

Jeff's view

How (not) to give a seminar

Sometimes I wonder how many seminars I have sat through. My brain tells me 'several thousand', but my gut says 'zillions'. Let's see: progress reports, journal clubs, faculty seminars, job seminars, The Harvey S. Benefactor Distinguished Lecturer Award, acceptance speeches for prizes, the list goes on and on. When advising large institutions I often heard forty or more seminars in a few long days. Yes, 'zillions' sounds about right. We spend an inordinate part of our life in seminars. And here is the bottom line: Most seminars are bad. *Real* bad.

Yet seminars *are* important. As a postdoctoral fellow, I published my results in the best possible journal and then thought of the next experiment. This habit must have died out in the late Paleolithic. Now the scientific literature is exploding and nobody even tries to keep up with it any more. Today you must go out and sell your stuff. To be at science's forefront, you must head for the storefront.

I would not even dream of telling you how to give a seminar. Three children, fifteen PhD students, and 84 postdocs have taught me that raising a finger is just as bad as raising your voice. My postdoctoral mentor left me a little wooden plaque that says, 'He who always agrees with you cannot be very bright'. Yes, it's sexist, but that's how they did things in those days. The plaque adorned my office and greatly impressed my students and postdocs. When I told them what to do, they thought of the plaque and did the opposite. That's how they discovered great things. So here is how (not) to give a seminar.

Let's start with the basics. Your seminar should not inform, but impress. And don't call it 'seminar', for God's sake. That word is a clunker. Today it's *Roadshow*.

As with any show, the title matters. It must be flashy and get the adrenalin flowing. '*Signal transduction in the inflammatory response*' is precise, scholarly – and, well, scholarly. '*TNF RI, RIP, TRAF2 and FADD in NF-kappa B activation*' is more like it. 'This guy is hot stuff, a real deep thinker' your colleagues will suspect, and flock to your lecture. A hip title is also OK: '*Sex, drugs and yeast mass mating*' should catch their attention in Europe and at most major centers in the US, but do check things out before you speak at the Pontifical Academy in Rome or in the US Bible Belt.

Don't bother with introductions. General background, biological significance, earlier work by others – that's for the birds. The presence is now, so get right down to business. The opener 'When Jack, Mary and I did Westerns with RIP monoclonals, it was *me* who noticed some strange bands' will immediately grab their attention. Showing these bands on screen will also let you kill the room lights early on and then keep them off for the rest of your talk. Let your listeners relax, particularly if your seminar is right after lunch. There is nothing wrong with an innocent postprandial nap.

There are still people out there who project glass-mounted slides – through things called *projectors*! Ughh! Today you *beam Powerpoints*. Don't check out the electronics beforehand – do it while you speak. They never work right away, so you

can show how great you are with computers. While you take your time fiddling with the knobs, your audience can enjoy the Microsoft® logo on screen and Bill Gates gets a little free publicity. Even he deserves a break once in a while.

Your hosts have paid through the nose for their high-resolution beamer, so you owe it to them to squeeze the last little pixel out of it. When slides ruled the earth, a diagram's complexity was limited by the skill and the patience of the draftspeople. But now we are talking twenty-first century, and the sky is the limit. Fill the screen with all you got – preferably raw data straight out of your lab notebook. Let the audience feel the pulse of discovery. There used to be a rule that said: 'No more than one slide every two minutes'. Baloney! Today's generation was reared on TV and video games and is hooked on images. So keep those pictures coming.

Agos ago, lecturers used wooden sticks to point to things on the screen. They don't sell such contraptions any more, because everyone is into lasers. *Star Wars* stuff. They are cool gadgets, so use them. Keep them on, and keep them moving back and forth until the heads of your audience make you think of a tennis match. If the battery dies, keep on pointing. This will keep your listeners alert, because they must now search for a dot they cannot see on an image they do not understand.

Don't ever look into the audience. Keep your eyes on the action – the screen. If it happens to be blank, your lecture notes will also do. Once a friend of mine did look into the audience and saw so many people dozing that he was marked for life and never lectured again.

Never talk without lecture notes. Leave that to actors, politicians, and other frivolous folk. You are a scientist, an *intellectual*. So act like one and read your talk in the time-honored meter of scholarship – the monotone. If you cannot do without some spontaneity, follow this simple three-step protocol: (a) don't staple the pages of your notes together; (b) drop them on the way to the podium; (c) use them the way you picked them up. Your talk will be remembered for its startling connections, sure signs of a creative mind.

Your talk should focus on a single point – YOU. Nobody expects you to be a talking edition of Annual Review of Biochemistry. All those great ideas – you had them first. It was you who foisted them on your unbelieving collaborators who then did the obvious experiments. If you cannot avoid mentioning ideas of others, explain why they are wrong. Your talk can be elliptical, as long as you occupy both focal points. It wouldn't hurt to throw in a little chauvinism. Competitors from your own country always have full names. Competitors from elsewhere can be taken care of by collective epithets such as 'a couple of Japanese' or 'a bunch of Dutchmen'. If you are British, 'Work by Sir X at Oxford and by some Europeans' will please those from Great Albion. If you are American, refer to most others as 'people from overseas'. And if you are privileged to work in California, it's simply 'The Coast'. We all know there is no other one.

Stay away from simple language. Simple words spell simple

minds. Even the international language of science, Bad English, loves New Speak. No wonder, the two are close cousins. You never *read journals*; you *keep abreast of the literature*. You don't *do good science*; you are *at its cutting edge*. Your postdocs are not simply *good*; they are *the brightest and the best*. You never *work hard*; you *seek aggressively*. And experiments are never *unfinished, inconclusive* or *a failure*, but *in press*.

Half-way through the talk, your time is usually up. Now is the moment to think of a scientist's three most important goals: (a) the Nobel Prize, (b) unlimited research funds, and (c) unlimited speaking time. To get (a) and (b), you must have brains; to get (c), you must have guts. So don't skip anything – say it faster. Give the audience a rousing coda – they know that the coda is always the fastest part of a piece. No matter how much longer you still want to go on, keep saying 'now, in closing' or 'in these last few diagrams'. That's a great way to keep people from leaving.

When you have finished, do not summarize what you have said. Who wants to hear things twice? Get ready for the discussion, because that's where things might get tricky. Without those beamed diagrams you are left out in the cold. And some listeners may turn cranky, because the lights wake up the old geezers in the front row, and switching off the beamer sends the young ones into Acute Visual Deprivation Shock. It's wartime. Take every question as an excuse to continue your talk. Don't answer to the point, and make discussants feel

guilty for their inane question. If you are cornered, don't say 'I do not know' or 'you are right', but tell them that your many *papers in press* will answer everything. And if you cannot be right, be wrong at the top of your voice.

On leaving the lecture room, face the usual hand-shakes and small talk in good humor. This can be quite a challenge, particularly if you remember faces as badly as I do. If somebody who looks vaguely familiar traps you with outstretched arms and a familiar grin, try a generic opener such as 'How was the trip?' That's a safe one, because biologists get around. Stay away from inquiring about the spouse; as I just said, biologists get around. Relax and enjoy your drink while your intimate stranger gives you his horror story about the canceled flight. But then it is time to go. Do not stay for the official Dean's Reception and the dinner. Mumble something about next day's lecture at a famous place, and head for the airport. Being a hit as a lecturer gets your career off the ground; a hit – and – run lecturer has arrived. Besides, you can get home early and write those *papers in press*. Try to keep *abreast of the literature*.

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