

An occasional column, in which Mole, Caveman and other troglodytes involved in cell science emerge to share their views on various aspects of life-science research. Messages for Caveman and other contributors can be left at mole@biologists.com.

Any correspondence may be published in forthcoming issues.



Q&A

Bam! Bam! Bam! It was all going so well. Nice talk. Interesting work. Much of it unpublished (I love that). And the cookies were fresh, which is a bonus. This was looking to be a great seminar. And now I'm banging my head against the writing desk, just waiting for it all to end. It just isn't fair.

We've talked about this before, how important live communication of scientific findings can be [see *J. Cell Sci.* (2003) **116**, 2373-2374]. No matter how much we read, no matter how much we publish, the face-to-face social interactions that we as primates use to make important decisions apply to all aspects of what we do, including science. (Can you imagine a peace treaty or any other diplomatic event being ratified by email? I don't think so.) We

primates need to see each other's eyes to know what to believe and whom to trust. Written words are nice, but sort of new in our evolution. If it's important, we need contact.

So that's why we do this thing, this going to meetings, attending seminars, inviting folks to visit and going to visit them. Myriad hours spent in airports and hotel rooms, for the sole purpose of personally presenting our findings and/or listening to those of others. Why? Isn't it enough that we go through the nightmare process of actually publishing it? The reality is that the written word is a good start, but we need to look you in the eyes to know if we really believe what you say (or wrote). We don't generally groom each other, but we gain a great deal of information from body language, demeanor, and

discussion – plus we need to ask you questions.

And that's where the problem lies – because there are questions and there are questions. I shouldn't have to do this, but I need to lay down some rules. So here's Mole's Guide to Asking Questions in Public – by which I mean scientific seminars and meetings (if you are asking questions at a political campaign you may be on your own). If you adhere to these simple guidelines, you will prevent your dear Mole from knocking his head against solid objects and quite probably do the same for some of your colleagues as well.

First, we should distinguish between formal and informal presentations. During formal presentations we tend to hold our questions to the end, else we face intimidating stares from our colleagues and from the chair of the proceedings, and ultimately ridicule for our disruption. If it is formal, pray hold thy tongue while the speaker is speaking. This applies to most talks at large meetings, awards, named lectures, and the like.

But during informal seminars, say in your department (or even in institution-wide talks), it is socially acceptable to interrupt the speaker to ask a question. And here is our first rule: don't do it! The *only* reason to interrupt a speaker to query them is because you are hopelessly confused about what they are saying *and* you genuinely feel you shouldn't be. That is, you have been paying close attention, are suitably prepared for the subject matter, and there is something that was presented that upsets your entire *Weltanschauung*. But that still isn't enough – your question has to be designed so that, if answered, all will be well. And (and this is the tricky part) not just for you, but for anyone who has been paying as much attention as you have. Hence the rule: don't do it – unless you really, really have to.

“Hey, Mole!” I hear you say, “That's a bit much. I mean, I'm sitting here, listening, and I have a question that is absolutely, positively relevant to the issue that the speaker has raised, and I politely raise my hand (or not so politely just blurt it out) and (s)he is happy to answer. What's so wrong with that?”

Plenty. First of all, whether you realize it or not, it's simply rude to interrupt. It breaks the flow of the presentation, not only for the rest of the audience but also for the person presenting. It is distracting. In the vast majority of cases, the answer is, “I'm coming to that.” (By the way, if you happen to be the presenter and you get such a question, absolutely, positively do *not* skip forward a few slides to answer their question — you might succeed in doing so, but, for all but that one person, your talk now lies in tatters.)

So what sort of question might be acceptable? If the speaker says “day” and the slide says “night” (substitute your favorite pair of opposites here), you might ask for clarification — not only is that acceptable, it's brief. Go for it. Another one might be, “Excuse me, but you are standing in front of the projector, could you move a bit?” I think that's about it. Any question you might want to ask that begins with “Have you tried...?” or “Didn't someone show...?” or “What happens if you...?” is completely off the mark. I'll be forced to loudly bang my head against the writing desk.

By the way, if you are the presenter and you get one of these questions, politely ask the asker to wait until after the talk to bring up the question again. That usually works. If they insist, give them the shortest possible answer. If they continue to disrupt the presentation, take a cue from stand-up comics and deal with them as if they were a heckler. My favorite is “Wow, you're moving your lips, and it looks like you're trying to talk, but no sound is coming out. That's pretty weird.”

But let's get to the sort of Q&A sessions you are encouraged to participate in – those after a seminar or a meeting talk. Raise your hand and ask away, it's your time. Again, there are some rules. First, do *not* ask a question you cannot justify if asked, “Why are you asking that?” For example, if you ask me if the phenomenon I described was tested in ferrets (assuming, of course, that I hadn't shown it in ferrets), I'd have to know why this was a relevant question – not just for me but for anyone who might be in the room. The time you are using to ask the

question is limited, and it should be as informative as possible. The same applies to questions about the pH of the media, the number of cells that were treated, and the type of music that was playing in the post-doc office while the experiment was performed. If it is for your own information, information that nobody else in the room is likely to need to know, then don't ask it. That's what email is for.

Now that I'm venting, here are some more unacceptable questions. They begin like this: “I have a comment, and a question, and two more comments, and then another question.” Do you *really* think anyone else in the room wants to hear how very smart you are? If you really *are* this smart (and you might be) then educate me. Begin by explaining the context of the comments and questions so that I can understand why we're listening to this, instead of doing something else (like emailing the speaker with our own questions). But otherwise you are simply taking up time in a manner that says, “Look at me, look at me!” I'm not making this up. I just came from a meeting where one rather prominent director of a prestigious institution had to be limited to no more than two questions per talk (and had to be repeatedly restrained to this limit). Come *on*, people – you just don't need that much attention.

At the opposite end of the spectrum are the questions from dear old Professor Groundhog. You know, the professor who inevitably falls sound asleep the moment the seminar begins, but somehow manages to sustain a reputation for asking amazingly insightful questions as soon as the applause dies down after the last slide. And these *are* insightful questions, for pretty much any seminar at all (which is why the old rodent gets away with it so often). Questions like, “What were you hoping to show with these results?” “If I were to tell my friends about this presentation, what would you have me tell them?” “Have these experiments been performed at least *once*?” And similar questions that are equally amusing and insightful, and serve to give the impression that Prof. G was paying attention. Still, it's nice that he shows up, and the questions are not without value. My favorite Prof. G

question is this: "How do you think all this works?" Lovely, and almost always not only relevant, but the answer can be interesting and informative.

So, what other sorts of questions are acceptable? If you are new to science or to the field, we welcome all honest questions that will help you understand the intricacies involved. Really, these are great, because quite often many others in the room will have the same questions but not want to show their ignorance (you can get away with it much more easily, it seems). I know, though – you don't want to appear stupid (especially since Professor Know-Everything is making his three comments and asking his four questions). So here's a suggestion. Instead of sitting with your BFF (if you have to look this up, then this suggestion isn't for you), sit near someone who not only is likely to be

willing to talk to you, but is also likely to know something about the field. Then, ask him *pianissimo, please*, if this is a good question. If you get the go ahead, well, go ahead.

If, on the other hand, you are experienced in the field, but not a seasoned researcher, ask questions that help to put the work into context with what you know and understand – again, this is valuable, but you should make sure to explain what you are asking so that others in the room who are less experienced can understand both the question and the answer. Finally, if you are a master (and I shouldn't have to tell you this, but perhaps I do), you should ask questions that you feel will help to clarify the talk in a much broader context, raising issues pertaining to controversies and intricacies in the field that might be of interest to those outside

of the field. This is *not* your forum, and it would be rude to make it so. But a well asked, informative and *interesting* question is not only valuable but often valued. The Q&A sessions are of limited duration and exist for the audience in general. We all appreciate a good discussion and encourage it. But if you break the rules, everyone'll get testy. And no matter how good the cookies might be, their frustration with you will show.

Like right now. My head hurts, and I just can't listen to this. Oh lord, he's asking about the protein concentrations. Bam! Bam! Bam!

Any questions?

Mole

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Commentaries

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Although we discourage submission of unsolicited Commentaries to the journal, ideas for future articles – in the form of a short proposal and some key references – are welcome and should be sent to the Executive Editor at the address below.

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