How to prepare a good presentation
WHY TED TALKS ARE SO GOOD?
Daniel Kahneman explains how we validate information
We are governed by two beings

**System 1**

- How do you feel about your mother?
- Drive a car an empty road
- Answer 2+2
- “Bread and ...”
- Detect hostility in a voice

**System 2**

- Focus on someone's voice in a crowded room
- Maintain a faster walking speed than is natural for you
- Tell your phone number
- Monitor the appropriateness of your behavior in a social situation
- 17 x 24 equals...
We are governed by two beings

**System 1**
- Fast
- Automatic
- Frequent
- Emotional
- Stereotypic
- Subconscious

**System 2**
- Slow
- Effortful
- Infrequent
- Logical
- Calculating
- Conscious
We like to believe in things that we understand (cognitive ease)
Some biases discussed in the book that affect our daily lives

- **WYSIATI**
  - “Will Mindik be a good leader? She is intelligent and strong …” [Make a good story; marketing]

- **Halo effect**
  - “She knows nothing about this person’s management skills. All she is going by is the halo effect from a good presentation” [marketing; increase your influence]

- **Loss aversion**
  - “We discovered an excellent dish at that restaurant and we never try anything else, to avoid regret.”
  - “The salesperson showed me the most expensive car seat and said it was the safest, and I could not bring myself to buy the cheaper model. It felt like a taboo tradeoff.”
  - our tendency to fear losses more than we value gains. [decrease the risk perception in your proposal giving confidence you know how to do it]
Creating effective slides
by Jean-luc Doumont
The Craft of Scientific Presentation
by Michael Alley
Maximize the SNR by increasing the signal and reducing the noise

$$\text{SNR} = \frac{\text{Signal}}{\text{Noise}}$$
Maximize the SNR by increasing the signal and reducing the noise

\[
\text{SNR} = \frac{\text{Message}}{\text{Distraction}}
\]

Me \quad \text{Message} \quad \text{Audience}
Me  Message  Audience

[My] Goal
why am giving this talk?

Audience
what does the audience know?

Medium
How to transport the information [across]?
Goal and the Audience are key to define the content of your presentation

<table>
<thead>
<tr>
<th></th>
<th>Goal</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference Talk</td>
<td>Present a result and your interpretation</td>
<td>Well-defined, single type, knowledgeable</td>
</tr>
<tr>
<td>Job Interview</td>
<td>Summarize your achievements and present your skills for the position</td>
<td>Different background, but understand the skills required</td>
</tr>
<tr>
<td>Outreach</td>
<td>Inform/Amaze the audience</td>
<td>Anything</td>
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</tbody>
</table>
My voice is the main medium

You are the center of attention

People should make visual contact with you

Slides are there to enhance the transmission of the message [not the noise]
VLT Unit Telescope (UT)

- Active Telescope Optics compensates for the deformations of the large 8.2-m main mirror due to its own weight.
- The mirror is only 15cm thick which allows to deform it and keep it always in the best possible shape.
The shape of the mirror is corrected in real time.
Photon noise

HARPS-type spectrograph: $R > 100\,000$, $\varepsilon_{\text{Tot}} = 6\%$

1) HARPS/ 3.6m
   1 m/s in 15' on $V=10$ star
   -> ~50 cm/s on VLT
   -> ~10 cm/s on E-ELT

2) ESPRESSO/VLT
   $V_{\text{lim}} = \sim 8$ for 10 cm/s in 15'
   => Many solar-type stars
   ~700 non-active stars
   => Earth twin search

   For 1-3 cm/s, 3-5 mag brighter
   => TEST for CODEX on a few very bright stars

3) CODEX/E-ELT
   1 cm/s on star with $V<6$
   10 cm/s on $V=11$ stars
   TRANSITS (PLATO)
Photon noise decreases with $1/D$
Planetary signal depending on the filtering assumptions

- Hatzes (2013) is unable to find the signal in a robust way
- GJ667C is another recent example
  - Bonfils (2009)
  - Anglada-Escude et al. (2013)
  - Feroz & Hobson (2013)
- Bayesian analysis "created" planets
- **Decentralization and Delegation** - If firms decentralize control and reduce the number of levels of management, each manager will have more subordinates and consequently will be forced to delegate some responsibility and decision making to them.

- **Job Enlargement** - Broadening the scope of an employee's job adds variety and opportunities to satisfy ego needs.

- **Participative Management** - Consulting employees in the decision making process taps their creative capacity and provides them with some control over their work environment.

- **Performance Appraisals** - Having the employee set objectives and participate in the process of evaluating how well they were met.

*It seems we already have most of it!*
**Project Management problems**

- **Excessive schedule pressure:** The Vasa was completed under strong time constraints to meet a pressing need.
- **Changing needs:** *Many changes* to operational characteristics were made *during* construction of the ship.
- **Lack of technical specifications:** The (non-existent) specifications were not revised as the operational requirements changed.
- **Lack of a documented project plan:** During a year-long transition in leadership it was difficult for the assistant to manage the project. This resulted in poor supervision of the various groups working on the ship (i.e., the shipwright, the ship builder, and the numerous subcontractors). *There is no evidence that the new project manager (the former assistant) prepared any plans after the original shipwright died.*
- **Excessive innovation:** No one in Sweden, including the shipwright, had ever built a ship having two gun decks.
- **Secondary innovations:** *Many secondary innovations were added during construction* of the Vasa to accommodate the increased length, the additional gun deck, and other changes.
- **Requirements creep:** It seems that *no one was aware* of the degree to which the Vasa had evolved during the 2 1/2 years of construction.
- **Lack of scientific methods:** There were no known methods for calculating center of gravity, stiffness, and the resulting stability relationships of the Vasa.
- **Ignoring the obvious:** The Vasa was launched after failing a stability test
- **Possible mendacity:** *Results of the stability test were known to some but were not communicated to others.*
Simple design helps to keep the attention

No more than 3 items in a bullet list with 2 lines max.
  Otherwise the attention goes away

Favor a visual support
  Crowded slides only add noise
My voice is the main medium

Get your speech right

You should be able to present your talk without any other support

Preparation [time] is the key
Mindfulness is the key to an awesome deliver

Try to calm down and enjoying your moment
- see yourself
- see the audience
- adapt on your way

Rehearsals until it feels good
WHY TED TALKS ARE SO GOOD?
Why TED Talks are so good?

Nice story
Goal of the talk is clear
Clean slides
Deliver is strong
HAVE FUN: EXPRESS YOURSELF!