

HOW TO TEACH

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OUTLINE

1. VARIETIES OF TEACHING
2. THE LECTURE
3. THE SEMINAR
4. TEACHING AND THE REST OF YOUR JOB

1. VARIETIES OF TEACHING

What you teach and how you teach depends on
WHO YOU TEACH.

1. Undergraduates
2. Taught Masters students
3. Doctoral students
4. Colleagues
5. The general public

All of these groups want (a) information / knowledge,
and (b) to learn & develop their knowledge

ONE TO MANY

Much of teaching is the transmission of knowledge from you to a collectivity.

Here you are the medium: you are sending information to 'the masses'

So that information needs to be (a) clear, (b) stimulating, and (c) connected to other information people receive.

ACTIVE LEARNING

Passing information is always somewhat passive.

The second goal is for students to UNDERSTAND information and be able to build up their own knowledge base.

Passive learning can be tested through regurgitation.

Active learning is tested by the creativity and effort put into a response (an exam, a presentation, etc)

TRADEOFFS

Active learning becomes self-affirmation if the learner simply relies their own opinions and views, even if honed by argument.

Passive learning provides (a) new and (b) peer-tested information to learners but it may not 'sink in' and learners may avoid working with the information themselves.

DIFFERENT FOLKS

Each audience has different needs and a 'one size fits all' approach to sharing information rarely works.

The needs are twofold:

(a) Their initial level of understanding / comfort with the material

(b) What they are going to DO with the material. Do they exams? Are they writing a thesis? Is this lecture simply to get people interested in a topic?

THE CURSE OF KNOWLEDGE

Stephen Pinker writes about 'the curse of knowledge' as a particular threat to academics.

We all use shortcuts that stand in for complicated arguments, social facts, or scientific terms. These make conversation smoother among specialists. But they are impossible for an educated lay person.

So, regardless of who you are teaching use simple language - this is NOT dumbing down.

2. LECTURES

Most academic teaching is done through lectures.

Speak to between 15 and 800 (!) people for between 45 and 90 minutes.

Classic audiences are (a) undergraduates and (b) more rarely, general public.

In both cases, core goal is have clear message that audience takes from lecture.

KEEP IT SIMPLE

Lectures often have to deal with very complicated material in the body of the lecture.

But an audience member should still be able to sum up in one or two lines what they learned.

A good lecture has a structure that allows you to both things at once.

GENERAL - SPECIFIC - GENERAL

THE EXPERIENCE

Speaking to people for an hour is really difficult!

And yet, once you are in the flow you just keep going.

A good lecturer can feel comfortable **EXTEMPORISING**

Having a written lecture may feel like an anchor to steady yourself but it may instead be a crutch you are forced to lean on.

PACING

The hardest thing to get right is timing and pacing.

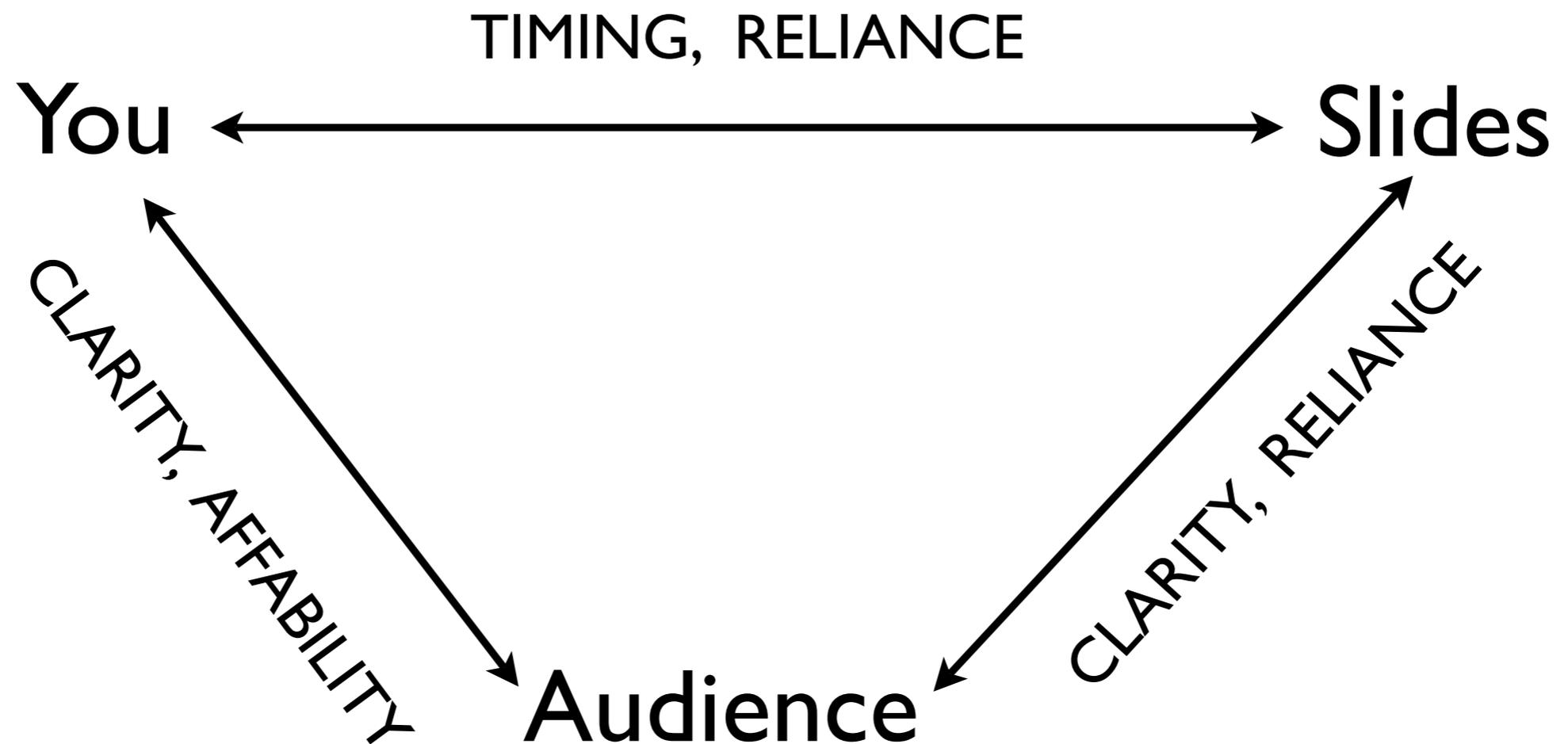
The lecturer's paradox: Nothing frightens people more than running out of things to say but almost all lecturers speak too fast.

YOU WILL NOT RUN OUT OF THINGS TO SAY!

IT IS ALMOST IMPOSSIBLE TO SPEAK TOO SLOWLY!

Just remember: Did I get across my main point?

PRESENTATIONS



YOU & YOUR SLIDES

YOU CONTROL THE SLIDES, NOT THEY YOU

1. Know your timing ahead of time (2 mins per slide?)
2. Know how to move among slides quickly
3. Know what is on each slide.

You need to avoid becoming TOO RELIANT on your slides. Similarly, you don't want your audience just 'slide-watching'

READABILITY

Keep text minimal.

Don't use abbreviations. Use fewer words.

Keep high contrast and simple font.

CLARITY

Keep things simple so that your argument is clear.

Evidence: always give quantities of interest and, if possible, measures of certainty.

Always assume that your audience knows no jargon
- use real words.

MEMORABILITY

The Three Point Rule - aka 'the hummable tune'

Graphics are MUCH more memorable than text but should be information driven.

Anecdotes can situate a theoretical problem in a memorable human context.

ENGAGE THE CROWD

Don't stare at your slide printout or at the screen.
Always look at the audience.

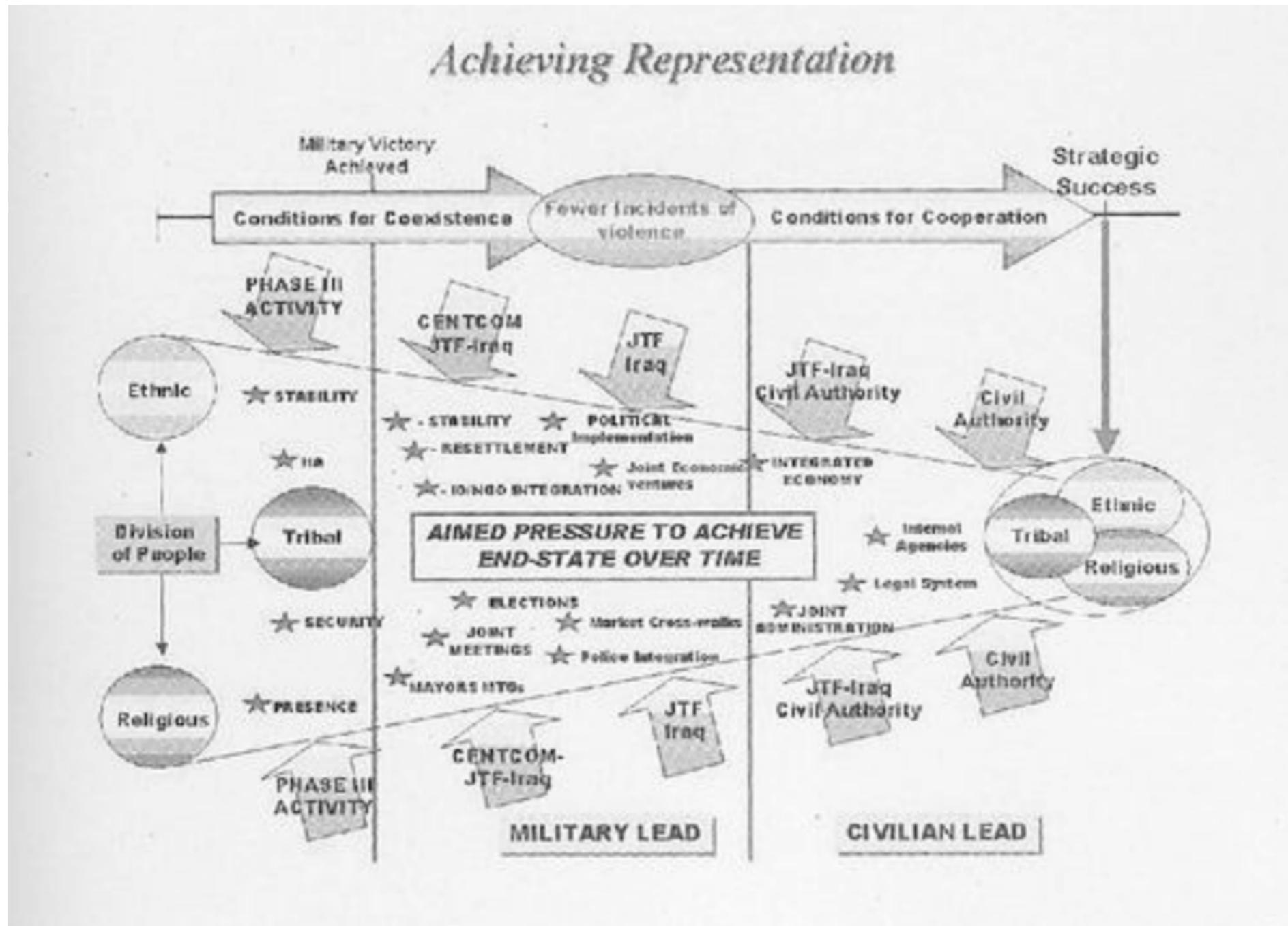
Smile. Pause. Intonate.

If a slide appears to be boring your audience don't
obsess on completing it. Move on.

BAD SLIDES

1. Too much colour / visual chaos
2. Too much text / too small font size
3. Nested hierarchies of bullet points
4. Vague overall message

BAD SLIDES



SEMINARS

In Oxford, this is of course the famous tutorial but outside of Oxford a similar experience occurs in undergraduate seminars of under 20 people and in graduate classes.

Permits a much more active style of learning...
potentially

IDEAL SEMINAR

Students have done ALL the reading.

Students understand how the readings connect.

Professor is able to elicit this information.

Professor can get ALL students to speak.

Professor can make students feel they know more leaving room than they did on entering.

SYLLABUS DESIGN

A syllabus matters much more for a seminar since the syllabus dictates what the discussion will be on.

Professor's role is more indirect - they guide students through the syllabus materials and help make sense of them.

When designing a syllabus the readings on a topic need to 'speak to each other' yet be comprehensive

PARTICIPATION

Many professors find seminars very frustrating.

How do you encourage people to speak and hit the points you want without asking leading questions?

Are student presentations helpful or tedious?

Are student debates thoughtful or inane?

PROMPTING

Seminars work best if professors can prompt students to 'learn on the spot'.

Ideal is to have students think through a problem out loud -

- Why is such and such the case?
- How would we know?
- What is the counterfactual?
- What alternative theories might there be?
- Which of the concepts under discussion is crucial?
- What assumptions underpin a model?
- What would happen if you changed them

4. TEACHING / LIFE BALANCE

The horrible thing about academic jobs is you have to do all the things you did as a grad student but now have to teach and do service on top.

But you do get paid...

Many many people burn out in the first few years because of all these responsibilities.

All your new 'preps' happen at the start of your career.

DON'T OVERDO IT

Your teaching does not need to be perfect.

In fact, you'd be surprised how low the marginal return to extra hour devoted to teaching prep is.

Your job is to deliver a simple account of complicated material. But mostly you already know that material - simplifying it can be done fast.

ONE STEP AHEAD

Many people have 'imposter syndrome' when they start teaching. I did...

A good imposter stays one step ahead of their students! It is very rare a student will actually know more material than you do.

Remember your job is to simplify the material so the chances of your being 'caught out' for not knowing something complex are small.

EVERY POET IS A...

Few courses are truly new. You should look at people's syllabi and build on those.

Ask advisors / friends if you can see their slides / lectures - don't rip them off but use these as inspiration.

Never re-invent the wheel - your students do not want or need to see you doing that!