However brilliant a scientist is, however incisive their mind and however elegant their experiments, they must be able to communicate effectively. The ability to write fluently, to inspire an audience in a lecture hall, and to listen carefully and argue cogently face-to-face with a sceptic are all important. Maybe some people believe that it’s only important to impress the journal referees and members of grant panels who might be in the audience. Well, it is possible that journal referees may remember if the person they’re sitting next to is convulsed during your talk, and they may remember this long after they’ve forgotten anything you actually said.

I suspect that we all feel that sometimes, maybe often, we fall short of the standards we set for ourselves in our talks. I’m sure I can’t be alone in knowing that sinking feeling, when there was something you wanted to say but realize that the message got lost somewhere in the saying of it, and sometimes we recognize exactly what the faults were in our own talks only when we see those faults displayed by others.

So I have been compiling a small list of ‘dos and don’ts’ for scientific presentations. Many of these relate to Powerpoint presentations, perhaps because this is still something of a strange new toy to me. I feel rather nostalgic about the absence of the blue slides whose age you could estimate by how much they’d faded, and the slide with the cracked glass, and the one that was always upside down whichever way you put it in the projector – anyway, here is a sample.

1 With Powerpoint you can show 76 slides in 10 minutes, but the audience can’t read them. They can read about six, if the slides are clear. If they’re awake.

2 Colours are pretty. But, for instance (and here I check my notes) yellow on white is not very readable. Nor is red on green, even if you’re not red-green colour blind. Nor is red on blue, or red on black. Red on black is completely unreadable from a distance. In fact, keep away from red. Put a big sticker on that button – don’t go there.

3 Unless you’re going to show a gene sequence. Then red on black is fine.

4 Blue on blue looks very cool on the screen. It doesn’t work. Sorry. Nor does pale grey on pale grey (no, I’m not making this up).

5 Things you can read on the screen need to be bigger when projected, so make the writing bigger. Bigger again. OK leave some of those words out. Leave most of them out in fact. Bigger. Do you really need that slide?

6 Abbreviations save space in writing abstracts that you don’t really expect to be read. However, many abbreviations save no significant time when speaking. Some do – like B for corticosterone. Please don’t say B.

7 You can write things inside coloured stars to make them stand out. The audience won’t be able to read what’s written, so don’t worry about using odd abbreviations to fit the space. Your slides will look like toothpaste commercials, and if that’s OK with you, go ahead.

8 Half of your audience may not speak English as a first language. Half of the rest may not speak electrophysiology fluently. Half of the rest are 50-ish and our eyes don’t work too well and maybe our brains, and the theatre is probably too hot and it’s pretty hard to stay awake, and isn’t it time for coffee or lunch? Half of the rest are waiting for the next talk, and half of the rest were too embarrassed to leave after the last talk. You might address your talk to the seven people interested: your students who are waiting to see if you’ve forgotten to acknowledge them, your postdocs who are waiting to see if you’ve understood them, and your friends who are checking if you’ve read their papers.

9 Or you can try to make things clear and simple and interesting. Clear and simple and interesting is hard. Much easier to be confusing and to sound important. Much harder still to be interesting, but you don’t stand a chance if you’re not clear and simple. If your ideas are illogical or incoherent then this is very obvious in a presentation that’s clear and simple. Go for dense and detailed if you don’t have anything interesting to say, and let the audience sleep. Throw in a gel or two to be sure of that, or maybe one of those electrophysiological slides with subpanels a–f.

10 Try to be clear without treating the audience as though they’re stupid; they’re not. They probably know quite a lot, but might have forgotten it for the moment. Reminding them gently is good. Making them feel like children is not.

11 Animated reconstructions make a third of the audience feel slightly motion sick.

12 A 10 minute talk should take 10 minutes. A 20 minute talk should take 20 minutes. A 30 minute talk should take 30 minutes. If you think that the audience will not be interested enough to ask questions, or that the schedule drawn up by the organizers was just for fun, then by all means run over time.

13 A good 10 minute talk is not a good 20 minute talk spoken very fast.

14 ‘I didn’t have enough time to get to the really interesting stuff’. Yes well maybe. But if you don’t have anything interesting that you can say in 10 minutes, I’m sorry, but you probably don’t have anything interesting to say in 20.

15 We know that X is a wonderful city and that you’re very glad that the organizers have invited you, but perhaps it’s best not to remind them publicly just in case they’re about to regret it.

There are some tricks that I didn’t see used – as far as I can remember no speaker inserted sound effects into their slide

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show, so there's some good news to report. In fact at least half of the talks that I went to this Summer were pretty good and some were impressive. A few were truly dire, but I've known plenty of speakers give a bad talk at one meeting and a great talk at the next, and vice versa.

But don't assume that your talk was one of the good ones. It's a convention that the organizers and many of those you meet will congratulate you on your wonderful talk. I know this, because I once made the mistake of congratulating someone on their talk before they'd given it. It was a long time ago and I try not to do that any more. Your friends might tell you gently what went wrong, or you might be able to guess it from the broad smiles and warm words of those who disagree with you. Or from the evasive looks of those who slipped out half way through.

If you're an invited speaker, it's not the audience who are being honoured by your presence, but you who are being honoured by their attention. They deserve your thanks and consideration; maybe in a rational world it's you who would be paying them to listen not they who are paying you to talk. If you are an invited speaker, you're a part of the meeting, and its success depends in part on you, not just in delivering a great talk but in bringing some of your lab along, in going along to see the posters and to talk with people some of whom might just be there partly to meet you, or in the hope that you'd look at and comment on their work. Be thankful, and do your bit in every way you can; that's what you're being paid for, not to display your importance.

Finally, if you're an invited chairman, you have three jobs: to remember the name of the speaker, to keep him or her to time, and to ask the first question if the audience are fast asleep. To keep the speaker to time it may occasionally be necessary to pull a plug out, or in exceptional cases to chase them from the podium. If you don't feel able to do these three things, then maybe it's best to say no when asked.

I've given some truly dire talks myself, including one far worse than any I've heard lately. I still wake up sweating about the talk I gave when I switched the data projector off instead of the slide projector; it took 10 minutes to warm up again, by which time I'd reorganized my talk to accommodate the slides that were meant for later, then I had to reorganize again when the projector had warmed up, now only to find my fingers too sweaty to work the mouse. I think my voice dried up at this point. On the other hand, one of the best talks I ever gave only began to get good half way through when the projector broke down and I was left with just a blackboard; probably only then did the audience sense I cared about what I was saying, and start to take note. But then I was talking about other peoples' work, which always helps, and I couldn't show the data, which makes belief easier.

Show the data; not all of it, just the bit that really matters; it's a good reality check.

Even if it's a gel.

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