Scientifically Speaking

HOW TO SPEAK ABOUT
YOUR RESEARCH
WITH CONFIDENCE AND CLARITY

JO FILSHIE BROWNING

Speaking about science in the digital age

Now, more than ever, the scientific and medical community is under the microscope and in front of the media. Despite making incredible breakthroughs, the benefits of your work continue to be hotly debated. There's a movement of anti-experts, anti-vaxxers, climate change deniers and conspiracy theorists; fake news floods the mainstream media and flourishes on social feeds. This has grown worse during the COVID-19 pandemic, with fictions and falsehoods spreading as virulently as the virus itself.

The level of disinformation has grown because so much scientific discourse has now shifted online. When anyone with an opinion can log on and say what they want – whether or not it has any factual basis – it creates a lot of noise. It's as if there's a war being waged for people's attention, with scientific experts increasingly on the disadvantaged side.

What can you do to cut through the confusion and make yourself heard? First you have to acknowledge that to responsibly communicate science you have to understand and adapt to this new digital environment. It's no longer enough to write papers or even speak at conferences. You have to master the art of putting yourself across succinctly and engagingly online, which now means speaking on video in all its forms. The reality is that today it's not your 100-page research report or the thesis you spent three years writing that will make waves, but the 20-word sound bite, the media interview, or the online snippet of you discussing it.

By the end, you'll understand how to make a genuine difference in the world through speaking about your subject. You'll also be able to influence public debate, gain more citations and enhance your professional profile; this will lead people to want to collaborate with you, which in turn will create more speaking opportunities in its own right. Most of all, your science will reach the audiences that need to hear about it.

I've seen this transformation happen with countless scientists and doctors during my 25-year career in healthcare communications, both as a practitioner and as an academic. My time as a journalist and media spokesperson in the healthcare sector taught me what the media wants to know, and my work as a media trainer has given me valuable experience in turning even the most reticent of professionals into confident speakers and communicators. What's more, I was a lecturer on the first undergraduate science communications course in the world and I have a diploma in scientific communications. Today I work with both senior and up-and-coming physicians and scientists as a coach and trainer, helping them to discover their inner communicator so they can influence others through their speaking. I'm also an international speaker myself.

In Part 1 of this book, you'll learn why speaking is so important and how it actually works (as opposed to how you may *think* it does). In Part 2, you'll master the process of creating and delivering a compelling talk that communicates your subject clearly and persuasively, along with how to handle a Q&A session with aplomb. And in Part 3, you'll discover how to speak engagingly in many different settings, while at the same time minimising your nerves and maximising your energy.

You may be reading this because you have a specific event coming up and want to jump to the relevant part, and that's fine. But I'd encourage you to read through the rest as well because you'll gain better results if you do. Becoming an engaging speaker means gaining an understanding of the fundamentals as well as delivering in a specific situation. My goal for you is that you'll use everything you learn in these pages to enable you to become the most compelling communicator you can be, giving talks and presentations that are as powerful as the science behind them. Good science should never be badly communicated, so let's make a start.

Part 1

Why you need to speak, and how it works

Chapter 1
The speaking advantage

> *Precision of communication is important, more important than ever, in our era of hair trigger balances, when a false or misunderstood word may create as much disaster as a sudden, thoughtless act.*
>
> *James Thurber, American cartoonist and author*

You're reading this book because you're curious about becoming a better speaker. But first it's worth asking why that's important. What's in it for you? When I talk to scientists and physicians from around the world, I'm given many reasons for why they want to speak with influence, but in the end they come down to two main ones:

1. To enable your research to make a bigger impact on the world.
2. To further your career.

These are worthwhile aims, and of course you may be motivated by both of them. You might also be asking yourself why you can't carry on as you are now, writing about your expertise and research projects and publishing them in scientific journals. Of course, specialist publications are still hugely important, as are scientific congresses and other science-led events. But they won't help you to win the war of attention that I mentioned earlier. Much has changed in the realm of communications in recent years, and the way you put across your messages needs to evolve to adapt to the current environment. Digital platforms have an impact on how you gain a profile at a global level, and audiences expect a different kind of communication than they once did. This means that what got you to where you are now won't

necessarily get you where you want to be in the future; this new paradigm represents an opportunity, and to take full advantage of it you need to learn to speak with influence through a variety of different media.

What has changed

It was 3.00 pm on 21 October 2018 at a congress of the European Society of Medical Oncologists (ESMO), when a woman in a pale-blue dress walked onto the stage in front of a packed hall of 6000 people. Her name was Dr Kathleen Moore, and she was about to present the data behind a major breakthrough in ovarian cancer treatment: the Phase 3 results of the SOLO-1 study, looking at the developmental drug olaparib in women with the BRCA mutation of advanced ovarian cancer. As Dr Moore explained, in normal circumstances nine out of 10 women with the BRCA mutation die within four years, but this new treatment had been proven to achieve a 70% reduction in the risk of progression or death with olaparib versus placebo. For these patients, what we were essentially seeing was close to a cure. The high point of Dr Moore's talk was when she flicked a graph onto the screen behind her that illustrated the dramatic separation in the curves between the progression-free survival rates of the placebo group and the treatment group. At this moment there was an audible gasp from the audience, with tears appearing in some people's eyes as the full impact of the research came home to them.

The announcement was felt across the world, but it wasn't just because of the congress. In fact, Dr Moore's presentation was only part of the data communication. The work had actually begun the previous morning, when I'd chaired a press conference at which the key scientists involved had presented the research and then been interviewed by journalists. The resulting material was packaged up so that just as Dr Moore was walking onto the stage it was ready to be published in the medical media. Her presentation coincided with the publication of the study in the *New England Journal of Medicine*, and alongside this pre-prepared tweets were released by those involved in the study and others who were excited by the results. Images and video footage were posted online. It was a highly coordinated communications cascade, synchronised to hit simultaneously to create maximum reach. The result was a PR coup: articles appeared all over the world from the *Financial Times* to *Medscape*, various other media highlighted the 'breakthrough medicine',

Twitter went crazy, and Dr Moore and her colleagues from the trial had their science in the spotlight. I felt honoured to be a tiny part of this process.

However, leaving aside my own memories of the experience, what I want you to take on board is this: although many people saw the live presentation and some may have read the news articles, most found out about the research through social media, news websites and other digital channels. It's an illustration of how science communication has been going through structural changes that are driven by the increased prevalence of the spoken word in the digital sphere. A talk given at a conference is like planting a seed – it needs the soil and water of online media to bear fruit.

It wasn't always like this. Back in the nineteenth and twentieth centuries, the study of science was something that researchers carried out in small and exclusive groups. Writing and reading were the only channels for knowledge to reach other groups of scientists and the broader community. Academic papers were submitted and peer reviewed, and other experts might agree or disagree through writing letters to journals or conducting counter-studies; almost everything was conducted through the written word. Then, over time, international conferences were established so that scientists and doctors could communicate their work orally, which allowed a broader community who were fortunate enough to be able to travel to engage in in-person debate. As the internet revolution made its impact felt, blogs and online news articles were added into the mix, democratising scientific discovery and discussion across the world. And because it became increasingly obvious that, in order to be noticed, scientists had to surround their audiences with information, media ubiquity was born. Whether it be on Twitter, LinkedIn, news websites, or academic journals, their research had to be everywhere.

This worked well for a while, but the problem was that everyone started doing it. Today the challenge is that there are just too many words. Articles, papers, discussion forums, social media posts – who has time to read everything? Scientists are finding it increasingly difficult to achieve what PR people call 'cut through', which is when what you write is read by the people you want or need to see it. On top of this, you'll have noticed that we're all less willing to read now. We skim text as we scroll through our newsfeeds, taking in only the headline and summary; we 'read' books that are abbreviated to 15 minute cheat sheets or audio summaries; and we look at tweets rather than whole statements. So not only is there a huge amount of other written material out

there to compete with yours, but the people you want to reach and influence are less inclined to read it in the first place.

What can you do about this? In a sea of written words, the *spoken* word now cuts through more than ever. And with the advent of the digital revolution, we can now speak with more people than ever before through online videos – far more than we can in face-to-face meetings. People like watching videos because if they can get what they need in a 30-second hit, that's far less demanding than reading an article. It's estimated that by 2022 online videos will make up more than 82% of all consumer internet traffic – that's 15 times higher than in 2017.[1]

The implication is that to win this war of attention you need to use your voice, and today that means accepting that video is king and that speaking on camera is necessary. Of course, printed media still has its part to play, but whereas once you would give a talk with a press release to go with it, now it must be accompanied by scheduled tweets and pre-recorded videos. And because conferences are filming, recording and live-streaming their talks – particularly post-COVID – it's safe to say that any scientific presentation you give will be disseminated much more widely than the walls of the congress room.

The bottom line

Speaking has become the key skill in scientific and medical communications, whether it be in person or on video. Think of the different ways you can communicate orally:

- presentations (both in-person and increasingly now online)
- congress TV
- press conferences
- panels (both in person and increasingly now online)
- poster sessions
- Twitter (this isn't oral, but the platform works much like a conversation pit and often includes video).

[1] www.forbes.com/sites/tjmccue/2020/02/05/looking-deep-into-the-state-of-online-video-for-2020