Complementary skills, why bother?

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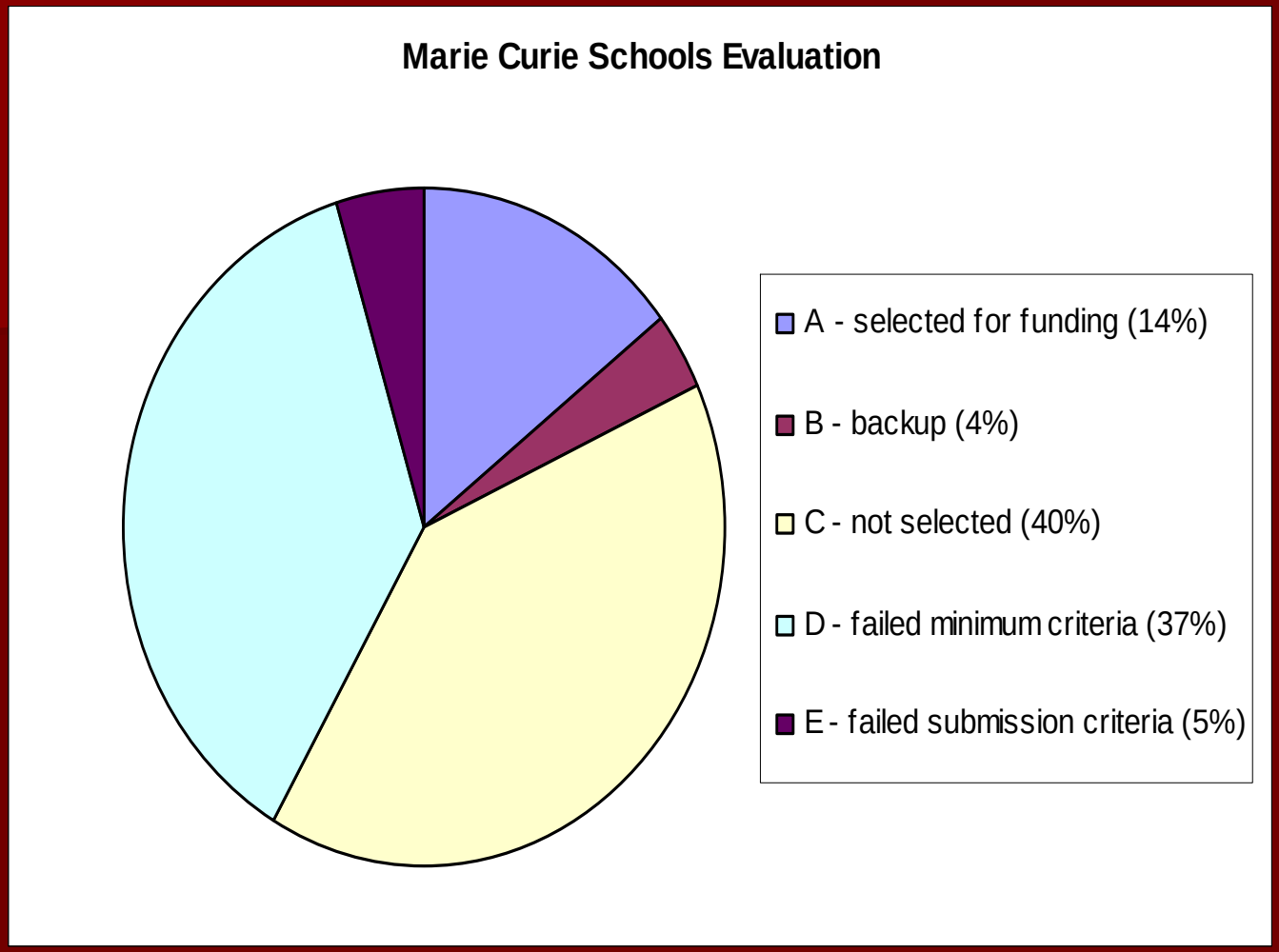
Why bother?

- Short answer
  - it is in the project contract
- Longer answer
  - it's importance will become clear in the next 5 lectures

Why bother?

- Real life example 1: The ONTHEFRINGE project
  - Evaluation
    - Scientific quality of the project: 5 out of 5
    - Quality of the research training: 4.5 out of 5
    - Quality of the hosts: 4.5 out of 5
    - Management and feasibility: 5 out of 5
    - Community added value and relevance to the aims: 5 out of 5
    - **Total score:** 97.5 out of 100.
  - Result
    - Approved with a budget of ~0.5 M€



- Conclusion:
  - To be selected science was not a sufficient condition

- Real life example 2: Key-speakers in a conference
  - Communication skills do enter in the equation

- Conclusion
  - Good science is necessary but not sufficient
    - It should be well communicated: orally and written
    - It should be conducted respecting ethical values
    - You have to manage your career, if you want to continue doing it (or not)

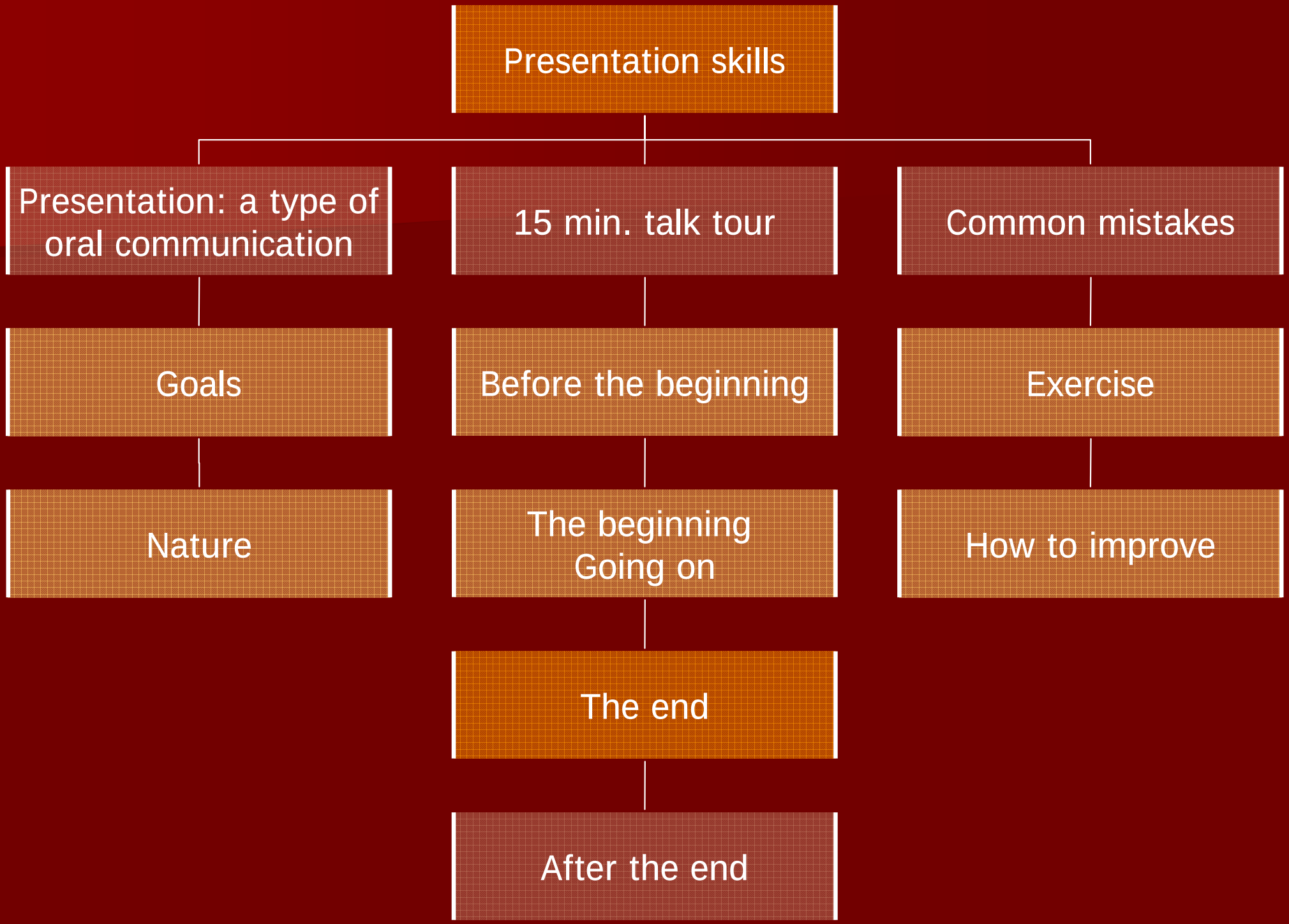
- Goals of these lectures
  - Make you aware of the relevance of complementary skills
  - Transmit a basic set of rules
  - Create a starting point for your self-development
- These lectures are target to PhD students
  - Can be potentially useful to more experienced researchers

1. Presentation skills

Based on:

“Advice on giving a talk” by D. Kurtz, 2006,
In Astrophysics of Variable stars, ASP Conf. Series v.349, Eds. Sterken & Aerts

“Presentation Skills for Scientific English”, by Jonathan Upjohn, 2006,
in a JETSET school power-point


Presentation skills
Presentation: a type of oral communication
15 min. talk tour
Common mistakes
Goals
Before the beginning
Exercise
Nature
The beginning
Going on
How to improve
The end
After the end

Oral communication in science

- Scientists need oral communication skills for
  - Transmit, validate and get feedback of their research
  - Establishing networks, finding research partners & funding
  - To attain full membership of the scientific community

- Examples
  - Informal
    - Peer-to-peer, journal club, meeting
  - Formal in a conference
    - Poster talk, Short communication, Review/invited talk
  - Other (formal)
    - Talk at an institute, Lecture, Dissertation like (MSc, PhD, Habilitation), Administrative/reporting/job interview

The goal of a presentation

- Transmit information (not skills or attitudes)
  - Communicate your science
  - Engrave it in the brain of the audience

- It is not the goal of a presentation
  - To show that your are extremely clever
  - To show that you are a master of power-point tricks
  - To explain in 15 min all the details of your 3-4 month work

The nature of oral presentations

- Why some speakers perform badly?
  - Misconception of the nature of oral communication
  - Not connected to linguistic problems (anglophone/non-anglophone)
- Oral communication is different from written communication
  - Receiver has no control on information flow [silence]
  - No feedback monitoring successful comprehension
  - Real danger of loosing contact with the audience
- Oral communication is a complement to written communication

Focusing on a 15 min. contributed talk in a conference.

Before the beginning

- In doubt: prepare, prepare, prepare
- Check your colors carefully if you don’t want bad surprises
- Check carefully that your presentation works correctly in the conference computer (use pack & go/package for CD)
- Keep a backup
- Check that figures display correctly at the projector resolution
- Dressing
  - Always dress a little better than the audience

The beginning

- It's normal to be a somewhat nervous/tense, but so is the audience...
- The talk is for the audience
  - Stand out in front of the audience without any physical barrier
  - Face the audience, look relaxed, unworried and friendly
    - even if you are close to panic (body communication & pointers)
  - **Look** to the audience in silence, building eye contact, then talk to them
  - The audience is curious and friendly towards you
  - Can they hear you?

Going on: hooking the audience

- The hook is the science
  - Explain the physics and how it fits in the broad picture
    - Details are for later
- The string is the attitude/stamina/body language
- At this point your audience must be able to answer the question: “What is the purpose of this research?”
- There is no point wasting time with an outline in a 15 min. talk

- Use silence to enforce comprehension

Going on: the details

- The details are for the audience, not for you
- Words in slides are to be read
  - Do not pack you slides with words
    - attention, flexibility, readability, time
- Plots, graphs, pictures, illustrations
  - Are in general scientifically critical
  - Legends are to be read (by everyone)
  - It takes time to read them
  - Explain the graph
- Backgrounds can remove attention from your talk
- Tables should be used with care, highlight relevant data
- Look at the audience – keep eye contact.

Going on: the details

- Animations are spectacularly deadly
  - Are not in general scientifically attractive
  - They absolutely monopolize attention away from you
    - Never used gratuitous animations
- Be very conservative regarding power-point animations
- If you spot a presentation error (bullets etc) do not point to it, but if it is science do it
- Go on till you come to the end
- Keeping eye contact, checking time
- Then stop
  - Conclude by presently succinctly a couple of major points

After the end

- Questions, questions, questions
- The speaker is now very fragile
- Answer questions with intellectual honesty
- Treat hecklers with respect and never attack them

- Ask the opinion of those you respect on your talk

Common mistakes

- Not keeping eye contact + body language
- Too much humor, asides and asking questions to the audience
- **Going overtime**
  - You look silly and disrespectful
  - No one cares about what you are talking **now**
  - Your session chair is now panicking and the audience terribly bored – welcome to the black list...
- Trying to present too much information/lack of redundancy
- Not spending the appropriate time preparing and rehearsing the talk
  - Min(5 days, N audience*time)/experience

Exercise

- Identify these mistakes during the school

How to improve

- Read a few articles/books
  - *Advice on giving a talk* by D. Kurtz, 2006, In Astrophysics of Variable stars, ASP Conf. Series v.349, Eds. Sterken & Aerts
  - *Scientific Papers and Presentations*, by Martha Davis, 2004, 2nd ed.
  - *What's The Use of Lectures?* by Donald A. Bligh, 2000
- Ask for your talks to be recorded in video an watch them with colleagues – criticize and correct.
- Seek professional advice (convince your institute)

Thank you!