Introduction to Scientific Communication

Lutz Pluemer

Welcome

- Welcome to everybody.
- It is my **pleasure** to give you this lecture today and in the next weeks and months.
- I look forward to I look forward to **getting to know you better**.
- Maybe you are looking forward to **getting to know me better** ☺

Mission

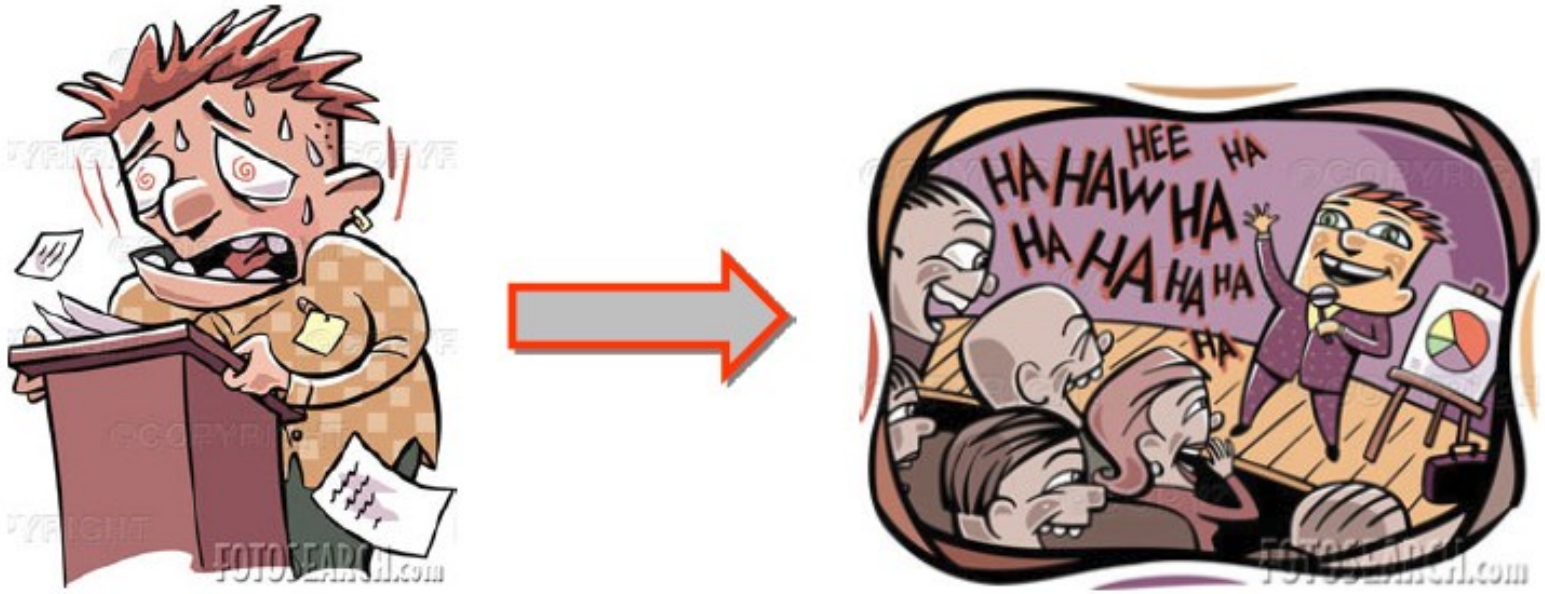
- My Mission is to introduce you into the Science and the Art of Scientific Communication
- My Mission is to teach you to **sell yourself better**.
- I am here to
- Teach you
- Guide you
- Coach you
- Scientific Communication and Communication in General
- **Oral Presentation** and Paper Writing, with Focus on **Oral**
- Because I believe that Communication will be the **Key to your Professional Success**

Structure of My Lecture Today

- **Who am I?**
- Where do I come from?
- What is my background?
- Why I am here.
- Why is Scientific Communication so **important**?
- Why is it **difficult**?
- A **Model** of Human Communication
- Practical Exercise: **A 60 Second Elevator Speech**

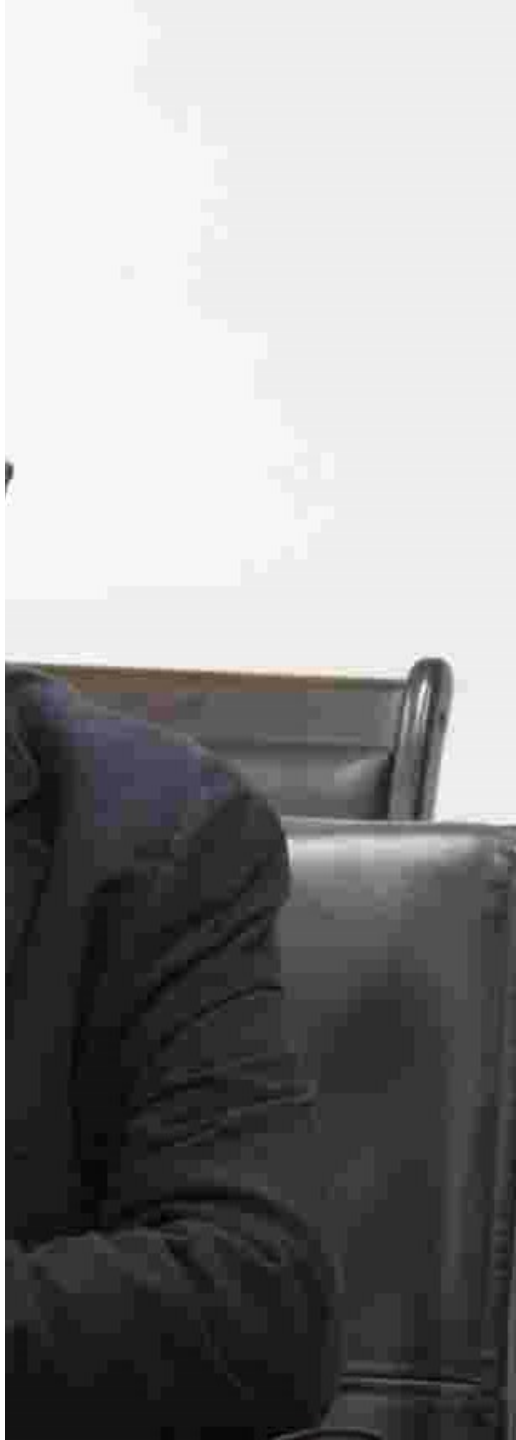
Theory and Practice

- This lecture will have a lot of **exercises** in class
- In these exercises you will present something – **in front of the whole class**
- And we will start today.
- Because: Scientific Communication is more an **Art** than a Science.
- And the Key to success is **Practice**.
- The same as with learning the **English** language.
- I know it is hard for everybody to present in front of the whole class.
- But you will learn. Step by step.
- And I will coach you. I'll show you how to deal with your **shyness**.
- But I cannot avoid it for you.


HA HAW HEE HA
HA HA HA HA
HA

About myself

- Where do I come from?
- What is my background?
- What is my „Unique Selling Point“?
- How does it relate to my Mission for this Lecture?



Where do I come from? – Some Maps

From Germany to China

Europe and Germany

Germany and Bonn

Bonn

- A small City of 300 000 Inhabitants
- In the Province of North Rhine Westphalia
- Much smaller than Chengdu
- However: Bonn is a sister city of Chengdu
- And North Rhine Westphalia is a sister Province of Chengdu
- Some Impressions

Bonn – the City Hall Welcoming State Guest

L. v. Beethoven – the famous Composer

Bonn – the River Rhine

Bonn – the River Rhine

Bonn – the University

Bonn – Botanical Garden of the University

Student Life

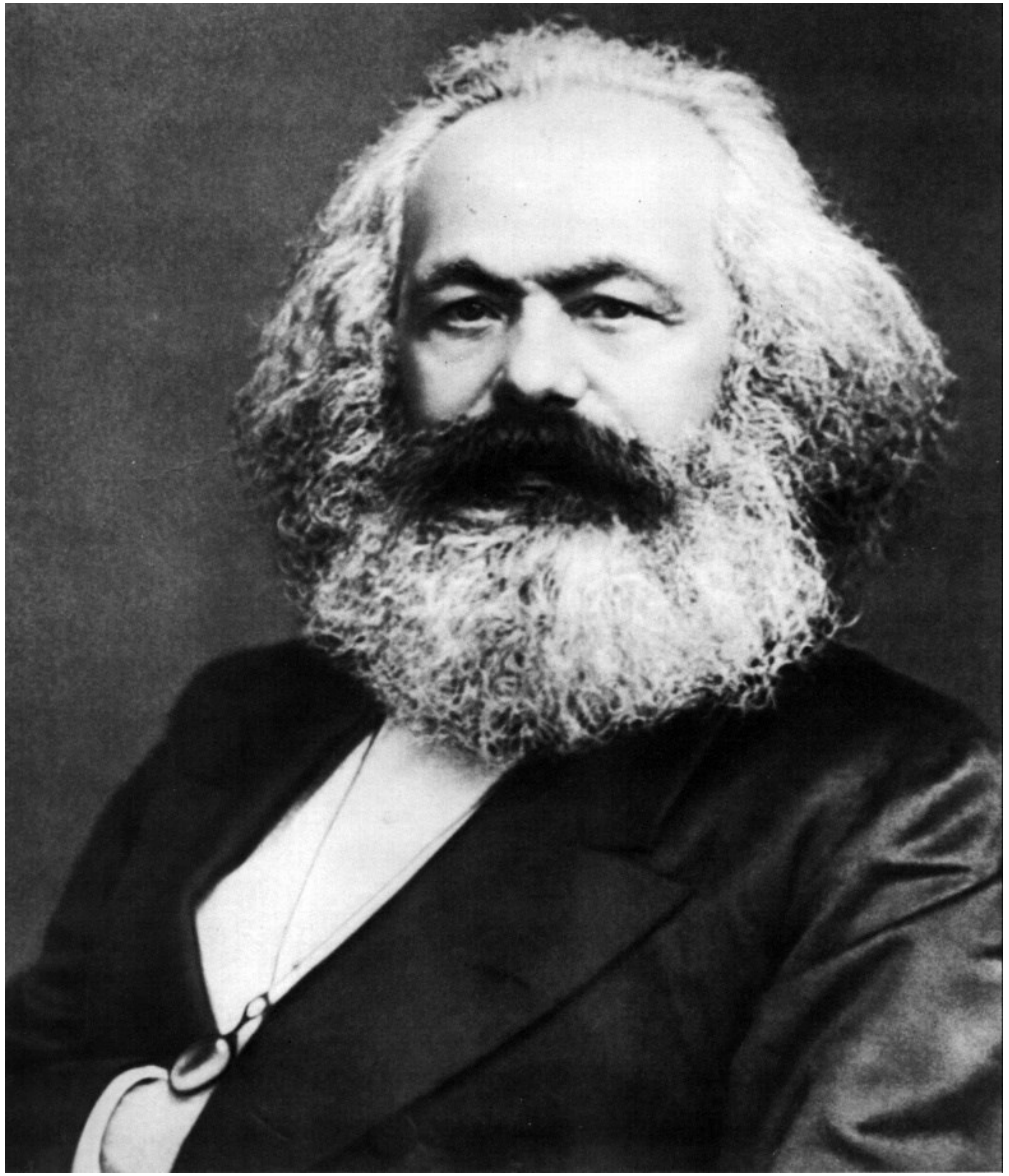
History: Bonn University was founded on **18 October 1818**
by the **Prussian King** Friedrich Wilhelm.

Some dates on the University of Bonn

- Was founded in **1818** by the Prussian
  King Friedrich Wilhelm
- Celebrated its **200th Birthday** two years ago
  with Germany's President Frank Walter Steinmeier
  and the Rector of the University Michael Hoch

One of our famous students

You know him all: Karl Marx

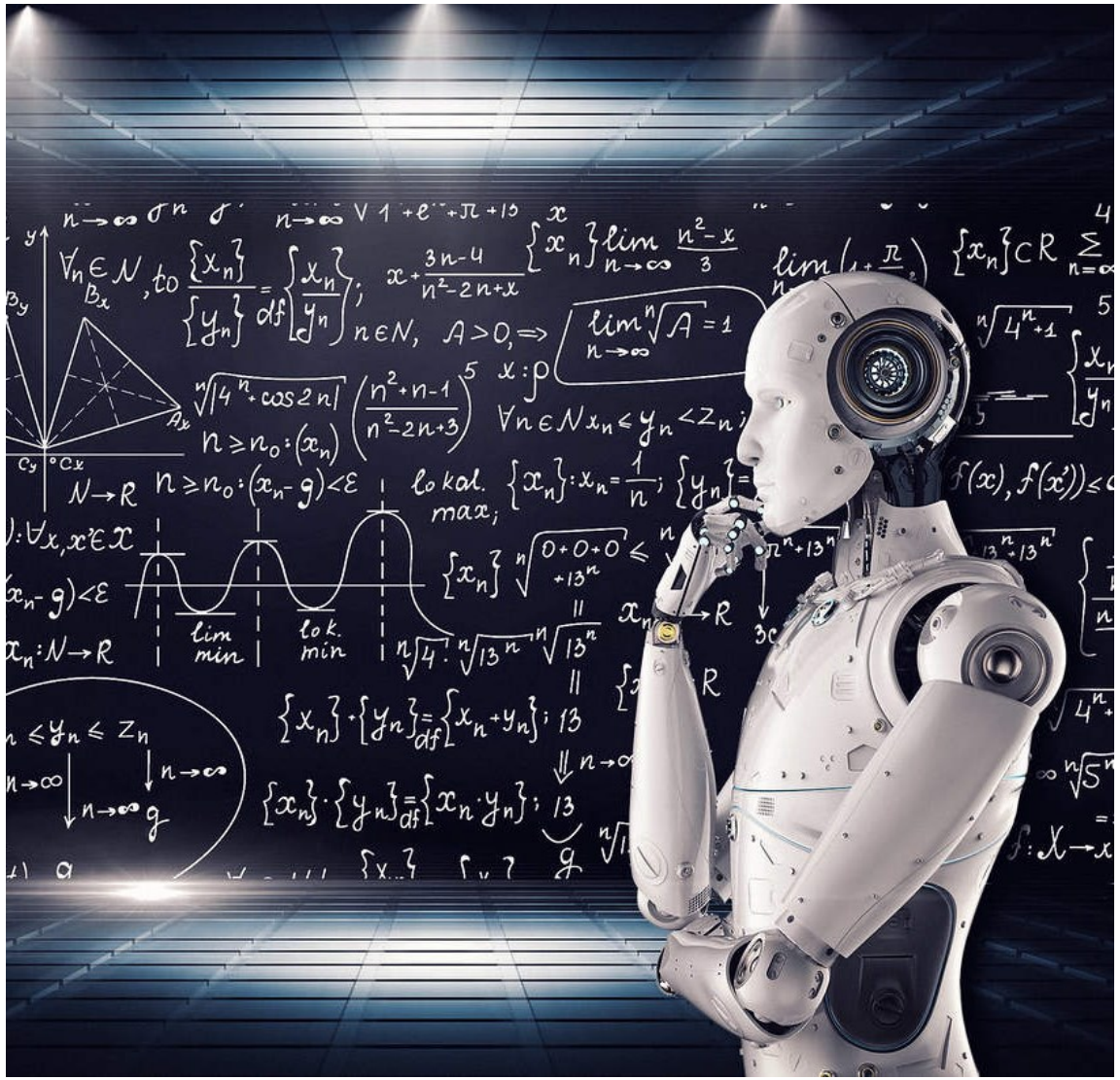


Ranking

- Was founded in 1818 by the Russian King Friedrich Wilhelm
- Celebrated it‘s 200th Birthday 3 years ago
- Has Two Nobel Prize Winners, one of which Reinhard Selten, has honorary doctorate from SWJTU
- In the German **Excellence Competition**
  Bonn is **Number 1**
- In the **Shanghai Ranking** (Academic Ranking of World Universities ARWU) Bonn is worldwide **number 70**
- My old **Faculty** (Agriculture) is worldwide **No. 46**
- In recent years, the university and faculty have developed rapidly forward
- That is part of my Background: **„How to move forward“**

My professional Background

- Studied **Computer** Science (Major) and Philosophy (Minor) (strange)
- Got my Ph.D. in „Logic Programming“ – strong Relation to AI and Expert Systems
- Changed to „Geoinformation“ – strong Relation to Geodesy and Photogrammetry
- Since Geodesy Institute in Bonn is in the Agricultural Faculty (unique, but strange)
  I initiated the Cooperation between Agriculture and Geodesy …
- And included modern AI-related Robotics (unique)
- This has led to one of 57 **excellence clusters** in Germany (unique success)



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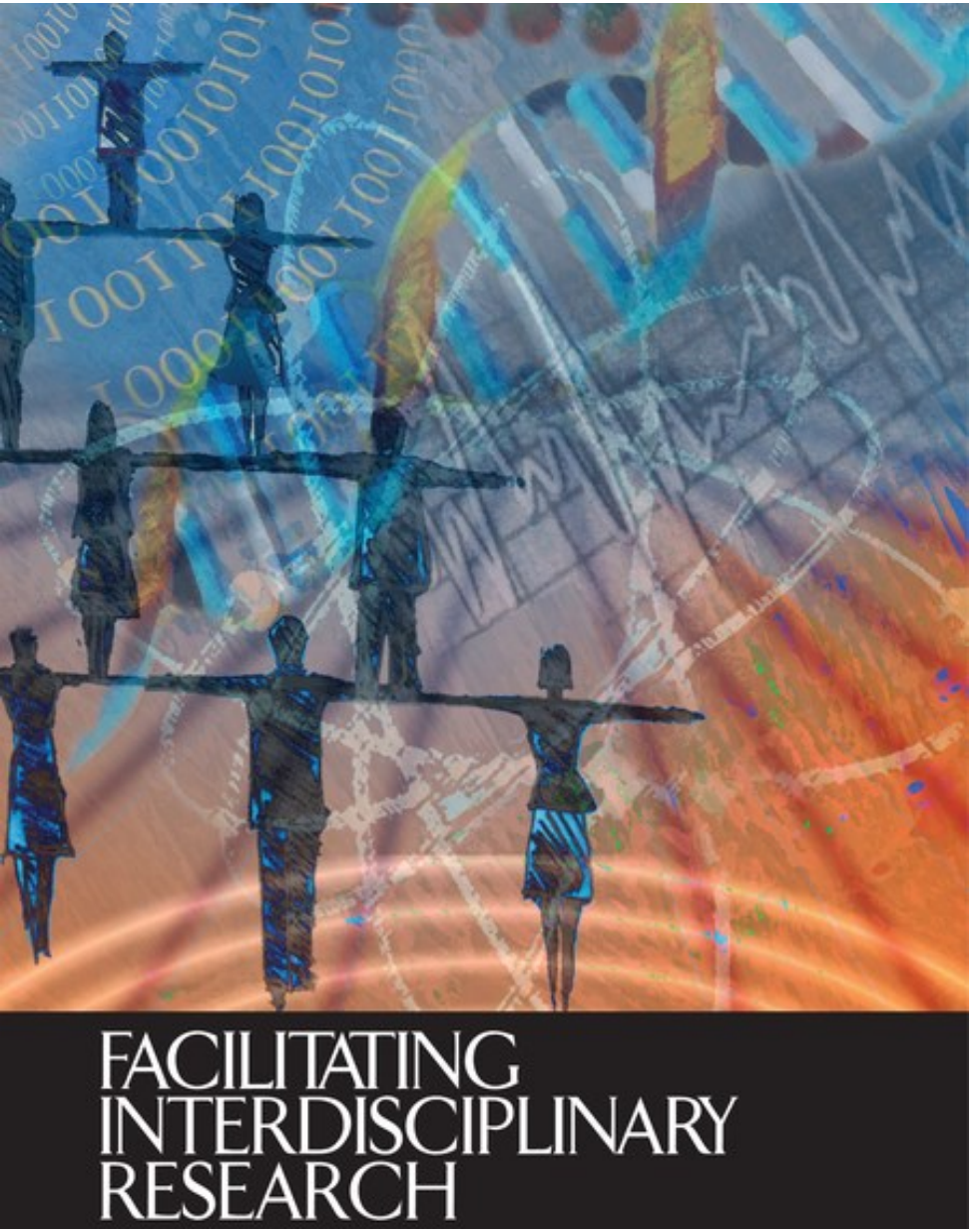
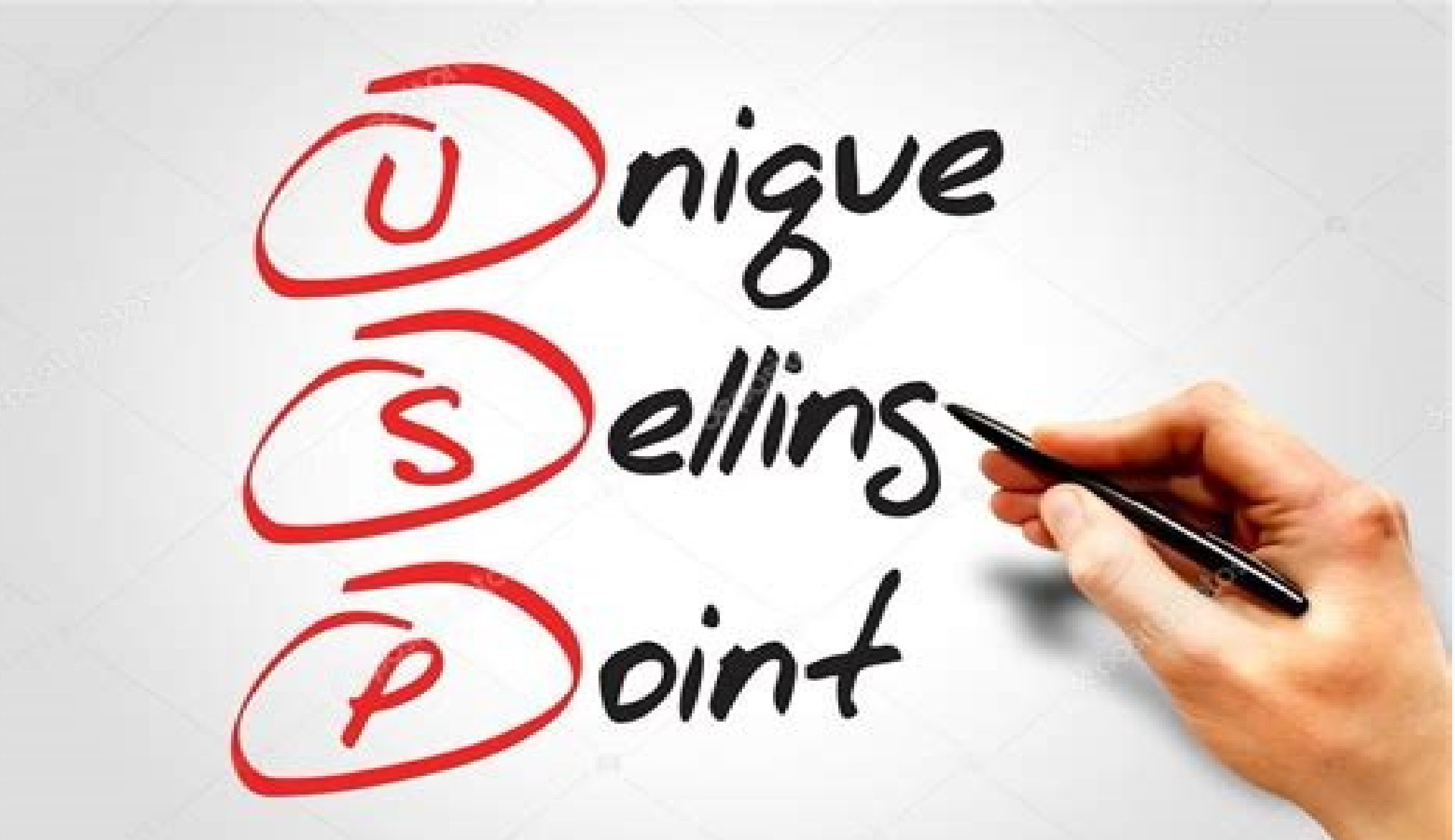


Why do I tell you that?

- why am I telling you this?
- I am a **strange** person
- I started with an unusual (**unique**?) combination of philosophy and computer science – **risky**.
- I have **changed** my scientific field several times – researchers should **avoid** that.
- I did a lot of **unusual** interdisciplinary work – again very **risky**. Does not pay off immediately.
- But this is me. And that is now my „**Unique Selling Point**“

„Unique Selling Point“

- So the message is:
  „If you think you are strange –
  do not worry.
  Try to identify your
  Unique Selling Point“
- But do **not hurry**. You have time.
- For now it is enough to understand
  the concept of „Unique Selling Point“
- It is what makes you different

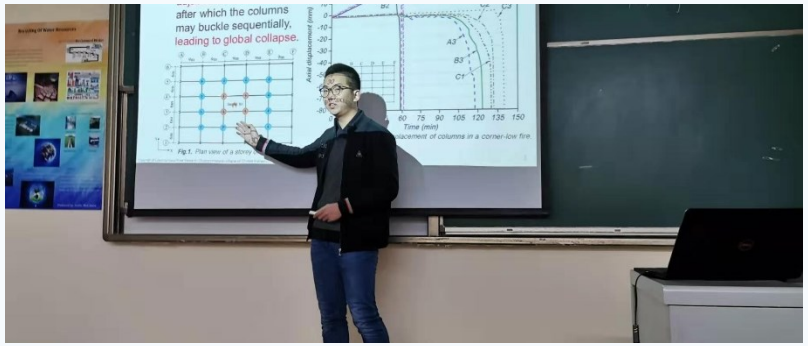

Unigue
Sellings
Point

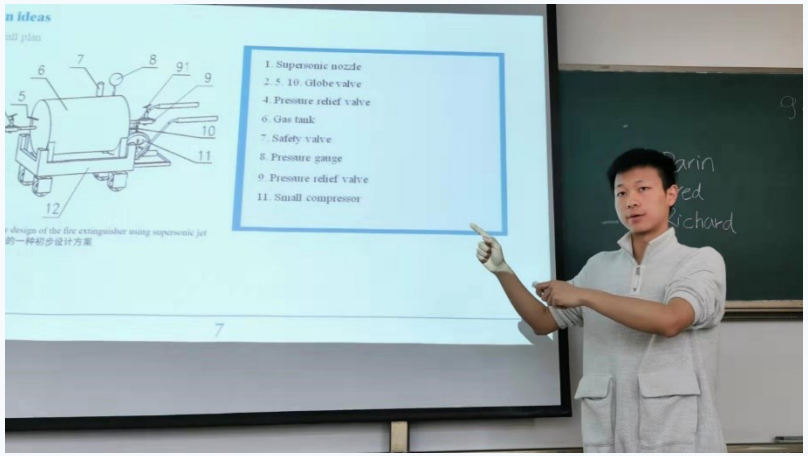
My „Unique Selling Point“

- I like public **speaking**.
- I like it when I **reach** my auditorium.
- I like it when I **convince** people of my concern.
- I try to think myself into people (students, colleagues, friends)
- to find the right words.
- I like to look people in the **eye** while talking.
- To experience how they react
- to feel and experience **resonance**.
- And I like to **teach** students how to give a decent **lecture**.
- How to write a decent **article**.
- That pleases the reader.
- That's why I'm standing here.

What I wan you to learn

- When I came to Bonn and got the geodesists and photogrammeters and farmers as colleagues, I noticed that many lectures of them were **boring**.
- Experienced professors, but the lectures were really **boring**.
- And there is one important rule: **Never bore people.**
- Also the lectures of the students were **boring.**
- And I decided to **address** this problem.
- Later I heard from their employers: they are much better than before.
- Last year I had this lecture for the first time. And in the end the students' performance **exceeded my expectations**.





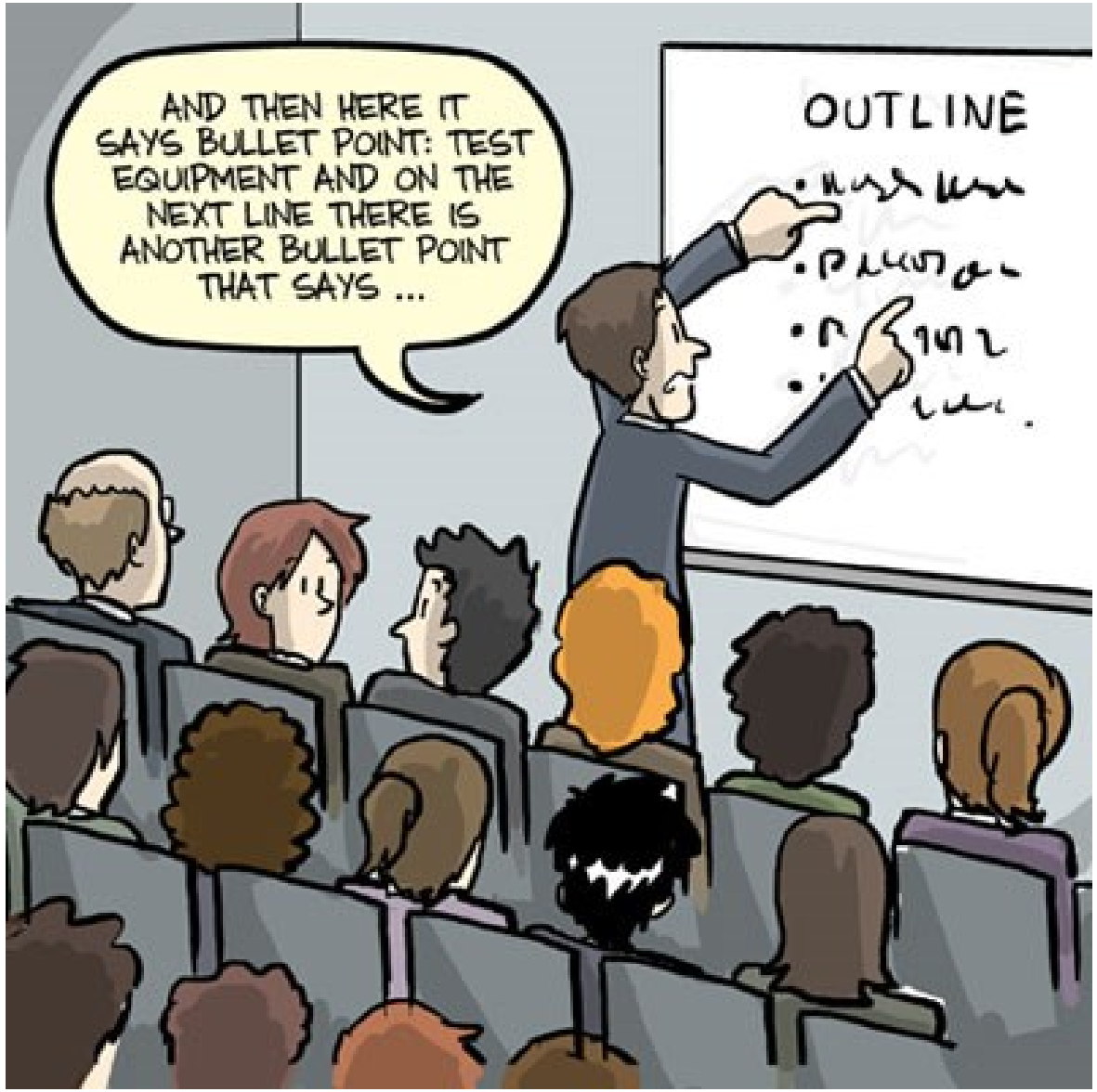
How can you tell the difference
between a boring and
an exciting lecture?

it's very simple.

Exciting Lecture

Exciting Lecture

A Boring Presentation



Boring Lecture

Why is it so important …

… that you
learn to give exciting lectures?

and to write convincing Articles, Reports,
Application Proposals?

Relevance

- in your professional life you will be
  EXPECTED to communicate effectively,
  it will be a substantial part of your job.
- The quality of your career will depend on it
- Your professional success in any future workplace relies on your **technical communication skills** (making effective presentations, writing proposals, compiling technical reports, etc.)
- Mastering scientific communication and acquiring these skills would probably payoff more than any other single topic you have studied

Payoff

Mastering scientific communication and acquiring these skills would probably **payoff more than any other single** topic you have studied.

It is about this difference.

Taken from Dani Or, ETH Zurich

Why is (scientific) communication so difficult

- think about it for a moment
- and if you don't know the answer, **ask your neighbor**
- He might know.

TEN THINGS PEOPLE FEAR THE MOST
1. SPEAKING BEFORE A GROUP
2. Height
3. Insects and bugs
4. Financial problems
5. Deep Water
6. Sickness
7. Death
8. Flying
9. Loneliness
10. Dogs

Whether that is true or wrong

- Most people may be shy.
- At the beginning.
- the only way to get over it is:
- **Practice** Practice Practice
- Getting **Feedback**
- **Understanding** the Principles of Scientific Communication
- Learn Some **Tricks** and Tips
- How to avoid that
- What's going on there in that pic?

The most basic Rule for my Lecture:

- We will learn that together and start today.
- But before that one most basic rule for this Course:

The most basic Rule for my Lecture:

- We will learn that together and start today.
- But before that one most basic rule for this Course:
- Please **do** not use your smartphone !
- Well: you may use it for **commenting** my slides.
- Or for **translating** difficult English words into Chinese.
- But do **not chat**!
- Do **not surf**!
- **Don't** let the smartphone **distract** you.

alamy

Why is the rule „don't use smartphone“ so important?

- Because it **distracts** you.
- Because then you **can't** concentrate.
- And because **you send me a message**:
- “Your lecture is **boring”**.
- It is **uninteresting** for me.
- There are more important things for me.
- Such a message **hurts m**e.
- It hurts every lecturer.
- Also, if your colleagues play with their smartphones during **your** lecture, you would not be amused.
- It's - I'm quite frank - a **question of respect**. And I will be **very strict** in this regard.

My Approach to Teaching Students

- I respect my Students –
  that's why i expect they respect me.
- I know that **you will shape the future** –
  so if I teach you well its for a **better future**.
- I know you have learned to work very hard
  and have a big potential - my role as a teacher
  is that you can make the best of your
  potential.
- So i see myself more as a **coach** than as an
  instructor.

Not like that

Der "Nürnberger Trichter"
Postkarte um 1940
(Quelle: wikipedia.de)

Sometimes like that

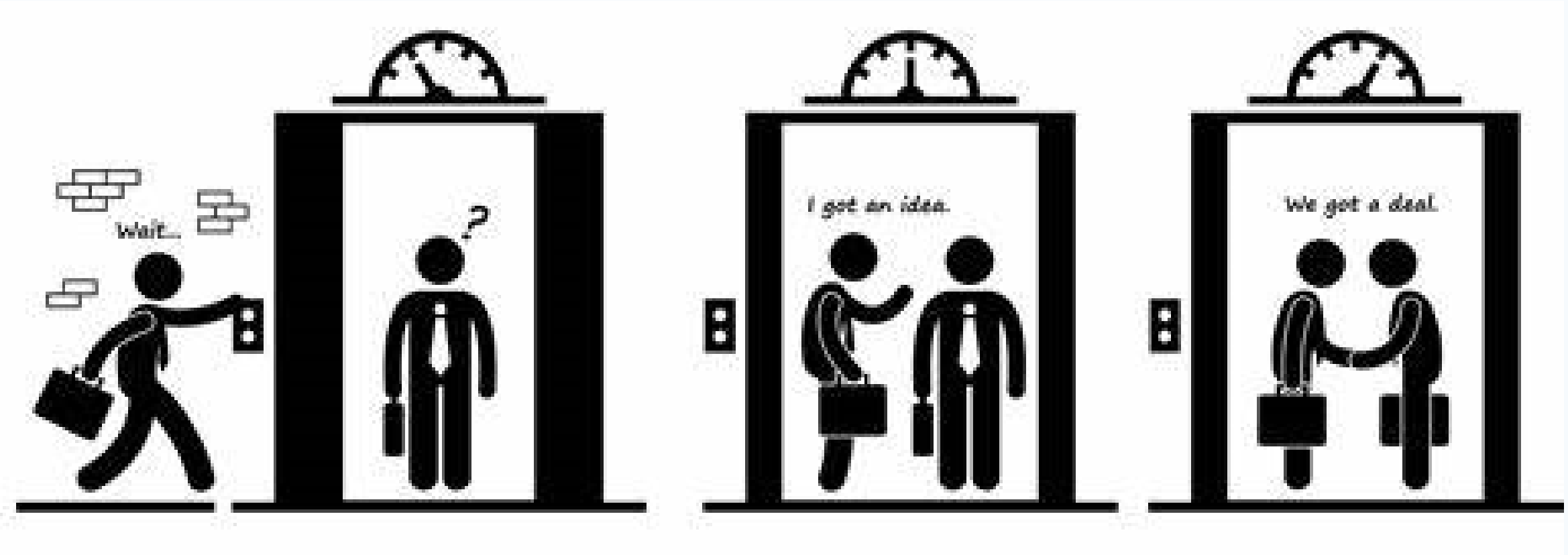
But mainly like that – as a coach

What I **expect** from **you**

- Some of you may think:
- „If the teacher say something to you just take it don't ask”
- ”Don't think about in your own way”
- “Just to repeat, to remember, and prepare for the examination”.
- Always say „Yes“, never say „No“.
- **That's not my understanding**

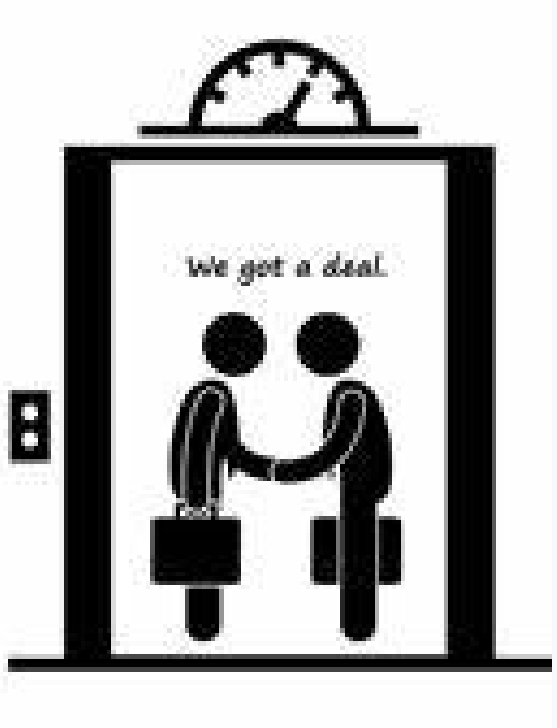
- I expect that you think about **in your own way.**
- I expect you to ask questions.
- I expect you to tell me if you do not understand or do not agree – or if I expect too much from you.
- **You should be able to say „no“.** „I do not understand“. „I cannot do it this way“. …
- I want to **meet you at eye level**. Not from above.
- Lets give it a chance

Elevator Pitch



Elevator Talk (II)

Elevator Pitch - Scenario



- Imagine the following situation:
- You have applied for a job – maybe your first job
- The company is in a big building with 35 floors
- Your interview is in the 35th floor
- The Elevator takes 60 seconds for that way.
- When you enter the lift you meet the **„Big Boss“** – and he ask you who you are
- And you have exactly 60 seconds to convince him that you are smart, have good ideas, and that you are the right person.
- Lets give it a try – today

Your Elevator Pitch today (II)

- But you should not apply for a job today.
- You should just introduce yourself:
  name, hometown, province (≤ 15 seconds)
  and then select one of these subjects:
- my **hometown** – most interesting in China
- my favorite **novel** - why it is so **exciting**
- my favorite **movie** - why it is so thrilling
- My favorite Sport – why it is so exciting
- **Duration: 1 minute, no more but also not much less**
- Give me a chance to get an **impression** of you.

Tips for the Speaker

- You may be shy. Don‘t worry.
  Most people are.
- You can prepare and use **notes**.
  But don't look at them all the time.
- Look into the audience.
  Look your best friend in the **eyes**.
  Try to keep **eye contact**.

Good Habits for the Audience

I will be demanding to listen 54 presentations – carefully and concentrated - even if they are short. **Try!**

Do not use your smartphone

Do not think on your own talk.
Listen to this talk.

Smile at the speaker.

Think about your **feedback** - for later.

The Groups of three or four

- Later you will have a **“Feedback Round”.**
- **Constructive**, **friendly** Feedback.
- Emphasize **good points**, and „What could be **improved**?“
- You can also talk about how you felt. And how the others **perceived** you.

Friendly Feedback

Second Lecture this Week

We start with another „Elevator Pitch“

But then you have 2 Minutes

And you can prepare two or three slides

And for each of you there will be another one who gives Feedback (1 Minute)