Communicating cutting-edge science

Michael Sulu explains how he uses comedy to engage a diverse audience in science.

Thill relatively recently, public engagement and scientific communication (sometimes called PE and scicomm) weren't regarded very highly. Even today, they are still the younger siblings of the older twins of teaching and research within an academic setting. Not all academics focus on sharing their work with the public, so why do some do it? Undertaking either public engagement or science communication can be an arduous task, and it is not linearly scalable. Although the more you do, the more of an information bank you create, eventually making things easier, there is a fair amount of work required to get each presentation polished and ready.

DIFFERENT REASONS FOR ENGAGING

A general theme for many communicators (including me) is the need to show that members of minority groups work in science, so as to get over the 'you can't be what you can't see' aspect of the deficit of different groups within science. One of the arguments for diversity is that a diverse group of people will have diverse ways of thinking and thus create diverse solutions to a problem. If a particular individual can't solve a problem, it is unlikely that a dozen others with the same ways of thinking will have any more luck! A related point is that science and engineering research are often about the pursuit of answers to specific questions, and some of these questions may have been answered elsewhere.

So the intelligent first step is simply to go out to talk to people about the problems you are facing, and to listen to how others have solved problems to see if your problem can be solved in the same way.

Another really important facet of science communication is that it often shows the human, error-prone side of science and scientists. Everyone makes mistakes – they are inevitable, but the important thing is to learn from them. When I was lecturing for an absent colleague on the topic of environmental legislation, I found out about an environmental disaster that took place in upstate New York. Having never heard of it, I thought it would be a good idea to investigate it mid lecture and opened up an online image search. It was not until the images appeared that I realised the danger of entering the search terms 'Hooker' (the chemical company) and 'Love Canal' (the location).

DIFFERENT MEDIA

The reason sometimes dictates the medium for communication. Generally, you identify your audience and the reason you want to engage with those particular people first, then you plan your engagement. You might

► Michael Sulu performing at the January 2015 Bright Club at the Bloomsbury Theatre. (© Steven Ullathorne)



ANALYSIS

want to communicate widely with the general public, in which case radio and television make sense. Or, if you want to speak to a specific demographic that is already interested in your topic, then a podcast or a lecture could be better. Lectures are more transient, unless videoed, but they do provide the opportunity for more real-time discourse.

So what is Bright Club? It uses humour to engage the public with current research and how it is carried out. To do this, university researchers have to present their research area as a stand-up piece in plain English. The thinking behind this approach is that comedy engages everyone, and once you have engaged someone with a topic, they will be more likely to go on to find out more. Comedy enables people to learn while laughing.

Stand up, though? I was tricked into it! A simple discussion led me to say that I was happy to do stuff, but that I couldn't do the event I was being asked to do because I was busy and it was too short notice. Fast forward a couple of months and I received an email saying I had been accepted for Bright Club training! I had no idea what it entailed, but it turned out to be two sessions. The first one was learning how to be funny and how a joke is constructed; the second was practising and receiving constructive criticism. Learning how a joke is constructed made me far more appreciative and also

critically aware of how other comedians work. Practising the material is both essential and soul destroying. It's like imposter syndrome ramped up to the max.

Stand up is daunting, to say the least, and people are often surprised that I do it. These people are often my friends, and they know me well enough to know that I am rarely the funniest person in any social group, although I have my moments. When the actual performance comes it is amazing: you have spent weeks thinking you won't be funny, then you stand up in front of an amazingly kind audience who laugh at everything. (I did get a heckle in my first show, but it was funny so it just made me laugh and everyone laughed with me). After the performance, it is immediately clear why people who do it for a living love it! There is a huge adrenaline rush, so it is easy to see how it can be addictive.

POSITIVE VULNERABILITY

I continue performing at Bright Club mostly because there is something cathartic about the vulnerability of stand up. With or without slides for accompaniment, it is you versus a crowd daring you to make them laugh. Unexpectedly, the experience is completely different in a small pub compared to a theatre. A pub is intimate, and you can see and hear everything and everyone, but a theatre is expansive, and under the glare of the bright

lights you feel even more vulnerable, especially when you can't really see who is heckling you.

I think that the vulnerability aspect is the key element of doing stand up for me. The obvious positive is that it is useful practice for public speaking in general - you can take humour into the lecture theatre and to conferences, and you can generally use it to improve all of your public engagement, as humour is one thing that unites us. I have done a fair amount of public speaking and the Bright Club experience is different. As well as a boost to both confidence and competence in public speaking, you gain the ability to think on your feet and adapt to audiences. Equally importantly, you get comfortable with being uncomfortable in public. It is the last part that is key for communication in general - the vulnerability you feel and your level of comfort with discomfort means you have an enhanced ability to have difficult conversations. You also become more adept at reading a room.

WIDENING PARTICIPATION

Some of those difficult conversations have happened when undertaking outreach or widening participation. For example, when I to go a school and talk to minority groups about the experiences in higher education. The ability to speak with passion and emotion about topics that can be difficult is essential, because a key

tenet of most jokes is that the audience has to become invested in them and in you, so you have to at least seem as if you have a strong emotion about something or a definite stance on a topic, along with the ability to create a positive emotion (laughter) from a potentially negative space.

So from my perspective Bright Club has been an entirely positive experience. Through listening to other people perform I've learned about other disciplines – the Bright Club plan has worked on me! I've made new friends who are almost all funnier than me. I've bonded with people from a variety of career stages and disciplines, from a variety of backgrounds and with a variety of personal experiences, all brought together by one initiative, Bright Club – the thinking person's variety night. While I don't like the tag line, the experience has enriched my life massively.

Dr Michael Sulu is a post-doctoral research associate at University College London in the Department of Biochemical Engineering. His work focuses on three things: growing different types of microorganism, teaching others about growing microorganisms and training people how to grow microorganisms.



July 2019 | environmental SCIENTIST | July 2019