

Evidence-based, informative and on YouTube? How to communicate science in the Internet age

by Blog Admin

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Traditional methods of communicating research don't appeal to an online audience. But academics can't just rely on charisma and trust when communicating to online viewers.

Dorothy Bishop experiments with how to keep everyone happy.



Here's an interesting test for those on Twitter. You see a tweet giving a link to an interesting topic. You click on the link and see it's a YouTube piece. Do you (a) feel pleased that it's something you can watch or (b) immediately lose interest? The answer is likely to depend on content, but also on how long it is. Typically, if I see a video is longer than 3 minutes, I'll give up unless it looks super-interesting.

Test #2 is for those of you who are scientists. You have to give a presentation about a recent piece of work to a non-specialist audience. How long do you think you will need? (a) one hour; (b) 20 minutes; (c) 10 minutes; (d) 3 minutes.

If you're anything like me, there's a disconnect between your reactions to these different scenarios. The time you feel you need to communicate to an audience is much greater than the time you are willing to spend watching others. Obviously, it's not a totally fair comparison: I'm willing to spend up to an hour listening to a good lecture (**but no more!**); though to tell the truth, it's an unusual lecturer who can keep me interested for the whole duration.

Those who use the internet to communicate science have learned that the traditional modes of academic communication are hopelessly ill-suited for drawing in a wider audience. **TED talks** have been a remarkably successful phenomenon, and are a million miles from the normal academic lecture: the ones I've seen are typically no longer than 15 minutes and make minimal use of visual aids. The number of site visits for TED talks is astronomically higher than, for instance, Cambridge University's archive of **Film Interviews With Leading Thinkers**, where Aaron Klug has had around 300 hits in just over one year, and Fred Sanger a mere 148. The reason is easy to guess: many of these Cambridge interviews last two hours or more. They constitute priceless archive material, and a wealth of insights into the influences that shape great academic minds, but they aren't suited to the casual viewer.

For most academics, though, shorter pieces pose a dilemma: they don't allow you to present the evidence for what you are saying. I felt this keenly when viewing a **TED talk by autism expert Ami Klin**. At 22 minutes, this was rather longer than the usual TED talk, but Klin is an engaging speaker, and he held my attention for the whole time. As I listened, though, I became increasingly uneasy. He was making some pretty dramatic claims. Specifically, as the accompanying blurb stated: "Ami Klin describes a new early detection method that uses eye-tracking technologies to gauge babies' social engagement skills and reliably measure their risk of developing autism". I was very surprised at the claims made for eye-tracking, and the data shown in the presentation were unconvincing. More generally, Klin talked about universal screening for 6-month-olds, but I was not sure that he understood **the requirements for an effective screening test**.

After the end of the talk I checked out Klin's publications on Web of Science and couldn't find any published papers that gave a fuller picture to back up this claim. I asked my colleagues who work in autism and none of them was aware of such evidence. I emailed Klin last week to ask if he can point me to relevant sources but so far I've not had a reply. (If I do, I'll add the information). At the time of writing, his talk has had over 132,000 views.

So we have a dilemma here. Nearly everyone agrees that scientists should engage with audiences beyond their traditional narrow academic confines. But the usual academic lecture, saturated with PowerPoint

explaining and justifying every statement, is ill-suited to such an audience. However, if we reduce our communications to the bottom line, then the audience has to take a lot on trust. It may be impossible to judge whether the speaker is expressing an accepted mainstream view. If, as in the Klin case, the speaker is both famous and charismatic, then it's unlikely that a general audience will realise that many experts in his field would want to see a lot more hard evidence before accepting what he was saying.

I've been brooding about this issue because I've recently joined up with some colleagues in a web-based campaign to raise awareness of language impairments in children. My initial idea was that we'd post lectures by experts, attempting to explain what we know about the nature, causes, and impacts of language impairments. Fortunately, we were dissuaded from this idea by our friends in TeamSpirit, a public relations company who have come on board to help us get launched. With their assistance, we've posted several videos and worked out a clearer idea of what [our YouTube channel](#) should do. We will have professionally produced films that feature the experiences of young people with language impairments and their families, as well as the professionals working with them. But we also wanted to ensure that the material we put out was evidence-based, and to include some pieces on issues where there were relevant research findings. We were advised that any piece by a talking academic head should be no more than 3 minutes long. I could see the wisdom of that, given my own reactions to longer video pieces. But I was uncomfortable. In 3 minutes, it's impossible to do more than give a bottom line. I didn't want people to have to take what I said on trust: I wanted them to have access to the evidence behind it.

Well, we're now experimenting with an approach that I think may work to keep everyone happy. Our academic-style talks will stick to the 3 minute limit, but will be associated with a link to a PowerPoint presentation which will give a fuller account. This is still shorter than the usual academic talk – we aim for around 15-20 slides, all of which should be self-explanatory without needing an oral narrative. And, crucially, the PowerPoint will include references to peer-reviewed research to support what is said, and will include a link to a reference list, including where possible a review article. I anticipate that most people who visit our YouTube site will only get as far as the 3 minute video. That's absolutely fine – after all, only a small proportion of potential visitors will be evidence geeks. But, importantly, the evidence will be there for those who want it. The PowerPoint will give the bare bones, and the references will allow people to track back to the original sources.

We live in exciting times, where it has become remarkably easy to harness the power of the internet to disseminate research. The challenge is to do so in a way that is effective while preserving academic rigour.

Note: This article gives the views of the author(s), and not the position of the Impact of Social Sciences blog, nor of the London School of Economics.

This blog was originally published on Dorothy's [BishopBlog](#) and can be [found here](#) along with a further discussion.

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