

Public speaking : protect and survive

Steve Abel

May 19, 2017

1 Introduction

Public speaking is more than just a question of getting through your material in the allotted time. You have to get it into the heads of the audience as well. More than that you would like to impress them enough that they go away and bother to retain what you said and possibly even look up your paper. In short you have to engage with them. Here are a few guidelines to help you do that. Some of them may seem rather cynical. I think this merely indicates that talks are a) a very poor way of conveying information b) mainly 'political', in a sense that will become clear as we go along. This is wisdom gained over many years of giving and attending talks. Of course these rules are not always easy to apply as no doubt you will realise if you have attended my own talks, but it should give you some idea of what to aim for. You may choose to ignore it and learn the hard way instead. **Note added:** due to this document becoming mildly viral (at the common cold level rather than the smallpox level) it was updated in 2017.

2 Preparation beforehand

Remember your audience is waiting to be impressed and entertained (but is for the most part entirely passive). The best way to impress them is to be prepared and for them to see that. Organize your talk properly and know it back to front without having to rely on the crutch of your Keynote-split-window-presenterview or whatever it's called (it won't work on the day). You should address it to (or slightly below) your audience, so the first thing you have to do before preparing is to find out who will be in your audience. It is difficult to underestimate the audience - the accepted statistic is that the average audience member spends less than 20% of the time actually listening fully to what you are saying. Because of this engaging with an audience is a much more difficult prospect than engaging with a single listener. It is more like talking to a bored child with attention deficit disorder. Help them to concentrate by having plenty of pointers. Put in mini summaries so that people can catch up if they have tuned out. Keep telling them what you are doing and why. If there are two ways to explain things do so. Put in plenty of pictures.

The talk should roughly be organized as follows:

1. The beginning - Say *what* you are going to do and *why* it is interesting. Then briefly summarize the outline of the talk.
2. The middle - build your arguments logically and piece by piece - beginning with what you think the audience knows. *Never miss steps in the logic*. Every time you do this you lose 50% of the audience. Try to have one step per slide.
3. The end - Summarize *what* you have done. *Compare* to previous work. Say *why* it is better. Say what remains to be done in the future.

Once your talk is prepared and you are happy it is in this format your preparation is about 50% completed. You now need to do the following

Read again through and around the subject as much as you can without being physically sick.

Think of questions that might come up and think of possible answers, of which more later.

Above all, ***own your arguments***. You are going to convince an audience, many of whom have differing opinions that your model, theory, whatever, is better than theirs. This is only possible if you believe it yourself. (This is in fact the whole point of a PhD - you might like to discuss this with your supervisor at some point.)

The evening before, go through the talk outloud, even if you feel stupid, and *several times*. This will make you much more confident on the day and also help you to organize your time during the talk. This is a fact I literally learned by trial and error; when you are the speaker it isn't at all obvious that it makes a difference. I simply found empirically that if I had done this then I would literally be getting pats on the back after the talk. If I had not then the audience would either wake up drenched in their own drool, or be a perfect picture of confusion. Clearly I must present completely differently somehow, probably more coherently, but I could not say explicitly what the difference is ¹.

3 On the day

Eat a good breakfast.

If you have ever been nervous talking to your supervisor, you will be doubly nervous now. This feeling never goes away but you can learn how to control it and use it. Many symptoms of nervousness (shaking, sweating etc) are to do with energy loss. To combat this, eat something energy boosting but light 10-15 minutes before the talk e.g. chocolate (or nitroglycerin). Have something heavy with a slower energy release for afterwards.

Go over your slides quickly to remind you of what's on them.

4 During the talk

First let's talk a bit more about the audience. Their expertise will of course vary and you should make sure you know what type of audience you are addressing before you prepare the talk. It's also a good idea to Google them if you have not seen them before, so that you can recognize any alpha males/females in the audience. Despite this, the social composition of an audience is more or less invariant. Broadly speaking, an average audience consists of the following;

- 50% are people who are just hanging around for the whole session and may be reading something else but pretending to listen to you by lifting their eyes every so often.
- 30% are people who drifted in on the off chance that your talk may have been of relevance. Once they arrive they realise it is not and would like to go but are trapped by the guy sitting on the end of the row. They will spend the rest of the talk resenting you for wasting their time.
- 10% are people who are waiting for the talk after yours and got the time wrong - they'll wait anyhow though just to be polite, but probably think about something else or just gaze at the ceiling.
- 5% are people who are genuinely interested! That's the good news. The bad news is that they have a better model of their own and are here to make sure your's is rubbish and to shoot it down if they get the chance. They will ask questions like "Why should we believe this model when the (insert-name)-model is so much better". They may also adopt an air of general disdain and boredom in order to convince the rest of the audience that they should ignore what you are saying.
- 5% are people who actually like your model and are interested in what you have to say. This includes your supervisor - in an audience of 20 or less this group will probably only be him/her.

Example: a typical seminar audience in the UK would be about 16 people. Of these, 7 will be there because they go every week to avoid work, 4 came along because they misunderstood your title, 2 are there because they were drafted to make up the numbers, 1 is there because he mistook you for a good friend of his who actually died a few years ago (when you deny this he'll probably ask if you're related), 1 is there because she's an expert and feels obliged, 1 is actually interested (possibly the guy that invited you), and 1 is a mystery guy that no-one knows who turns up every week and falls asleep right in front of you before you even start to speak. Sad but true.

Corollary: you're lucky if even 5% of the audience are willing to put much effort into understanding what you have to say. Not only that but they will have probably read your paper anyway. So, for the most part these are *not* the people you are addressing. Your job is to entertain and impress the 90% of the audience that is entirely neutral, and to win over the 5% who are actually against you. To do this you have to convince them that you believe what you are saying .

¹On the other hand the pre-match preparation for one of the best talks I have ever seen – by someone who will not be named – consisted of her polishing off my bottle of Salmayaki. So I would use your own judgement.

Most of this (i.e. convincing the 90% neutrals) can be done entirely with body language and is independent of what you have to say. (Of course the best way to adopt the air of someone who believes what they are saying is to **actually** believe what you are saying - i.e. own your argument, again. If you do not the chances are you will be found out.) Remember most of the 90% will not be experts and will not be able to judge what you are saying. Their impression of the strength of your argument will be based almost entirely on your apparent conviction and whether you can tackle questions. So ...

- Stand straight, head up
- Face the audience and talk *to them*
- *Never* just read off the slides
- Discuss everything on the slides - don't flick quickly through the slides as the audience won't take anything in and may even become hysterical. Also don't do that covering-over-half-the-transparency-and-then-revealing-it-later thing. I think someone thought this was a good idea in the seventies. Everyone hates that. **Update for this millenium:** Don't do *too much* of the reveal the slide point-by-point thing. If you are building an interesting and complicated slide it can be very effective. But flipping down endless bullet points of text becomes irritating.
- Look relaxed and confident
- Project your voice to the back of the room
- Look as if you are enjoying yourself and are impressed with the cut and thrust and general cleverness of your arguments and results - if you don't look impressed the audience won't be.
- Do not talk when you are looking away from the audience. This is especially difficult if you are using a blackboard so slides are better from this point of view. If it is a blackboard talk, you do the following: 1) *Face audience: "I am now going to write such-and-such".* 2) *Write such-and-such on board whilst maintaining silence.* 3) *Face audience and talk about what you just wrote on the board (if you need to point at it, put your finger on the board and simultaneously rotate to face the audience using the remarkable flexibility of the human shoulder joint - if you have recently dislocated your shoulder use slides).*
- Pause between slides and after having made major points – look for signs of confusion if it is an important point that needs to be understood to continue.
- If you find yourself gabbling - take a deep breath, count to 5. Don't "race for the end" - otherwise before you know it you'll find yourself having finished and regretting having lost everyone.
- *Take control* of the talk. Remember you are leading it. If someone asks lots of questions it is perfectly alright to ask them to wait until later when you will address it. Note that a tactic of the hostile 5% may be to delay you so you run out of time and then close in for the kill at final questions when you are disoriented and disappointed at not having got all your stuff in.
- If someone disagrees with you, firmly and politely say why you think they are wrong. If you look anxious or raise your voice, they will be judged by the 90% of poeple unfamiliar with the subject to have won the point. If you disagree with them take a second to compose a good argument and calmly explain it.
- *Never* get personal with a questioner. It looks desperate and again you lose the point. For example if someone you know to be an expert ask you an elementary question do not say "Well, I thought you'd know that". (*Confession:* by 2017 I feel grizzled enough to reveal that this happened to me in my very first talk. I will reveal who the expert was on my deathbed.)
- If someone is being really stupid or irrelevant then say "as I said before" or "that's an interesting point but probably outside the scope of this work" or "it doesn't really make much difference to the end result". Note that you can use these tactics even if it *does* make a difference but you hadn't realised it before.
- If someone asks a tough question and you have no idea what they are on about, *never* say nothing, but don't blather either. Answer a question which you think might be similar to what they were asking. You can even begin "I'm not sure I fully understand your question, but if you mean ... ". Waffle on for a few minutes and finish by saying "Does that answer your question?", and look them straight in the eye. Unless they are extremely confident they will say yes. Half the time they won't even know what they were trying to ask anyway and will be relieved to be let off the hook.

5 In the event of emergency

Here are some common emergencies and suggested procedures to adopt. A good deal of these have happened to me at one time or other.

1. *Someone tells you that this has all been done by some Russian² in 1974*: Tell them that yes you are aware of that work, but your work adds a new twist and in any case you don't agree with their interpretation or some such nonsense. Even if it's not true the chances are they haven't read it anyway but have just heard about it and are just wheeling out their general knowledge for all to gaze upon admiringly. If it is true (or, even worse, if they happen to be the Russian in question) and they disagree then they may object. But you object back and no-one else is any the wiser. If he still objects proceed to step 2. The chances are you'll never see them again and this guy goes back to Russia and dies of cholera or something³.
2. *Someone claims that because of some X that is exceedingly complicated, this is all wrong*: Tell them that you do not agree but maybe you should talk about it after - to be used sparingly as it's a very obvious avoidance tactic and looks weak. Try to paraphrase this as much as possible. (Although some of the audience may become mirthful when they see through it and realize that you are in trouble.) You can say something like - "I'm not sure I can answer that properly now, but let's discuss it afterwards". It's perfectly alright to not be able to answer a complicated question that requires significant thought and possibly a pen and paper.
3. *Some bigwig, let's call him/her Professor X (possibly a member of the hostile 5%), laughs openly or makes a sarcastic remark that disparages your work and indeed your very existence*: This could be curtains but the best tactic here is simply politely to explain why you think they are wrong. Remember this is a different situation from speaking in private where you might be tempted to laugh along with them in order to save face. If you do that here you look like a fool. You should very publicly and seriously acknowledge that they disagree, and tell them (politely) that you think this is because they failed to understand your argument. It's even better if you can point out precisely where they have gone wrong as then they run the risk of looking stupid. To avoid this they will do some serious back-peddling and will vigorously agree with everything you say from then on. Also remember this is not the worst outcome. The worst outcome is for no one to ask or say anything. This is actually the second worst, in which your questioner is trying to make your talk out to be unworthy of serious attention, but you yourself to be mildly amusing. Don't let them get away with it.
4. *General attack!*: If you do not fend off professor X's question properly, you may run into the following phenomenon. Prof. X's comment encourages a group of underlings. Suitably emboldened and sensing that you are wounded they fall over themselves to rubbish your talk in order to curry favour with Prof. X. You come under general attack. The best thing to do in this sort of situation is to treat them all as one person and speak to them as you did to Prof X. Explain the thrust of your argument from the beginning. Make it obvious how patient you are being by talking to them *very slowly* and carefully as you would to a group of slightly errant but simple children. Emphasize your points. Say things like "As I have stressed a few times" "Let me say this again because perhaps you didn't understand that" and so on. Hopefully the rest of the audience will pick up on the fact that you are now finding this line of questioning a bit trivial and tiresome. (You may be lucky enough to witness the rare but very interesting phase transition the occurs if Prof. X at this point decides to agree with you or - as sometimes happens - has simply been giving out false negative signals because they just happen to be a negative kind of person. The underlings then have to either disagree with Prof. X (which would make their lives impossible) or somehow all very loudly undergo a kind of Damascene conversion.)
5. *You run out of time*: This shouldn't happen if you organize yourself properly and field questions efficiently. You can ask the organizer for a few more minutes. If you really run out of time then skip to the last transparency and try to summarise for the audience the gist of what you were going to say.
6. *You yourself become convinced that your talk is all wrong half way through*: this feeling does occur, and is quite unpleasant: ignore it and press on regardless. When looked at in the cold light of day the chances are this is simply a misgiving anyway and will turn out to be groundless.

²Someone remarked to me when I wrote the original that it seemed very anti-Russian to put "Russian". The reason I use Russian is because there was in the past a definite phenomenon of seemingly new ideas being re-discovered in different notation in ancient Russian texts.

³I appreciate that I am using the male gender for this: in my experience females are kinder beings and do not carry out this kind of ambush. If I ever witness it I will neuter the text accordingly.

7. *Addendum: your talk is in real time shown to be unequivocally incorrect to such a degree that no sane person would believe it, and you suspect that you may in fact be Donald Trump.* This I am pleased to say has never happened to me but I have seen it happen, to quite senior people even. Basically remember this – we all do the best we can. *As long as you have been completely honest with the audience* even here there is no cause for alarm. You can simply say “Well this is the study we did and these were the assumptions we made ...”. You will have been thinking about whatever you are talking about for a long time – by this stage it’s really impossible that someone could throw something at you that would leave nothing of any value whatsoever in your talk. When I was in an audience and heard the (senior) speaker say precisely this, I really appreciated their honesty, because actually it was a lesson in how to do the subject. As long as the talk has been entertaining no-one will mind.