Chapter 16
So Where’s the Theory? on the Relationship between Science Communication Practice and Research

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Abstract There has been little, if any, research looking at how well practical science communicators are connected with the relevant research literature. Indeed, there is little—if anything—written about who makes up the science communication community. This chapter reports on a short survey of attendees at the British Association for the Advancement of Science’s 2007 Science Communication conference. The survey gives some indication of what science communicators have by way of training, and what they are reading that is relevant to their professional lives. It finds that the community is relatively young and predominantly female, with generally high levels of science education. Training in science communication is less prevalent, however, and over 40% of the conference delegates who responded did not read any of the relevant journals in the field. This chapter discusses whether there may be mutual misunderstanding between science communication practitioners and social scientists who carry out research in the area. It puts forward an example of the use of research on public perceptions of risk in science communication training.

Keywords Communicating risk, science communication, training

16.1 Introduction

Take any scientific subject—chemistry, genetics, physics, zoology—or social science, and the norm is that to practise it, you should have studied it. This is generally true of the arts and humanities. It is especially true of the more applied subjects—engineering, law and medicine—or we tend to hope that it is. The safety of our buildings and transport systems, the smooth working of our justice systems, and the soundness of our health rather depend on practitioners in the field having gone through a rigorous apprenticeship that usually involves coursework, exams and
extensive on-the-job training. And in the world of academia, the leaders in the field are expected to be first-rate teachers and prolific and influential researchers.

But when we take the area covered by the Public Communication of Science and Technology (PCST) Network—variously known as public understanding of science, science and society, science communication, public engagement with science and technology (S&T), or whatever the current moniker might be—the rules get much more lax. People tend to drift into careers that are more or less associated with PCST. At the ‘top’ of the academic tree there are even professors of ‘public understanding of science’ or something similar who have carried out no research in the area; nor have they given a single lecture on the subject. Instead, they may have written some popular science books (or several versions of the same book) or run a science festival. And while one cannot imagine that a university of any standing would appoint someone with no research or teaching record as professor in molecular biology or civil engineering, or in modern languages or criminal law, where science communication is concerned, lack of peer-reviewed publications is—(too?) often—not an issue.

Twenty-something years ago, one might have argued that it did not matter or that it was inevitable. After all, public understanding of S&T was then a new field; the push to greater scientific literacy among ‘ordinary’ citizens was only just gathering new momentum after a hiatus of several post-war decades. To be sure, isolated groups of sociologists, and the odd historian or two, were interested in the public faces and the public’s perceptions of science, but there was nothing to make up a corpus, such as would be understood by members of mature academic disciplines. And, anyway, there were no respectable outlets for research and little opportunity for teaching.

Today, however, the situation has moved on considerably. Courses at undergraduate, masters and doctoral level are to be found across Europe, even if they are not anything like as widespread as subjects like environmental studies and, nowadays, nanotechnology. Since 1992, there have been two peer-reviewed journals in the field—Public Understanding of Science and Science Communication—that publish research that one would have thought was highly relevant to those associated with PCST and similar networks and activities.

Yet the impression remains: on the one hand are the practitioners, often with a background in the natural sciences, medicine or engineering, who organise and take part in public engagement with science activities of one sort or another; on the other hand are the researchers, usually with a background in the social sciences or humanities, writing articles for the journals, aloof from the blood and sawdust of the science communication arena. And the two just do not talk to one another. Or is that so?

This outline is all based on anecdotal evidence. That does not make it wrong, but anecdotes are slippery, and those who base their arguments on them are likely to take a tumble when the winds of real evidence blow. To date, however, there is little solid ground on which to build up a picture of the relation between research into science communication and day-to-day practice. Attempts to bring the two elements closer together have, so far, not been unqualified successes (Stocklmayer et al. 2001, Miller 2003).