

The Craft of Scientific Presentations

“Presentation and exposure of scientific results”

ESSle Autumn School

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www.schaper-rinkel.eu

Workshop Objectives



deliver scientific results in a way that meets the needs and standards of scientific target groups

- Design scientific presentations that inform, persuade, and entertain an audience.
- Speak effectively in a variety of academic situations.
- Use presentational tools and techniques to keep audiences engaged.

Scientific Presentation Skills. Agenda

- Overview
- Overcoming fears
- Designing presentations
- Impromptu speaking
- Action plan





What I need from
this workshop is ...

Introductions



- Find out something exciting about this person's research
 - Strange way into social sciences?
 - Unusual research topic?
 - New method /approach
 - What would you research if you did not have to worry about grants?
 - Favorite theory?

Assessment

Avoiding

Resisting

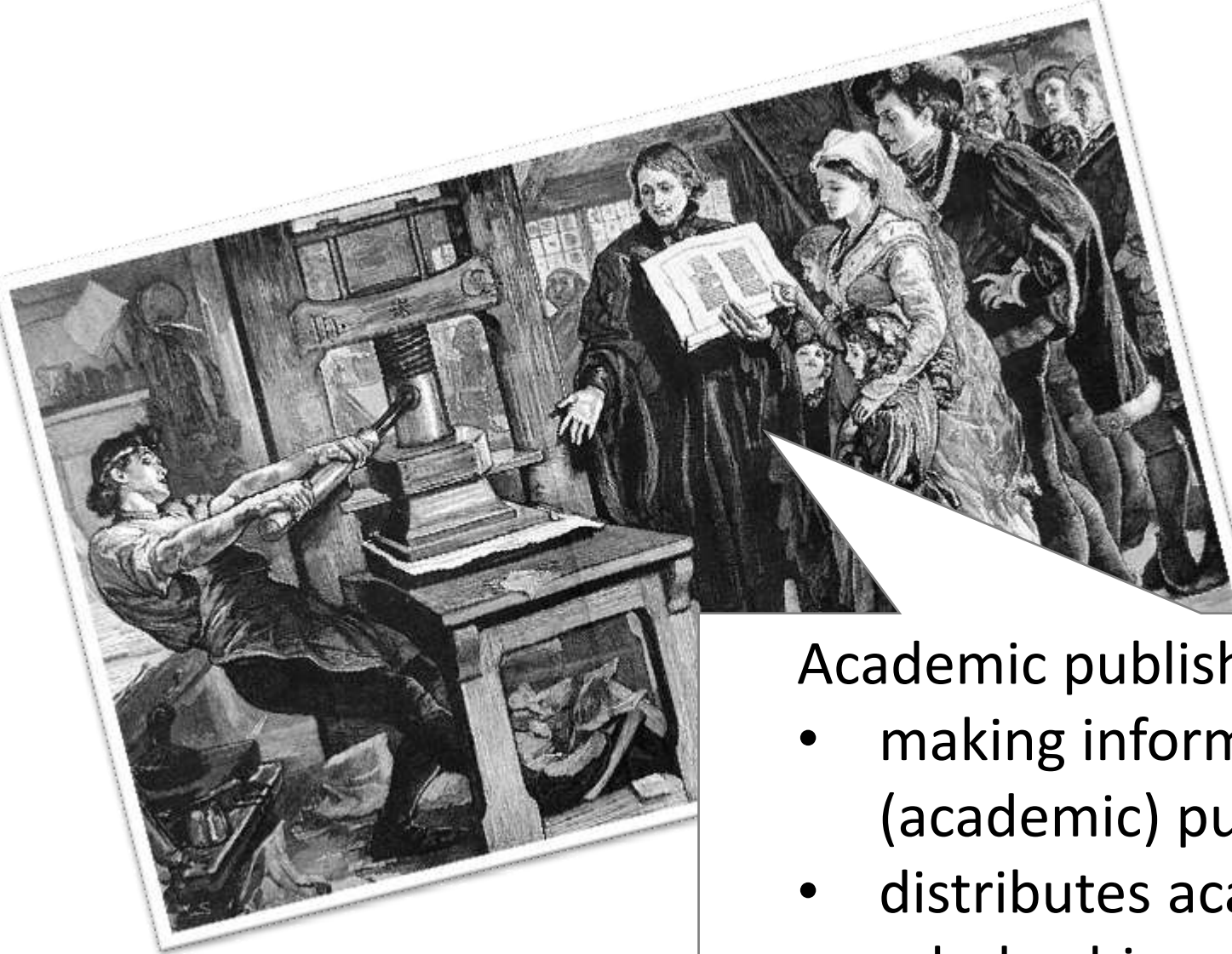


Reluctant

Enthusiastic



Scientific
presentations



Academic publishing

- making information available to the (academic) public
- distributes academic research and scholarship
- traditionally published in books & journal articles



Books and journals are available for a long time in libraries

Past...
... oral
presentations in
science



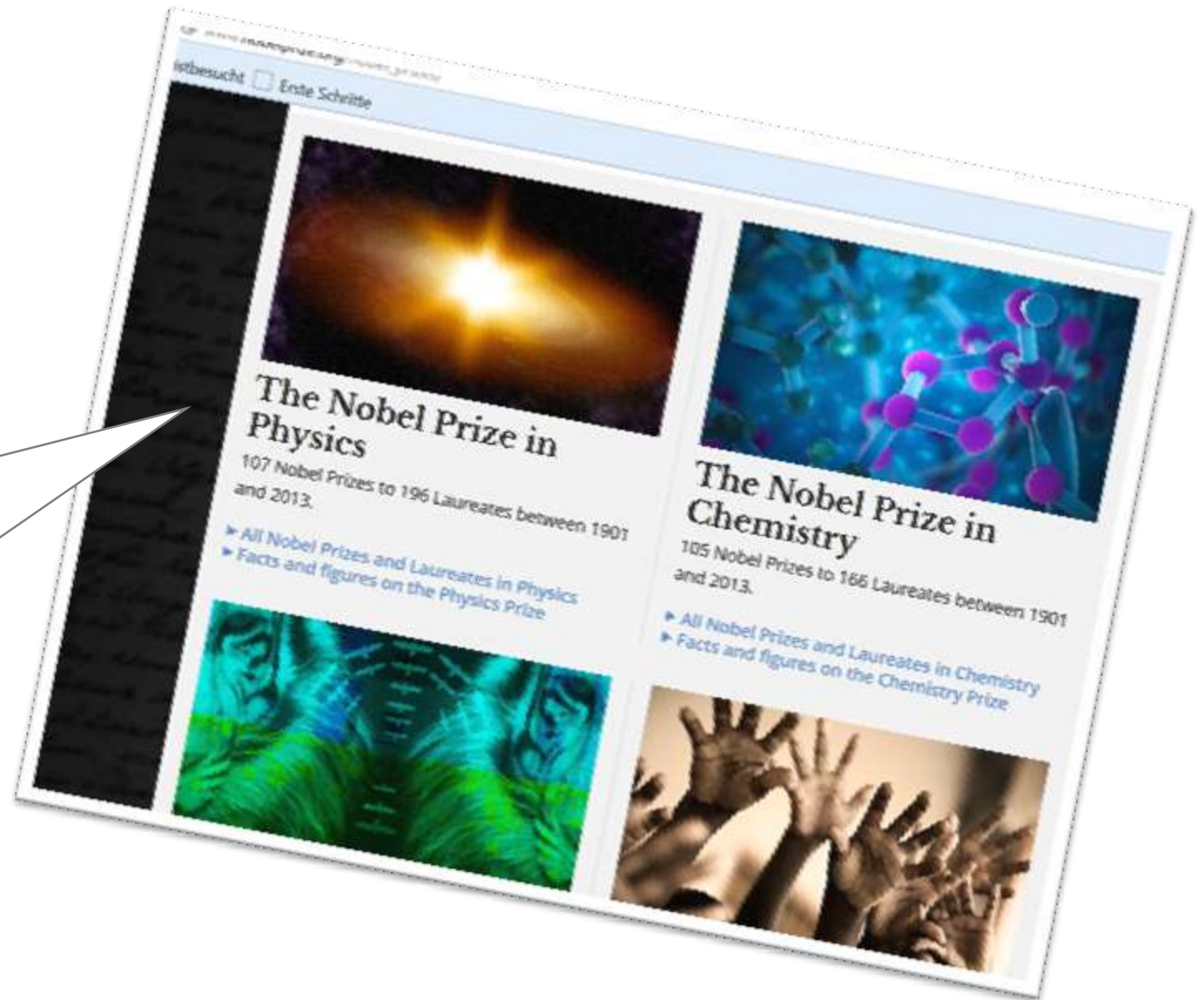
Albert Einstein
Nobel Lecture
1923

Today?

only available as
text – not as
speech



Today: Nobel
Lectures online
available



Today:
Presentations,
lectures are available
online
Massachusetts
Institute of
Technology

MIT Video contains
more than 12,000
presentations



<http://video.mit.edu/>

Today:

Lectures and
Presentations on
YouTube

- [YouTube](#):University
channels



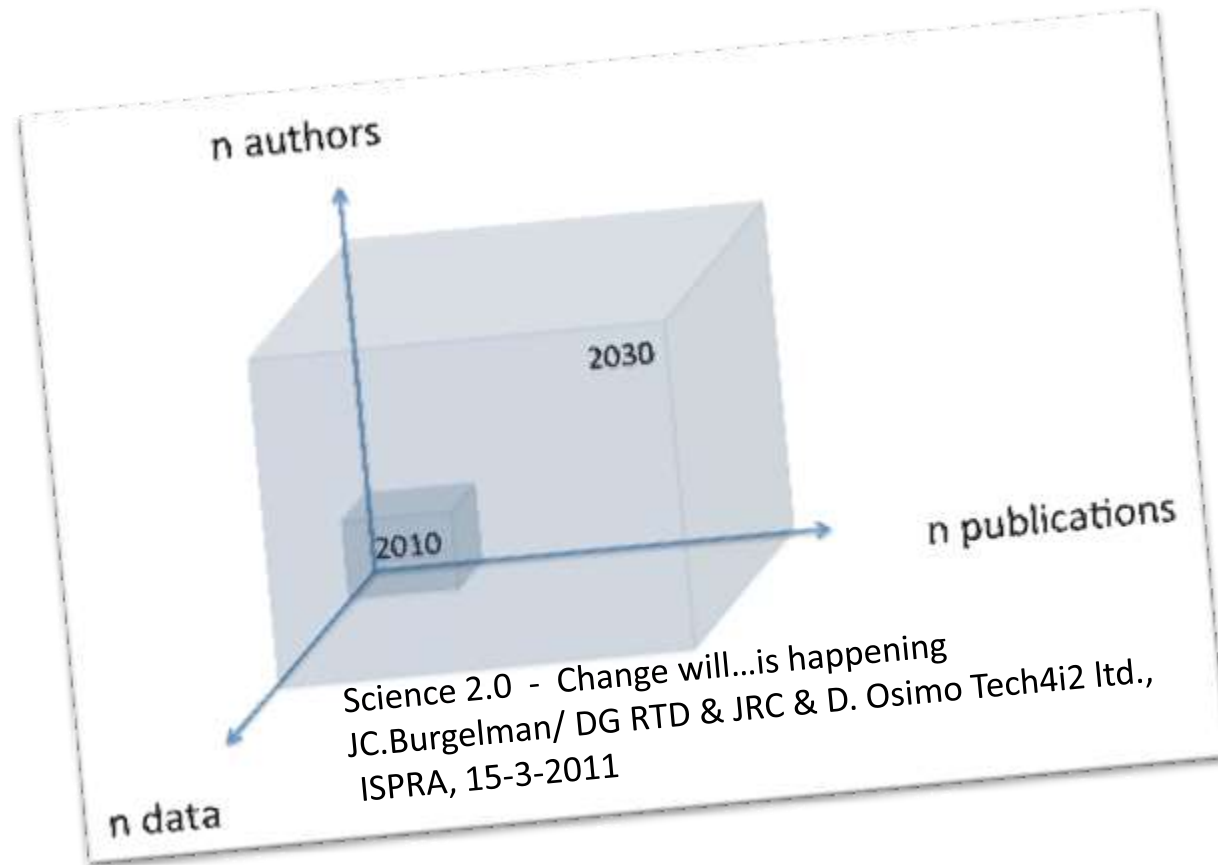
Great source for great talks!

TED (Technology, Entertainment, Design)
- conferences under the slogan "ideas worth spreading".

www.ted.com/



Key trends in Science 2.0: explosive growth of data, authors and publications



In addition: explosive growth of presentations, lectures, speeches in science → need for presentation skills

From reading
manuscripts...



... to
multimedia
and Storytelling



Uniformity versus diversity

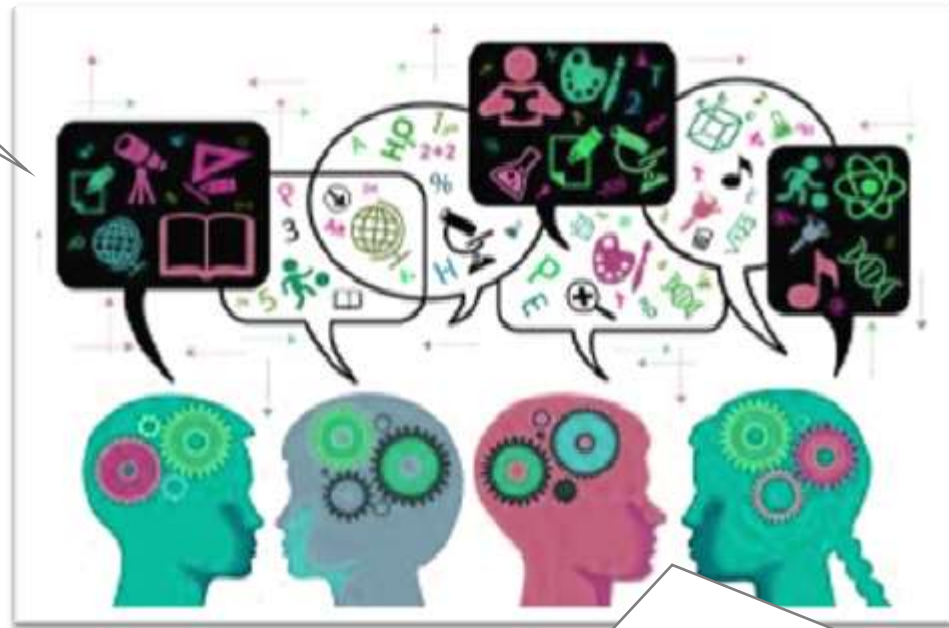
Contrasting Views on the Art of Scientific Presentations



“Happy families are all alike; every unhappy family is unhappy in its own way.”

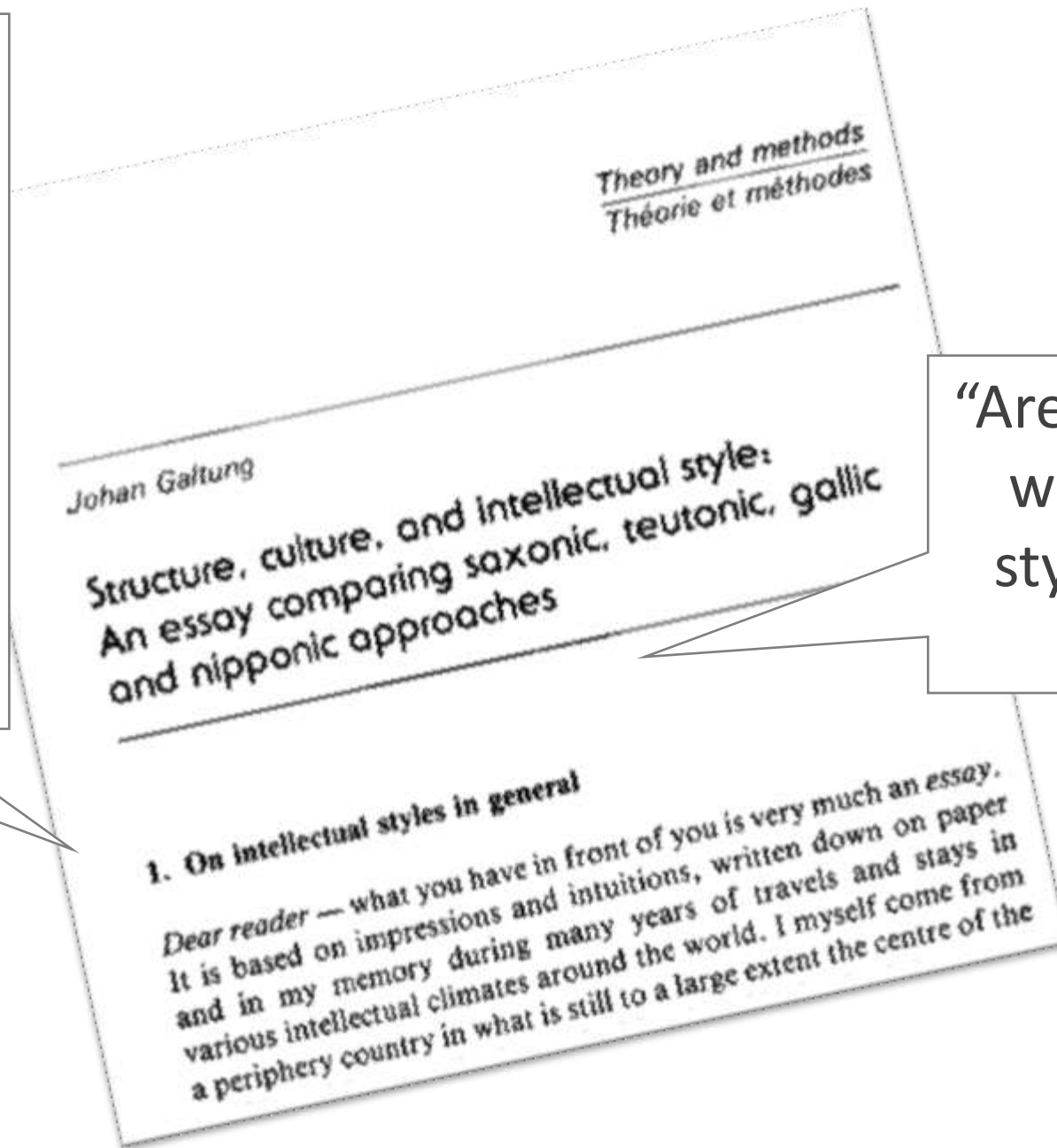
Leo Tolstoy, “Anna Karenina” Moscow, 1878

“Great scientific talks
are all alike; every
boring talk is boring
in its own way”



“Boring science communication strategies are all alike;
every successful strategy is successful in its own way.”

Johan Galtung 1981
“Structure, culture,
and intellectual style:
An essay comparing
saxonic, teutonic,
gallic and nipponic
approaches”, in:
Social Science
Information



“Are we heading for a
world intellectual
style? I don’t think
so.”

“Publish or
perish”



“Present or you
can’t publish.”

Types of Presentations

Informational

Instructional



Persuasive

Inspirational

Types of Presentations

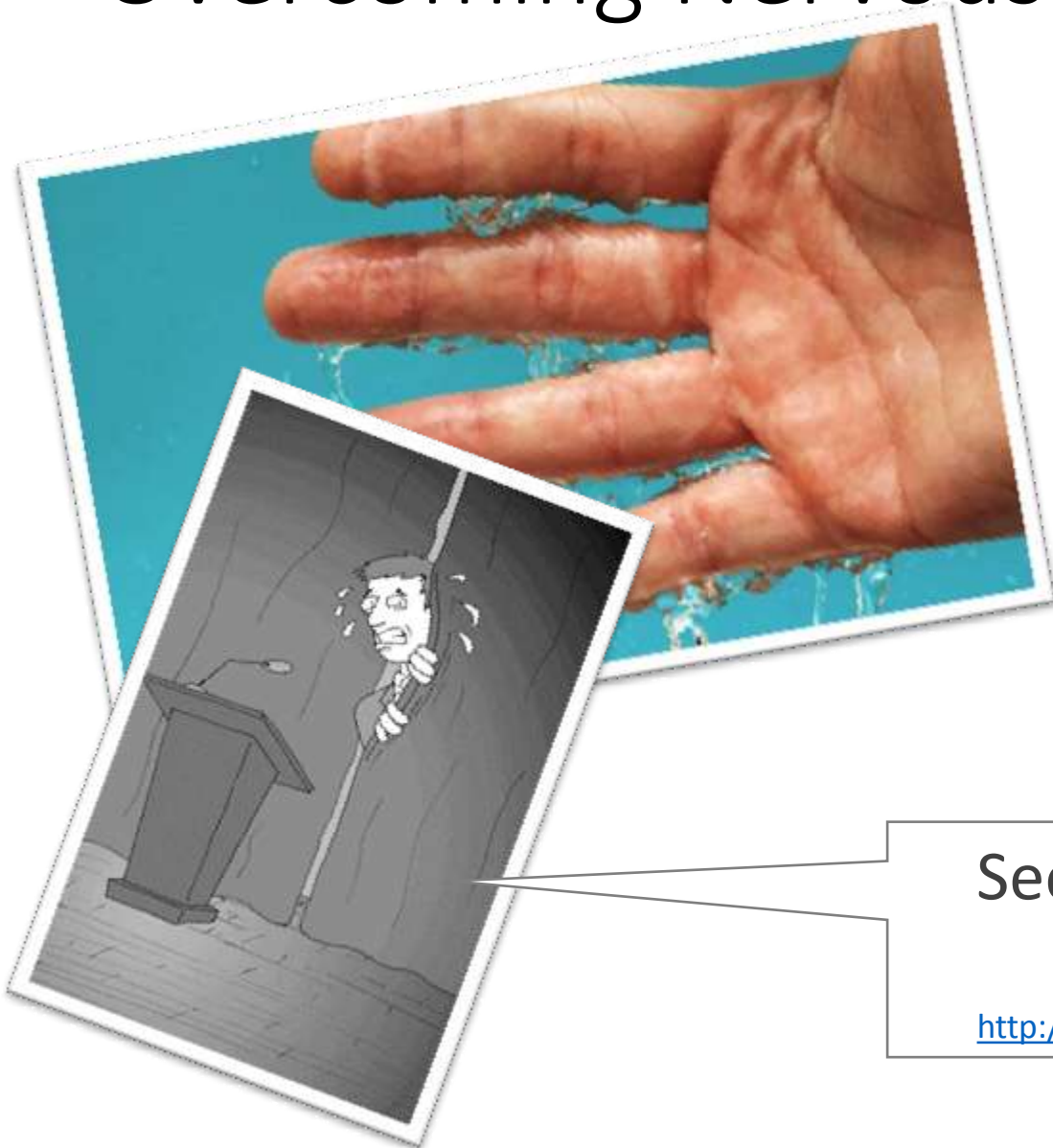
Informational	Inform: Meetings, information for students, Project reporting, workshop presentations
Instructional	Teach and instruct: lectures, workshop presentation, presentations at conference sessions
Inspirational	Inspire, change views: Key notes at conferences, invited lectures, presentations for a broader public audience
Persuasive	Initiate action, change views: Key notes at conference, invited lectures, presentations for a broader public audience

ABCs of Presentations



- Accurate
- Brief
- Clear

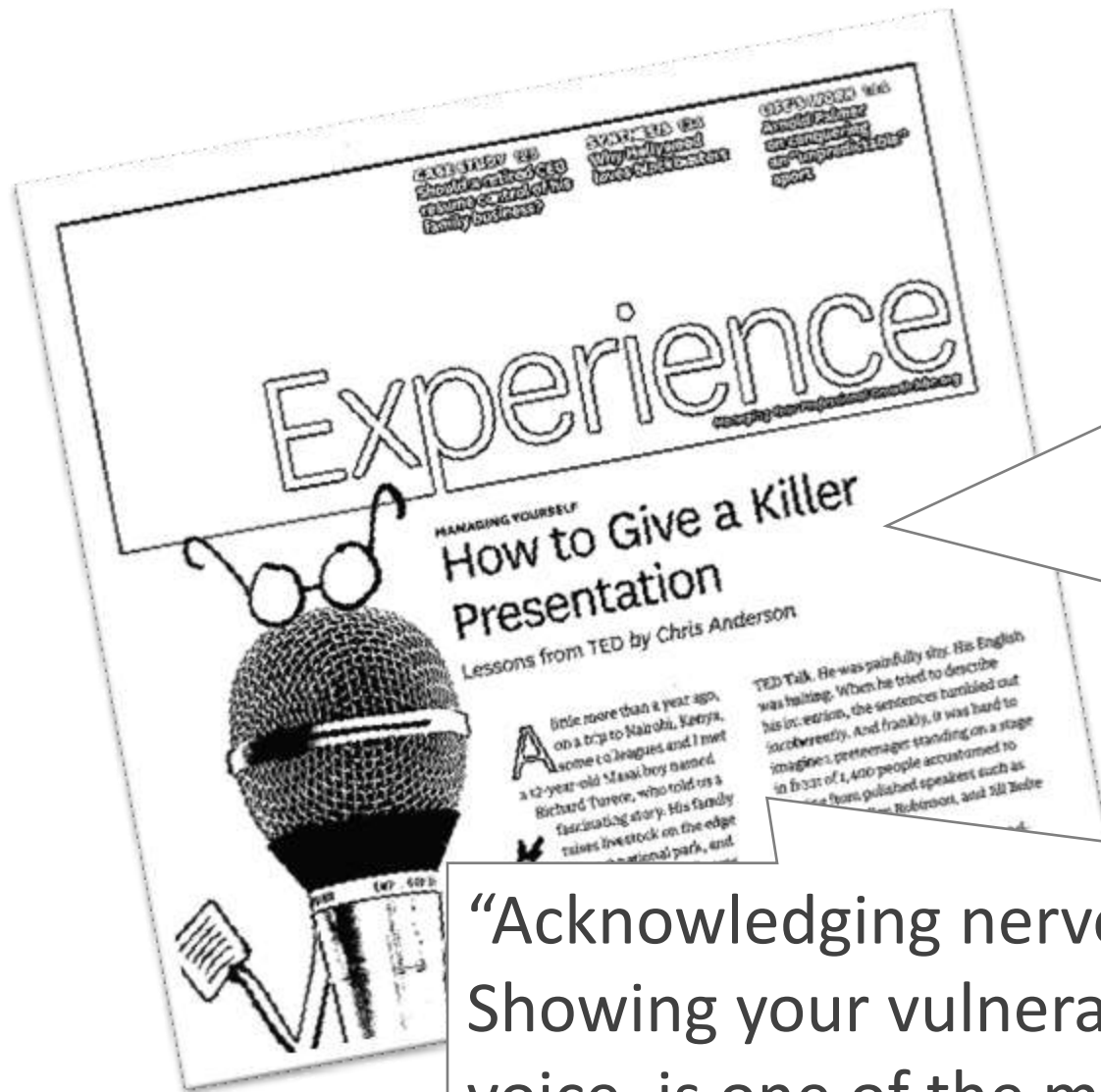
Overcoming Nervousness



- Breathe.
- Practice, practice, practice.
- Connect with the audience.
- Focus on the message.
- Do some exercises.

See the TED Talk: Kelly McGonigal: How to make stress your friend

http://www.ted.com/talks/kelly_mcgonigal_how_to_make_stress_your_friend.html



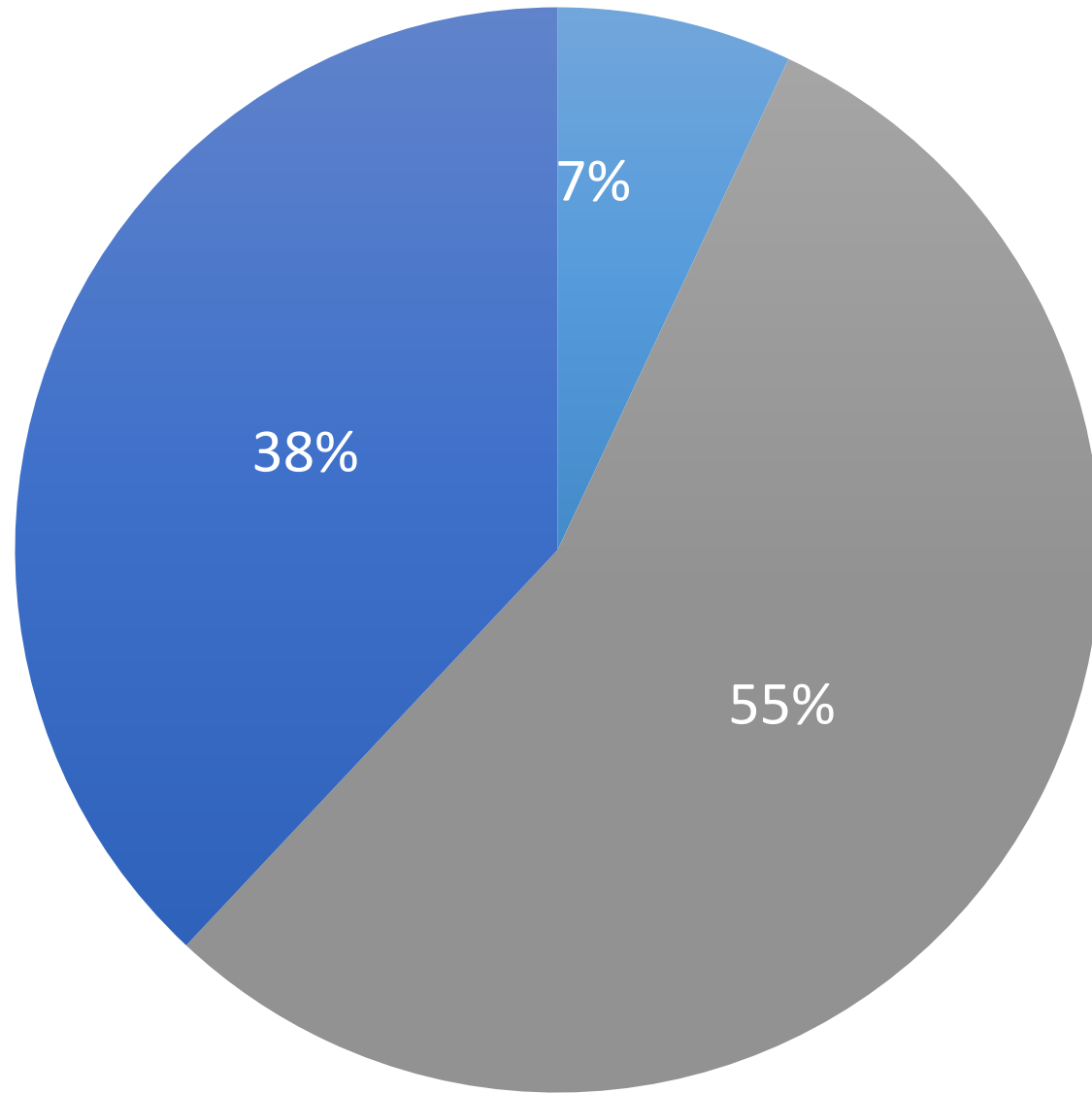
“In general, people worry too much about nervousness. Nerves are not a disaster. The audience expects you to be nervous. It's a natural body response that can actually improve your performance: It gives you energy to perform and keeps your mind sharp. Just keep breathing, and you'll be fine.”

Chris Anderson, curator of the TED Conference

“Acknowledging nervousness can also create engagement. Showing your vulnerability, whether through nerves or tone of voice, is one of the most powerful ways to win over an audience, provided it is authentic.”

Chris Anderson, curator of the TED Conference

Our Messages



■ Words ■ Body language ■ Tone

The contested science
behind: Albert
Mehrabian

Tone & Voice

- Speak loudly enough for everyone in the room to hear you.
- Speak slowly and clearly. Don't rush
- Begin a new point, use a higher pitch and volume.
- Slow down for key points.
- Use pauses.



Style of (Scientific) Presentations (Twin Sisters on TED)

Serious Gaming: Jane McGonigal

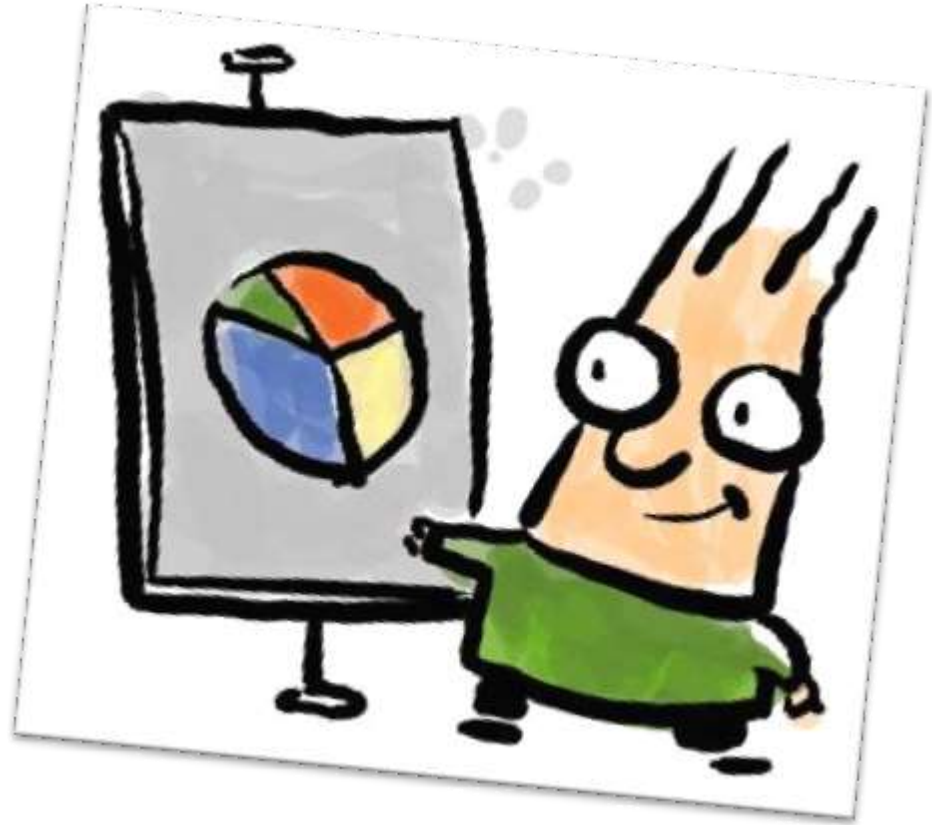


Public Health: Kelly McGonigal



Constructing Presentations

- Plan
- Design
- Write



Purpose

- Can you define your purpose for your talk in a single sentence?



Starting with the audience

A presentation is NOT a scientific paper!

- Who are they?
- What knowledge do they have?
- What do you want them to know?



What do I want from my audience?

- Plan your take-home message
- Tell a story, don't present a report
- The basic rule:
 - Introduction: **Tell them what you are going to tell them.**
 - Main part of the talk: **Tell them.**
 - Conclusions: **Then tell them what you told them.**



Think about your audience, then tell them a story

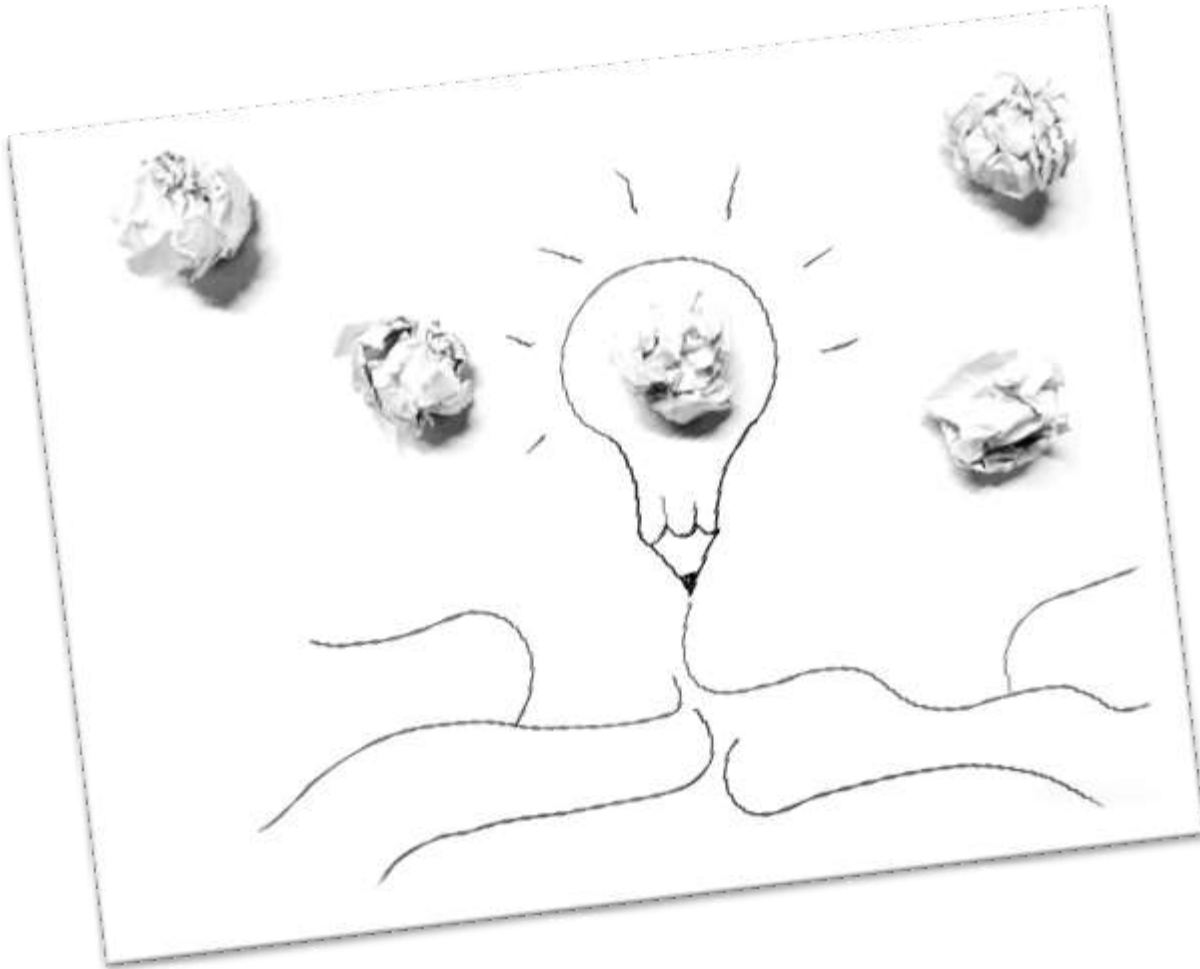
Traditional scientific presentations

- Who I am
- What my research is about
- How my research is different
- What method I use
- My results
- My conclusions

Storytelling in Science

- Act I: Present the question
- Act II: explore the question (Methods and Results)
- Act III: Answer the question (Discussion)

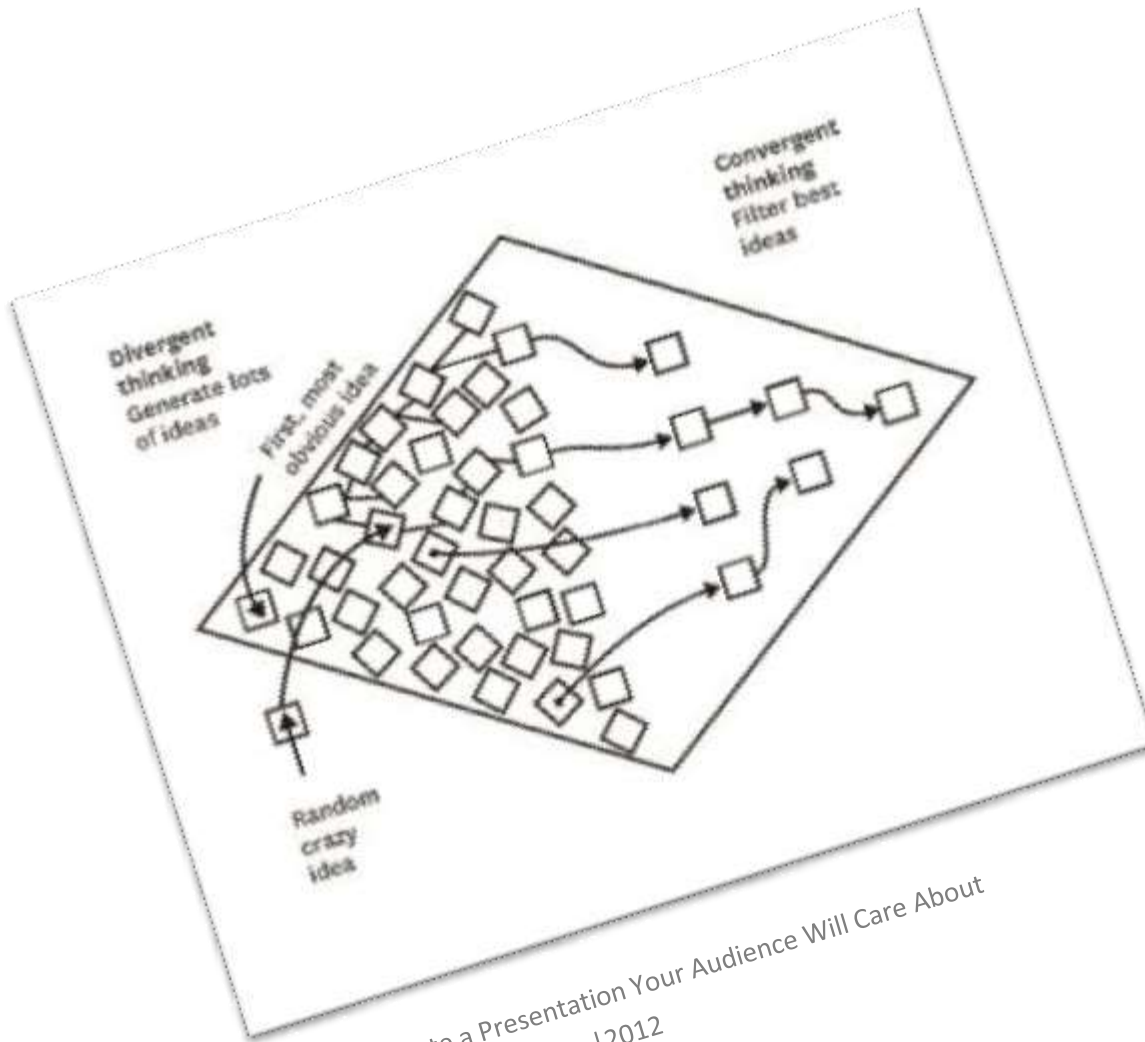
Brainstorming



Start with paper, not Powerpoint!

- Set criteria
- Don't judge ideas.
 - There are no stupid ideas. The wilder the better
- Focus on quantity, not quality
- Use mind mapping
- Try piggybacking
 - combining, modifying, expanding others' ideas.

Brainstorming

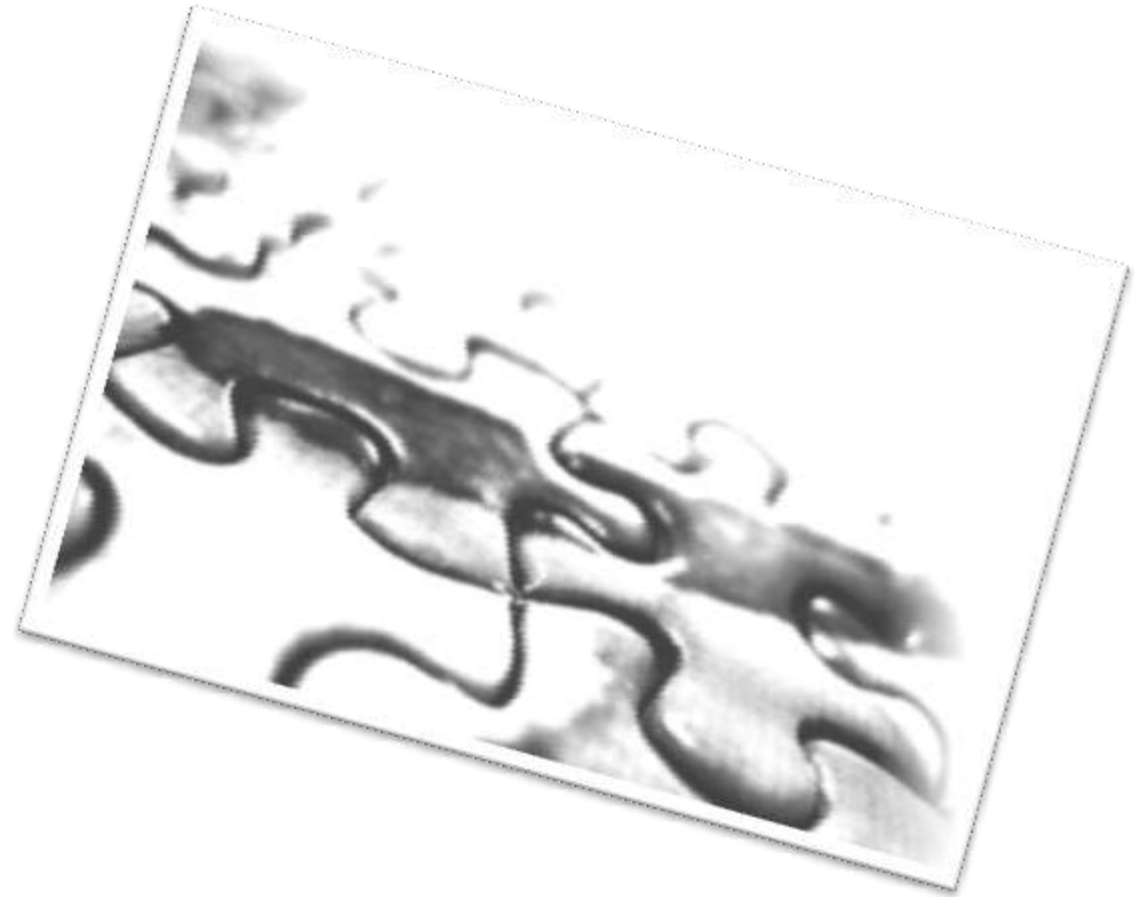


Create a Presentation Your Audience Will Care About
by Nancy Duarte | 2012

1. Go for quantity - divergent thinking
2. turn your attention to convergent thinking, the filtering and sorting

Parts of the Presentation

- Opening
- Body
 - Point one, Point Two, and Point Three – Don't overload with Data
- Closing
 - Review/ Summarize & special
- Q&A
- 2nd closing
 - Summarize & special

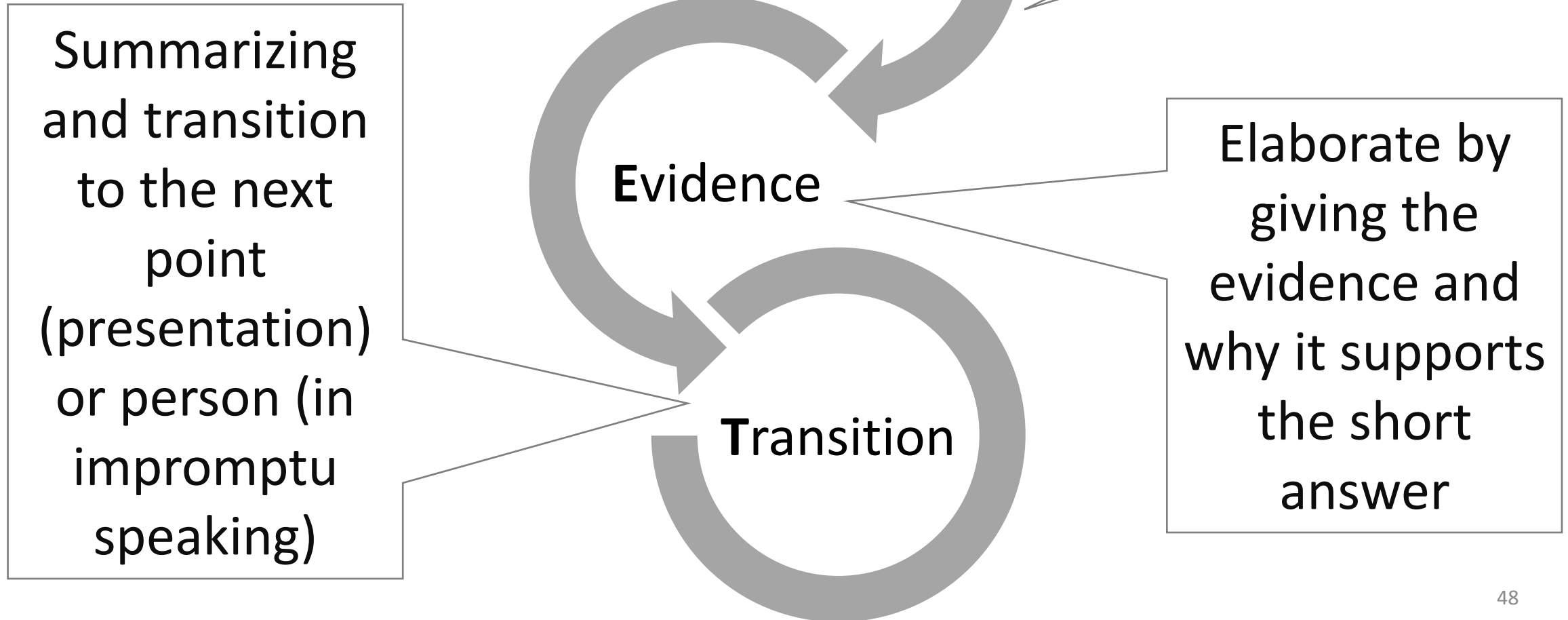


Impromptu Speaking

- Project reports
- Networking
- Meetings
- Q&A



S-E-T Formula



The Elevator Speech

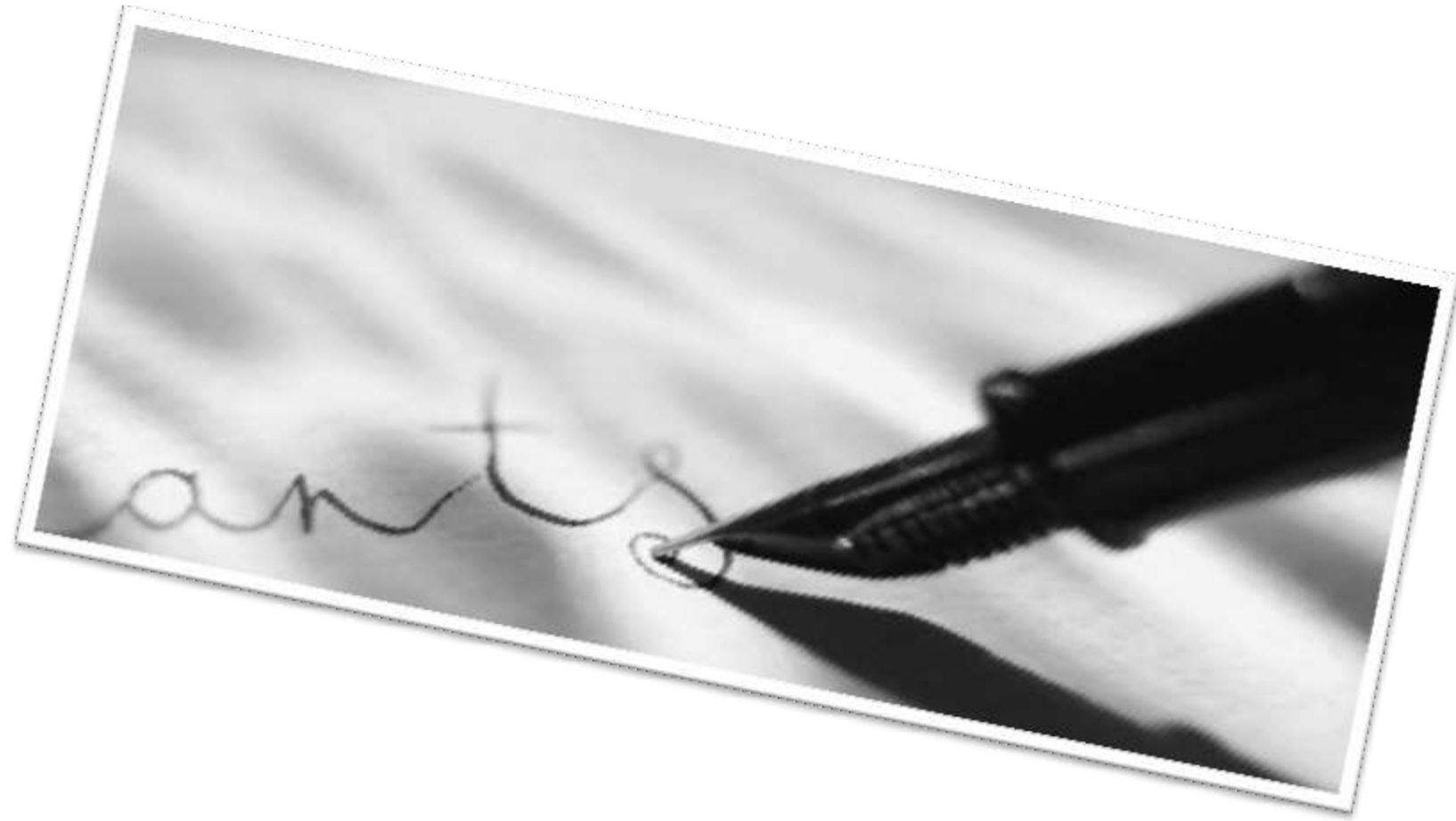


- 60 seconds / 120 seconds maximum
- Key points only
- Prepare in advance

“With ruthless revision, researchers can compose a punchy 'elevator speech' to sell their science to a neighbour, potential employer or politician.” Nature 2013

Writing Your Presentation

- Opening
- Body
- Closing
- Q&A
- Second closing



Visual Media

- Charts and Tables
- Drawings
- Graphic elements
- Photos
- Video
- Databases for visual media:
 - shutterstock.com
 - Flickr.com
- Be aware of copyright issues



Using PowerPoint

- Rule of sevens
 - No more than 7 lines per slide
 - and 7 words per line
- use “Sans Serif” fonts (Arial, Calibri etc.)
- High contrast (black & white)



Powerpoint Alternative: Prezi for scientific presentations (<http://prezi.com/>)

- Reasons to use Prezi

- Prezi is a cloud-based non-linear presentation software and storytelling tool
- allows users to zoom in and out of their presentation media,
- allows users to display and navigate through information
- Good examples to learn: many TED talks use Prezi to make their talks



Prezi for scientific presentations

- Reasons to avoid Prezi
 - Time consuming to build a Prezi
 - Yearly subscription if you want to use Prezi's offline



After delivering your presentation: Q&A Sessions

- Answering questions
- Prepared questions
- “Parking lot”
- Common questions
- Second closing

Be prepared to present a second closing if there is the possibility of a Q&A session.



Practice Session

Choose one question.

Answer it using the S-E-T Formula.

Practice, practice, practice.

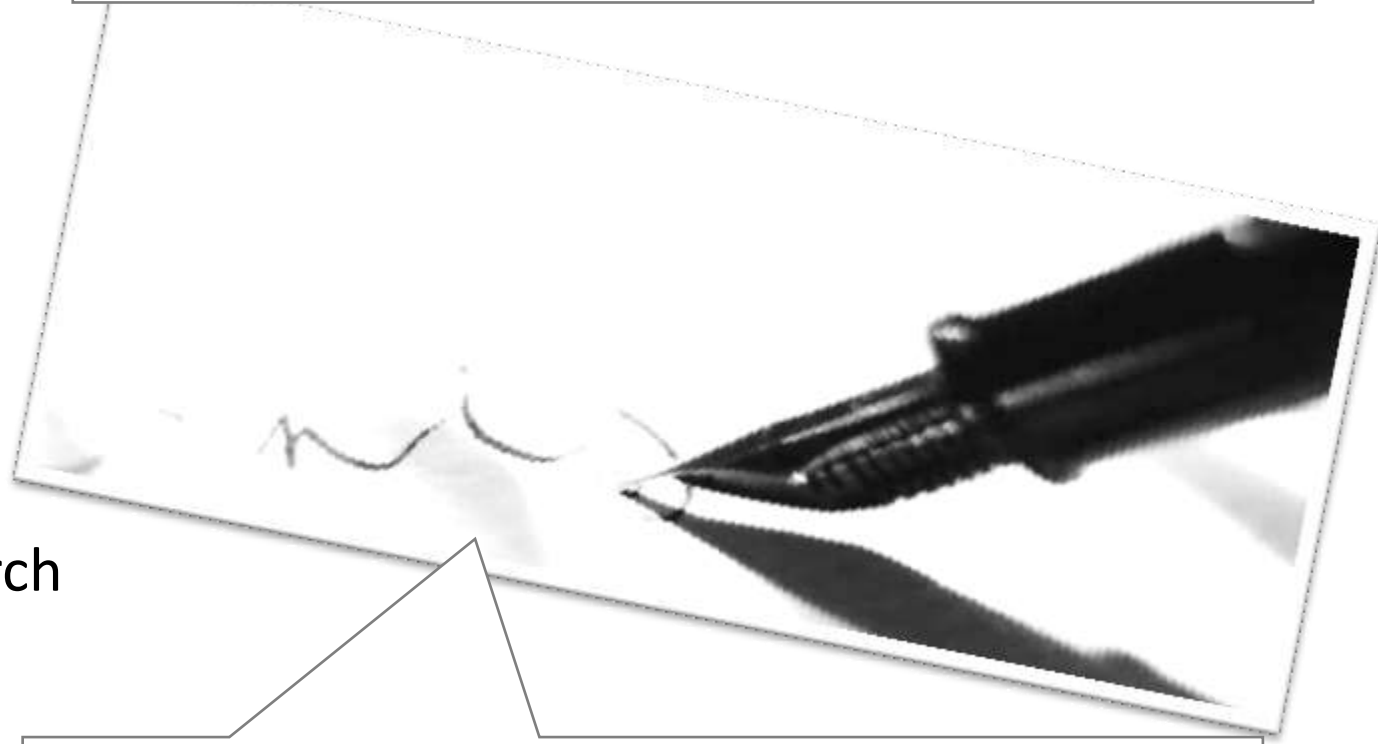
Present!



Practice Session – Chose a Topic & Type of Presentation

- Informational / instructional
 - Teach us a method you use
 - Inform us about your findings
- Inspirational
 - Tell us the story of research that changed your life
- Persuasive
 - Persuade us to give you a research grant (ERC Starting Grant)

Prepare a 2-5 minute talk on the chosen topic



You have 20 min to prepare

Evaluations

- What did they do that you liked?
 - find things that the speaker does well
- What would you like to see more or less of in this presentation?
 - suggest some areas they can work on



Academic Speaking Opportunities



- Scientific networks
 - Online access to get cfp
- Scientific associations
 - E.g. ESA - European Sociological Association
- Training sessions
- Meetings at which you facilitate

Continued Development

- Self
- Audience
- Peer
- Mentor
- Recordings



Action Plan

- 7 Days

- Prepare an elevator speech

- 30 Days

- Commit to an persuasive /inspirational presentation



It usually takes more than three
weeks to prepare a good
impromptu speech.

Mark Twain

It can be the beginning of a
fabulous new research in the
future



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