Giving talks

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These tips are primarily aimed at those who haven't given many talks before, but they could be useful for anyone (including me).

Some of them might sound like counsels of perfection: is it really necessary to write out beforehand *everything* you'll say out loud, or label *every* paragraph? Maybe not. As you become more practised, you'll figure out which corners you can safely cut. But if you follow these tips, I think it will be quite hard to give a *bad* talk—and if you're relatively inexperienced, I suggest that you follow them closely.

1 Preparation: general

Prepare very carefully. *Be as self-critical as possible:* once you've got a plan for your talk, ask yourself questions such as these:

- am I stating the main points clearly? Almost certainly, most of the audience will remember at most one thing about your talk—don't kid yourself otherwise. If you can give the audience one big idea to take away, so much the better. Tell them what it is!

- is everything in the right order logically?

- have I defined all the notation and terminology that I'm using?

- have I *explained* (e.g. by example) all the definitions?

- am I putting in too much/too little detail?

- is it possible that I'll over-run? (Allow time for someone to ask an awkward question.) Is there anything I could/should trim?

2 Preparation: tactics

Write out *in full sentences* everything that you will write on the board or say out loud. (Even if you choose not to write out everything that you'll say out loud, you really must write out everything that you'll write on the board.) Re-read, self-criticize and revise, as many times as necessary.

Label every paragraph. That is, begin every paragraph that you write with 'Theorem', 'Proof', 'Remark', etc. This makes the logical status of what you're writing crystal clear.

For longer talks (at least), divide your talk into numbered, titled sections. At the start of the talk, write up the list of section headings. This is in accordance with the general principle 'tell them what you're going to say; say it; tell them what you've just said'.

3 Media

If you're using blackboards, be absolutely rigorous in how you use them. Beforehand, work out what order you'll use the boards in (left to right, top to bottom, etc). Then stick to it. Resist the temptation to go over the edge to the next board.

Consider using slides. This has its own pitfalls, principally (i) putting too much on them, and (ii) going through them too fast. But a big advantage is that you can get the written aspect of your talk sorted out beforehand, and you have the opportunity to revise it as much as you like. Then when you're on stage, you're free to concentrate on what you're saying. This is especially valuable if you're the nervous type: it gives you one less thing to worry about.

Whether you're using boards or slides, *write in full sentences.* Of course, you shouldn't read directly from your 'script' of things to say—but having written it out beforehand, your spoken communication will be clearer and more articulate.