

An occasional column, in which Caveman and other troglodytes involved in cell science emerge to share their views on various aspects of life-science research. Messages for Mole can be left at [mole@biologists.com](mailto:mole@biologists.com). Any correspondence may be published in forthcoming issues.



## Meetings of the Moles

So what'll it be? Shooshing the slopes through deep Utah powder or sunning on the sand while the surf surges and the cocktails are mixed? Treats in Trieste or Manhattans in Miami?

Of course, I'm perusing this year's schedule of scientific meetings – so many and so little time. Okay, we know that the reality is not quite so wonderful. We have to spend much of the time in darkened rooms, absorbing presentations and poring over posters, and, even when we finish and head for the restaurants and bars, we interrupt jokes and stories to ask technical questions or solicit the informed opinions of our peers. One only has to consult the accompanying non-scientist partner of any of the participants to know that the meetings are (or at least seem) bone-achingly boring from the entertainment perspective, especially when put up against the dream meetings we envision from our offices.

There is a move afoot to change the system, knock it down – stop wasting time, money and energy on this ancient system of face-to-face exchange, which is outmoded in this era of rapid publication, webcasts and teleconferences. If you want to go on holiday, say the critics, just go on holiday. Meetings, they contend, should go the way of mimeographs, leg warmers and power lunches.

So, what are meetings actually for? (Aside, of course, from having fun, although the image of frolicking scientists wobbling precariously around a dance floor may be too much for those with sensitive dispositions. And don't even think about hot tubs). The knee-jerk response, certainly, is that they are for the dissemination of information. The literature, especially in recent years, has come to resemble 'The Blob', growing and consuming everything in its path, and Steve McQueen isn't going to come to our rescue. Nobody reads it. In fact, now that journals are all online, we

don't have to *look* at the titles – having the papers comfortably stored in cyberspace is the same as actually knowing what they say, right?

I'm still waiting for the brain sockets that will let us download information directly into our own wet storage. Until then, having the stuff online is not the same as reading it, because, unless it is loaded into our brain, the information is not available for our creative machinery to manipulate, extrapolate, incorporate and integrate into something great. Creativity needs input, and much of the input comes from the literature. You know how this works: we put a bunch of observations into the brain blender, add some questions and observations, garnish with something we might have heard somewhere, hit frappé and serve it in a chilled glass. Yum – a frozen idea-rita!

So, you say, that's why we go to meetings, then – to learn what's new so that we don't have to read the literature (and don't have to feel guilty about not doing it). It is our penance – we don't study and read, and so sometimes we have to go to that meeting in upstate New Hampshire and be eaten by mosquitoes.

No, I say! That isn't it. I contend that scientific meetings are not just important, they are essential, because they represent our best hope of knowing what in the literature we should or should not believe. What? Belief? Science is facts, right? It's hard and focused, sharp, like Occam's razor. True is true.

For any graduate students reading this instead of doing something useful, the answer is 'correct.' The end. Now go do an experiment.

(Are they gone?) We have to face the

fact that science is based on the philosophically untenable idea that just because something happens to work a few times, it must be true. Even if we do it hundreds of times, it doesn't proscribe a truth. You know, black swans. (I shouldn't have to do this, but the logic goes something like this. Kangaroos are never found in bars. We check thousands of bars carefully and none have kangaroos. So we have identified a truth – until, of course, we meet a kangaroo in a bar.) Until the appearance of the black swan, all swans *were* white, and I guess we occasionally *do* get kangaroos in bars (“but at *these* prices, you aren't going to get many more”).

So who do we believe? We could do the experiments ourselves and that might give us confidence, but are we going to do that every time there is a discrepancy in the literature? If we do do that, we are never going to publish anything original, are we? Or we can wait until more labs weigh in, but how can we speed along our own research if we sit around waiting for others?

What we need is more information. Is this latest report from a group that we know carefully checks its results and ensures that they fit into a broader body of work and theoretical concepts or does it rush to publish whatever might get a rise and then drop it for the next easy hit? With more information we can make a guess as to who might be right and then go ahead and apply the knowledge to our own research designs. This would be to our competitive advantage, too, if we figure out what's right before everyone else does.

So how do we get this information? One useful way is to study what has been called the track record – we check everything the lab has published and see if they tend to be right. And this is

a useful approach, but only if they've been on the track for a while. The other way to do this is to use the same method we use each day to decide who we can and can't trust. We meet them, talk to them, get an impression of them. There are people we loan money to without hesitation (don't look at me like that!) and people we wouldn't trust with our pocket lint. There are some scientists I simply believe when they tell me that their new molecule is green, and others for whom I would take what they tell me with more than a proverbial grain of salt if they said 'it's a nice day'.

And *that's* what we need meetings for. When I was a lowly graduate student, I met fellow students at meetings, and some of them I learnt I could trust and indeed I have trusted them all these years – the same for postdocs, assistant professors and pundits. These are our peers, and we have to get to really and truly know them and decide for ourselves whom we trust. This can't be done with webcast lectures or online discussion sessions. It takes face-to-face meetings. Without it, we have only the cold, cold literature, which is okay but can never carry the personal touch of the real meeting. And that's why telling stories and jokes, skiing together or snorkeling the reef, talking about where we grew up and why we became scientists is part of the process – it's all about getting to know each other. If we lose the opportunity to meet with our colleagues, we lose something that is distinctly human about science. And, make no mistake, science remains a uniquely human endeavor. So go ahead; book that meeting. And don't forget to pack the sunblock.

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