

Giving Talks

- Chris Godsil, November 26, 2014

It's not rocket science



Your Goal

The Question is:

- What are trying to do in your talk?

The Answer is:

- Explain why you are interested in your topic, and why your audience should be interested.

No Teaching!

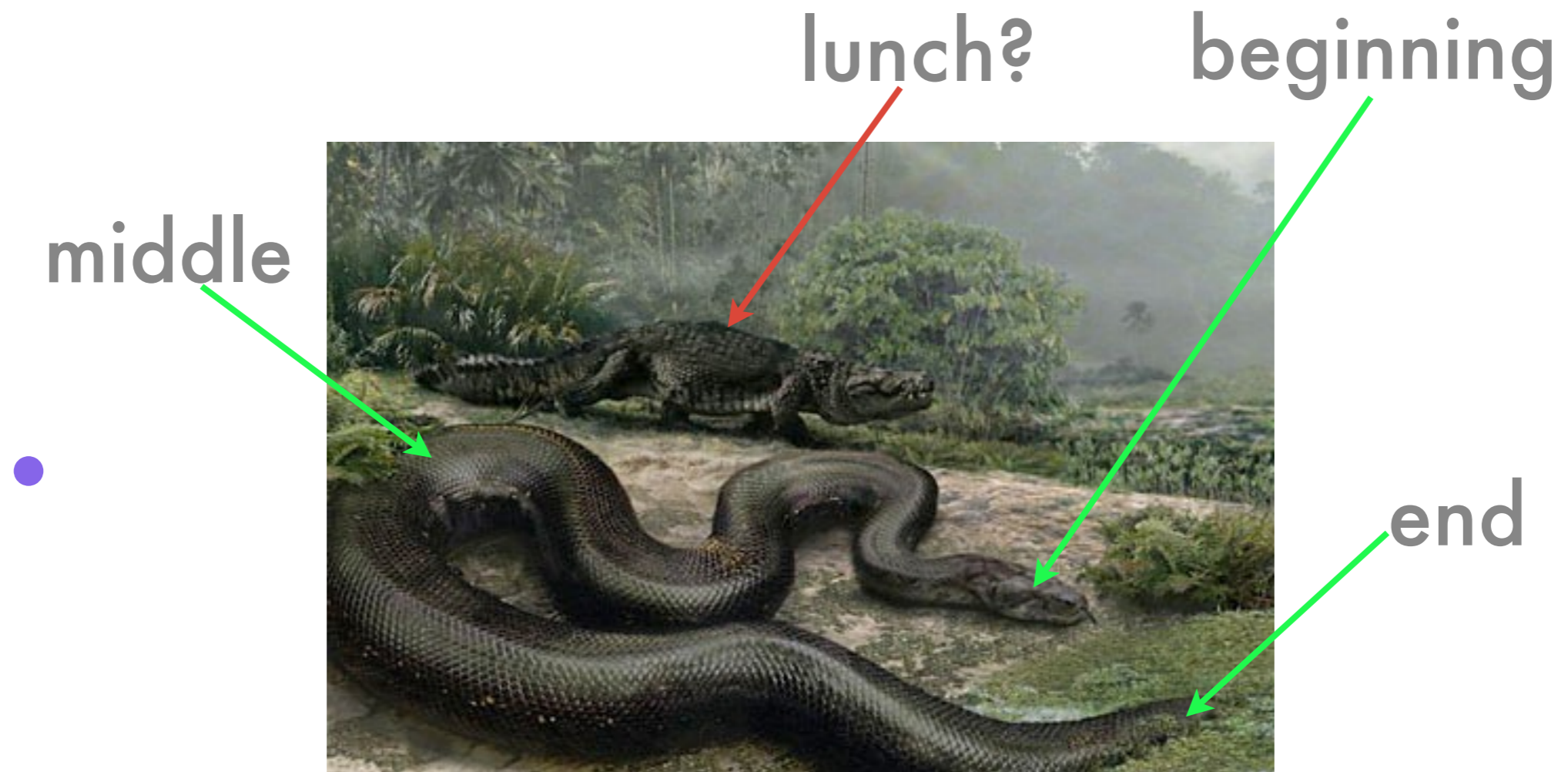
- This is not an opportunity to teach or instruct.
- All those lectures you have suffered and slept through in your courses do not provide a model.

The Structure

The Three Parts

- Every talk should have a beginning, a middle and an end.

Staging



In The Beginning

- Give the audience some idea about where you will be taking them, and why they should pay attention.
- Do not start with a definition, or with the statement of a theorem.
- Examples are always good.

The Middle

- The body of the talk will be a number of sections.
- Each section has its own beginning, middle and end.

Don't Go Off On Your Own

- At any instant, the audience should know what you are trying to do. (Describing an example? Proving something?)
- Say what you are about to do, do it, then state what you've done.

Ending

- Do **NOT** go over time!
- If you're running out of time, leave something out.
- If, during the talk, you get involved in a lot of discussion, you will need to skip stuff.
- Finishing too early is an error too.

End Well

- End on an upbeat! Do not mumble off into the distance.
- A summary would be better than nothing. But you could mention questions that follow naturally.

Human Nature

Manners

- Sit down while you're waiting for your talk to start. (Not manners, but you will not get so nervous.)
- No matter **what** goes wrong, do not complain or criticize. Do not belittle your work or your presentation.
- When you're finished, let the chair call for questions.

Nerves

- Nerves never go away, but you can learn to deal with them.
- Be aware that nerves are more of a problem when the audience is larger, or does not consist of friends and family.
- You are allowed to stop talking from time to time. To think, for example.

Motivation

- Make as much as you possibly can of connections between your topic and stuff that your audience knows.
- The history of a topic brings a personal connection. As might the story of how you came to the topic.
- “I’m rabbiting on about this, because my supervisor said to” will not work.

Attributions

- Be really careful to write down who is responsible for each idea or result that you use.

Dealing with Questions

- Make **absolutely** certain you understand a question before you try to answer it.

Preparation

The Basic Question

- What are the one or two points you'd like your audience to remember when your talk is over?

Outlines

- Decide what your main point is, and write it down in one or two sentences.
- Write down an outline. Anything that does not contribute to the main point should be omitted.
- On paper, write out everything that the audience will see.

Movement

- Think of your talk as a story, in which people do things, and time passes.
- Mention names and dates

It's all about Examples

- I have never attended a talk with too many examples.
- Use examples to illustrate definitions and theorems (if you must have theorems)...
- ...but do the examples first!

How much can I cover?

- The only way to cover a lot of material is to leave a lot out.
- Don't overestimate your audience

Cut!

- You will inevitably have too much material, trust me.
- It is amazing what you can leave out.
- It is even more amazing how your talk improves when you omit stuff.

Practice

- Practice your talk.
- When your talk is in good shape and the right length, practice in front of an audience. (An audience of two or three is fine, just not your fan club.)
- If you find yourself saying “If time permits....”, then you have not prepared properly.

A Few Points

- Do not use a blackboard in combination with the projector
- It's good to move around
- The best pointer is your finger

Laser Pointers

- are not light sabers



- use them sparingly (or not at all)

Technical Details

The Standard Tool

- is a LaTeX package: beamer

Alternatives

- powerpoint / keynote
- blackboard
- html5 + mathjax

Whatever You Use...

- Don't fill the frame...
- ...don't even go close

Starting with Beamer

- Learn LaTeX
- Read the beamer manual

Features

- Don't be clever. Just keep things simple and only use the bells and whistles for occasional emphasis.

Verstraete's Law

- Test the hardware before the talk
- Bring all the bits you might ever need

Graphics

- You can use any pdf file (or jpgs, or...)
- tikz is a good solution, but there's a learning curve.

The End

