

The history of science communication

I. BASICS

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Before we can get to a history of science communication, we need to understand how science emerged, who was doing it and how they initially communicated. Science has a global history stretching back for centuries. But what we perceive as modern science in Western civilisation was born out of a cultural movement of the 14th to 17th centuries – the Renaissance. Part of this movement was a rediscovery of communication in the form of Greek and Latin texts. Ideas of natural philosophy were discussed between influential men in the popular coffee houses of 17th-century London.

These verbal conversations gave rise to the Royal Society (1660), followed by the French and Berlin Academies of Science (1666 and 1700). Members of the Royal Society communicated their ideas to each other through letters, which formed the world's first scientific journal, the *Philosophical Transactions of the Royal Society*, and introduced the concept of peer review, making the published “scientific paper” not only a channel of communication but also a unit of productivity.

The “Grand Tour” offered wealthy young men the opportunity to bring back curiosities and specimens, forming “cabinets of curiosity”, which enabled lively after-dinner conversations about the natural world. Public interest in science began to grow rapidly. In the 19th century, England, France and America were peppered with local science societies, offering an opportunity for more widespread communication and with it, education.

The first society aimed specifically at science communication was the British Association for the Advancement of Science (1831). Science had been professionalised much earlier by other European countries, such as the education and examination system in Prussia, which gave rise to the *Bildungsbürgertum*, the educated middle class. Despite these endeavours over the decades, the public

attitude towards science in the UK lagged behind that in other European countries, leading to a deficit model of science communication, the idea of which was developed in the 1980s to address the public's lack of scientific literacy. In the early 2000s, this model morphed into the public understanding of science, where scientists began to talk more to the public about their work and communicate through a much wider range of channels. This was seen as essential if the public were to accept new technologies such as nuclear power and genetic modification of crops. The fundamental premise was “the more you know, the more positive and accepting you will be”. This model was also seen in other European countries: *vulgarisation scientifique* in France or *Wissenschaftspopularisierung* in Germany.

However, as we moved through the issues of the 21st century, it became clear that the acceptance of science and technology was far more nuanced than simply a lack of knowledge – there was also a cultural and ethical influence. Global issues such as climate change and the emergence of new infectious diseases and vaccinations have modernised the models of communication. There is far less emphasis on a deficit of knowledge or understanding and more on dialogue and debate, allowing the public to shape the future direction of science and technology.



Recommended reads:

- ♦ Babbage C. (2013), *Reflections on the Decline of Science in England, and on Some of its Causes*. Cambridge University Press. ISBN: 9781139381048; <https://doi.org/10.1017/CBO9781139381048>