every professional enclave has its private language, its jargon, designed to distinguish itself from others, to affirm belonging, to codify knowledge and to provide shortcuts to communicating complex or richly layered ideas. As part of an institution (whether it's a formal institution such as a particular university or a

looser "institution" such as — for example — biology), it is inevitable that over time one ceases to experience the jargon as exclusive. This mode of communication expands for the individual using it, until it becomes part of the everyday. Speakers of the language often arrive at a juncture at which it is impossible for them to perceive where common language ends and their specialized mode of communication begins.

In scientific disciplines, arguably more than in the arts and humanities, there is an added barrier to academic communication with the world at large. The historic cultural disapproval within the sciences of those who communicated their work publicly is breaking down rapidly since the advent of social media, but remains an active deterrent to science, technology, engineering and mathematics (STEM) academics engaging wholeheartedly in public communication — those who do must choose consciously to push against this taboo.

Whether professional science communicators or scientists who embrace communication, public intellectuals provide a bridging point. They straddle the gap between the specialised language of the academic, and the language of the general population. And, in science and technology in particular, they are the babelfish.

I am an expert practitioner in communication and have worked for many years for and with academics. I have always been fascinated by the work of researchers in STEM, but I don't have a degree in a STEM discipline. Early in my career this fascination led to a gig as the national medical correspondent and science writer for the national newswire service, Australian Associated Press, in which I was happily paid to pore over journal articles and write stories about the most interesting. In doing so, I noticed something very important. Many articles published for mainstream news services about science and medicine missed a few fundamentals. Sometimes old research was done up to look like new research, in order to sell a product. Sometimes trials were so small as to be insignificant, or their results had been impossible to replicate. But many journalists missed these subtleties (whether deliberately or through a lack of familiarity with academic writing), resulting in headlines and stories that grossly exaggerated findings, or were just plain wrong.

In the 1990s, together with an experienced and respected colleague at the Australian Broadcasting Corporation (ABC), I penned a guide for journalists on how to judge the veracity and quality of medical "breakthroughs". How to parse academic jargon. To assess the legitimacy of a publication and its possible practical applications. The difference between the scientific understanding and public understanding of words like "random" and "risk". Average, and the meaning of mean.

As a non-academic, I'll own that I didn't test its impact. I don't know if it made a difference to the overall quality of medical news reporting at the time. I'd like to think it did.

Later, I worked for the Medical Journal of Australia. Writing press releases for an academic journal really hones skills of translation, and improves accountability and accuracy. It required a new level of intellectual rigor as I swung abruptly out from under the journalist's twin aegis of fast-approaching deadlines and never showing a source a story prior to publication, and into the glare of having every word painstakingly checked for accuracy and authenticity by the journal editor, and sometimes the article's original author.

Through this tiresome process of back-and-forth it became evident that while academics are taught very well how to pen an abstract, they're rarely equipped to write a catchy lede.

Why is this important? Because — surely — the point of scientific research is not only to advance the sum of human knowledge, but almost always to do so with intent. In effect, to improve our experience of life, and the way in which we live on our planet. Why put all that effort into discovering that a varied wholefood diet reduces your risk of cancer if nobody ever changes the way in which they eat? Why go to great lengths proving that adding huge amounts of airborne carbon into the atmosphere messes with climatic stability if humanity continues to trip merrily down the carbon-pumping lane in blissful ignorance? Why dedicate a lifetime to developing a way to grow crops in a hitherto barren landscape if agricultural practices remain unchanged? If the point of academia is to protect and advance civilization, what use is it if nobody knows it exists?

Let's pretend for a moment that the academic is a dentist. A dentist knows, with a deep and intractable certainty built on evidence and years of experience, that it is important to care for one's teeth. Good dental health equates to better nutrition and improved personal presentation. Better nutrition and improved personal presentation lead to improved general health and enhanced prospects for interpersonal relationships and employment. These in turn lead to certainty of housing, higher order mental health, opportunities for travel and entrée into higher socio-economic strata.

But dental work is expensive and can be painful, and many people fear and avoid it. What's more, the individual dentist doesn't have the knowledge, experience, networks or resources to publicly espouse the benefits of good dental health or to encourage the people who live in their area to visit regularly for check-ups.

Enter the translator. The public health specialist, the professional communicator. The public intellectual, if you will. This person can craft a sophisticated public health campaign, or speak with authority in mainstream media outlets, and convince, cajole and encourage the dentally challenged that a visit to the dentist is a worthwhile investment.

The most effective translators work closely with the academics whose work they represent — or, indeed, are themselves those academics — but maintain enough of a linguistic distance to preserve their non-academic mode of communication. They are adept at communicating not just about the science itself, but also about its real-world consequences, implications or opportunities. They communicate science with passion and purpose: their motivation is not just enhancing understanding of and engagement with science, but encouraging its application, to the benefit of society and the environment. And the best of these earn not only the love and respect of the general (non-academic) public, but also the esteem of the academy.

Perhaps the most famous example is Sir David Attenborough who, though he earned an undergraduate degree in zoology, has worked almost exclusively as a science communicator. He has transformed the ways in which science and nature are understood through mass communication. His work has inspired many individuals to pursue a career in science — thereby supporting the future growth of

the sector — and he's arguably done more than any other individual to raise awareness of the impact of human activity on the natural environment. Astronaut and aeronautical engineer Buzz Aldrin has similarly dedicated his life to public intellectualism, and is proactively working towards an expansion in international space exploration programs. Dame Jane Goodall has taken her early research in primatology and built an enormous career as a highly respected and effective campaigner for conservation.

In Australia, there are other more recent (though perhaps less famous) success stories — the ABC's fondly-regarded doyen of science broadcasting Robyn Williams has an undergraduate science degree and has never worked as a scientist. His work to elevate passion for and understanding of science has infiltrated the national psyche. Science & Technology Australia's President-Elect, Professor Emma Johnston, is a highly respected marine ecologist and a much-loved host of a television program exploring the secrets and science of Australia's coastline. Snapping at their heels is science journalist Wendy Zukerman, who successfully dissects fads and pseudo-science through her entertaining, popular and scientifically rigorous podcast, 'Science Vs.'.

While STEM academics continue to push back the frontiers of knowledge, these public intellectuals and their peers are equipping the community with the knowledge we all need to make big decisions, both for our own individual lives and for our society. They entice a broad range of people from all walks, all ages and all levels of education to engage with the outcomes of STEM research and to use them to make informed decisions. And by engaging society they also encourage support for our STEM academics to continue to do their important work. Just like Adams' babelfish, public intellectuals are nourished by the deep thinking of academia. In return they offer the gifts of translation, dissemination and connection.

Author

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