How to Give a Killer Talk

Aleksandar Donev
Courant Institute, NYU[1]
donev@courant.nyu.edu

[1]Modeling and Simulation Group meeting

Feb 13, 2020

What is a good talk?

Let's start from this TED lecture on the mathematics of origami (YouTube). Let's discuss things you liked/disliked.
Now let's look at Nick Trefethen's advice (http).
Here are some non-sarcastic recommendations/notes to discuss, based on notes from Will Ratcliff (PDF):

- A key objective is to **convince the audience** that you have something **interesting-enough** to say and thus they should **pay attention**.

- People are curious creatures by nature and will pay attention to a **cool story** as long as that story remains **absolutely clear** (**less is more**).

- **Know your audience!**

- **Be excited** about your topic *and* your talk: your **enthusiasm** should be contagious. You should like your own talk!

David Attenborough Style

Specific recommendations from Jesse Stanchak blog based on Ratcliff (URL):

- **Be an Entertainer First**: You must engage the audience with what you're saying. Think about how your specific audience will relate to your material. Focus on presenting your science in a way that **engages and entertains as it explains**.

- **Be a Storyteller, Not a Lecturer**: Don't assume that your audience knows your field. Tell the story of your science: identify **the big picture** backdrop, your specific **research questions**, how you answer those questions, and **what we have learned** from it.

- **Prioritize Clarity**: Your goal is to never lose the audience attention, so make an effort to **be clear** and have a **simple narrative arc** to your talk. Crucial to know your audience, define notation, and observe audience reaction.

David Attenborough style contd.

- **Pay attention to transitions**: Practice the transitions in your talk to make sure the link between the ideas of one slide and the next remains clear. Lead toward the next step before you take it, as if each slide was a paragraph.
- **Use visuals/animations instead of text**: Keep the text in your slides to a minimum. Instead, use compelling visual to hold your audience's attention while you speak.
- **Look at the audience**: Imagine you are talking to your friendly colleague, even if this is people deciding your life's course.
- **Be wary of jokes** and metaphors or sarcasm: If a joke is poorly timed or if you misjudge an audience, you risk alienating them. Only use jokes if you are an expert or you are close to the audience.

Assorted extras

- **Go to talks and learn from others!** Just like one cannot write good papers without reading papers first, one cannot give a good talk without hearing a few first.
- **Use pointer sparingly**, only to emphasize something specific.
- Adjust talk as you go and **skip slides as needed** – don't flash them and run over them, rather, skip.
- Approximate speed estimate is **1 slide per minute**.
- **Don't overload the listener** with information they cannot process. **Think about what you can take out not what you can add.**
- Here is an example of an overloaded slide from a nice YouTube video (URL) by Susan McConnell on how to give a good science talk (watch at least the concluding segment at home!).

Structure of a talk (Ratcliff)

- Step 1: Set up the general outline of the talk first:
  - **Big picture** context.
  - **Key specific question** of interest that fits in the big picture.
  - Give **summary of main result** early on before going into details. Guide the listener so they know where they are going, don't blindfold them (suspense is for movies ;-).
- Step 2: **Methods and results**: Make sure to answer the question posed in Step 1 and focus on clarity and transitions!
- Step 3: **Conclude** with a **recap** of key new methods and results, and then **go back to big picture and how your results fit there**, and what new questions the open up.
- Step 4: Practice, run by a colleague/mentor, and anticipate questions and prepare answers, maybe as final slides.

Your own style

- Let's watch Ratcliff's 5-minute talk (YouTube). Was it a good talk?
- Discussion: *How much and what to put on each slide?*
  If you are not going to explain it, don't include it.
  Ratcliff recommends: Kill clutter. Remove text. Complete sentences are to be banished from your talk. I disagree...
- Discussion: *Board versus slides?*
- Discussion: PowerPoint/keynote vs beamer (movies?)