

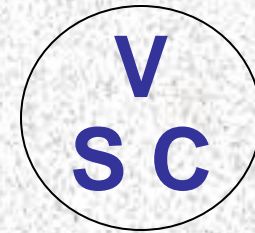


Giving talks

Writing papers

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McMaster University, July 2004

You've finished up the work on a project. What's next?



*Make your work public:*

- talks at conferences (with maybe a writeup later)
- posters at conferences ( “ ” )
- refereed journal papers

*What a talk does:*

- very effective publicity for your work
- General signal that you exist & are competent
- Gets other experts in your field to recognize & take interest

## *Talks for professional audiences*

### *Type of audience*

### *Intimidation factor*

Journal club

Friendly, supportive

Talks in grad courses

Review for your supervisory committee

CASCA meeting

Interested, neutral

Seminar as visitor somewhere else

Conference talk

“Job talk” seminar

Presentation for gov’t committee

Hostile or not interested

## *“Other” kinds of speaking environments*

### ***Undergrad lectures***

- Information transfer, how-to-do-it
- Managing discussion
- Keeping discipline
- Inspiring interest

### ***Public lectures***

- Inspirational
- Storyline arc
- colorful, anecdotal

### ***Oral exam (e.g. PhD comps)***

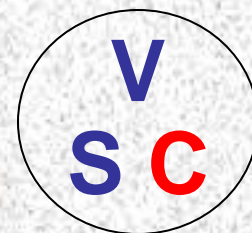
- Question-and-answer
- Exact material not known beforehand
- Think on feet (at least a bit)

## *Objectives for a professional talk*

*Describe your work to an audience which does not know **what** you've done or **how** you did it*

- 5 minute slot [AAS meetings]
- 10 to 15 minutes [CASCA or specialist conferences]
- 30 minutes [invited review talk]
- 50 minutes [really really special invited talk at a conference, or a stand-alone seminar somewhere]

*You should be able to describe your work in any of these timeslots – just a matter of selection, depth, emphasis*



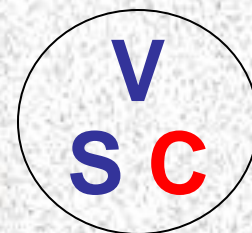
## Constructing your talk

### **The most important step.**

- Design it for *your* audience – not some generic audience. Don't *adapt* a previous talk – *rebuild* it.
- Design it for your allotted time.
- **Select, select, select.** Don't try to say *everything* you did (leave that for the published paper). Select **two major things\*** you want the audience to remember!! **Less is more!**

(\* For a poster, *one* major thing.)

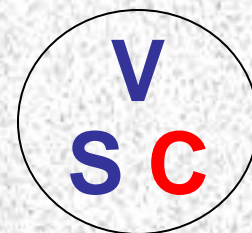
- **Clarity first.** Audience should leave with a clear picture of what you did. Stick to your outline and then stop. (Who's going to be offended if you stop a bit *early*?)
- **Style and rhetoric second.** Stick to your material, don't generate distractions of your own



## *Constructing your talk (II)*

*Key Questions to keep in mind while designing your talk (you may not be able to answer the last one ahead of time -- be ready to be flexible once you get there.)*

- Who and what will the audience be, exactly? What mix of backgrounds? Level? Style? Size?
- How much time will I have to speak?
- What are the two major concepts I want to get across?
- Are there going to be individual people in the audience that I would particularly like to impress positively? Who? (potential colleagues, competitors, senior scientists ...)
- What will the room look like and how can I best use it? Will I need rehearsal time after I get there?



## *Giving your talk*

### ***A 4-step process for dealing with nerves:***

1. Know your material.
2. Know your material.
3. Know your material.
4. Practice beforehand.

### ***Useful rhetorical tricks:***

1. Start with a good visual. Then get right into the material.
2. Tell them what you're going to tell them. Then tell them. Then tell them what you told them. (Outline → substance → summary)
3. Be energetic, smile, and act as if you're enjoying it (or that you like your material).



## *Common distractions during your talk*

### ***Bad audio/visual setup***

- Room poorly arranged, bad lighting, projector problems, hard to hear
  - *check out facilities the day before and have a plan with backup.*
  - Prepare, prepare, prepare*

### ***Audience activity***

- People coming and going at back (or front!) of room; some are chatting
  - *ignore the distractors*
  - *have strong “lead-in” to your talk, attract attention*

### ***Wireless laptops in use everywhere in the room***

- People doing e-mail, reading or working on files, preparing their own talks (!), goofing off
  - *ignore them (at least they’re quiet)*

## *PowerPoint files*

Really good for graphs, images, animations (non verbal communication)

Match the background to the ambient lighting in the room

But keep the *text* very sparse – just an outline for what you say

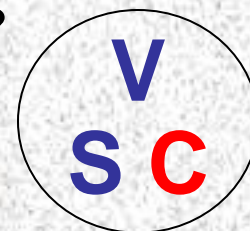
Talk to the people in the audience and not your laptop

*The fundamental relation you want to set up is between the audience and **you** – not the audience and the screen.*

*They are not watching a TV show. **The PP file is a supplement to the talk, not the talk itself***

*Could you give the talk from a Powerpoint file that had no text at all – just illustrations?*

*Could you give your talk if the visual aids failed completely?*

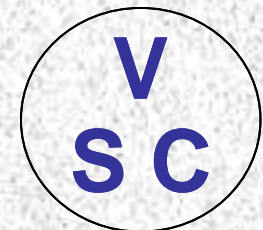


## *Replying to questions*

**Questions afterward are of two types:**

- **More information about what you did [easy]**
- **New stuff that was *not* in your talk. [harder]. *The audience are acting the way scientists should – challenging you.***
- **A 4-step process for dealing with nerves:**

1. Know your material *and its wider context.*
2. Know your material and its wider context.
3. Know your material and its wider context.
4. Don't be afraid to say "I don't know" (Clever rephrasing: "We haven't looked into that yet – this is what we have so far.")
5. Experience will help you develop a comfort zone.



## *Listening to talks*

### **Pay attention, but switch on your internal critic:**

Too much material (rushed, crammed)

Wrong level for this particular audience

Main points lost

PP file: too complex, lurid color scheme, bad background ...

No eye contact

Monotone voice

Exaggerated or overconfident claims

Attractive, simple PP design

Engaging speaker – puts audience at ease

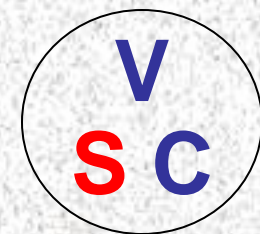
Energetic without overdoing it

Beautiful selection of material

Built-in “breathing space” – not just endless flow of words

Finished on time and kept audience “with it” throughout

**Go away thinking “I can do better than that”  
and know *why***



## *Why are talks important anyway?*

Research is done by *people* – want the personal contact & sociability

Most of human history is non-literate (direct aural + visual input to the brain – genetically hardwired)

?? Did true general literacy in Western history exist only for a brief time (ca. 1800 – 1900) ?? Books, newsprint, journals were widely available; high literacy rate; good writing valued and taught

-- But followed by gradual return of postliterate (actually, nonliterate) culture through cascading technological innovation

Telephone

Radio

Movies

Television

Internet

Cell phones

NB also “Netspeak”



## Writing papers

### ***The end result of any project.***

- Present preliminary versions at conferences + among colleagues – get constructive criticism
- Key feature of your CV. Conference papers are OK but *refereed journal publications* outweigh everything else
- Well crafted paper is source of pride.
- “Impact” measured through citation rates (3+ years) as well as informal peer opinion
- A few *good* papers are better than many tiny or repetitive ones
- astro-ph “publication” is essential now (widely read, though partially undermines principle of refereed literature)
- Clarity first, then conciseness, then style
- Writer’s block is a myth. Don’t fall for it.

