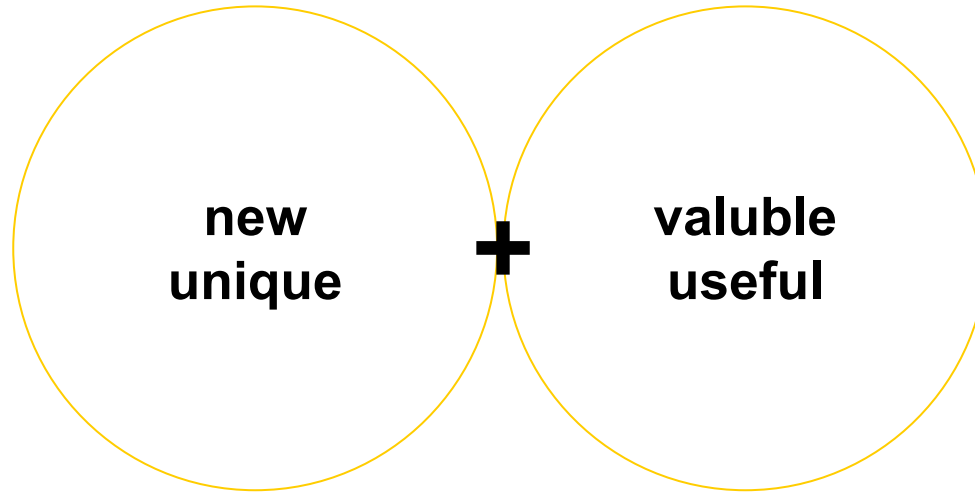


A few words on coming up with ideas

For this course, you will need to **ideate**, **design**, **prototype** and **pitch** a product idea based on additive manufacturing.

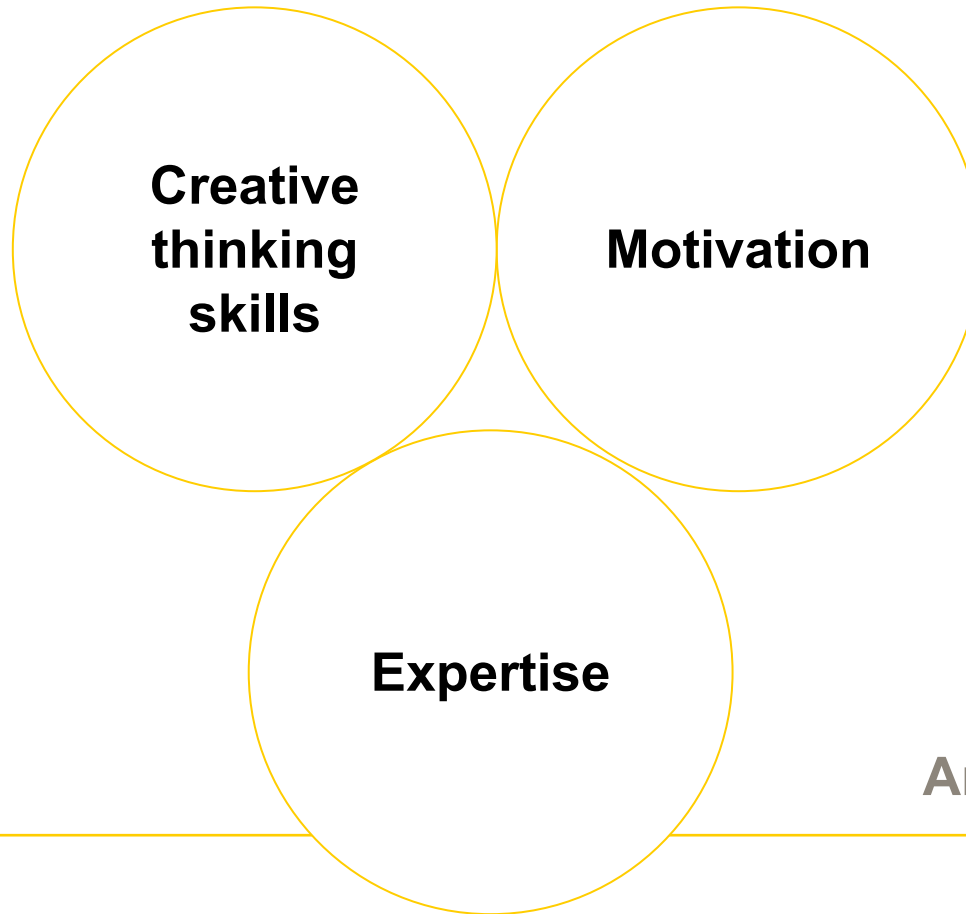
How can we come up with new ideas?

What is creative?



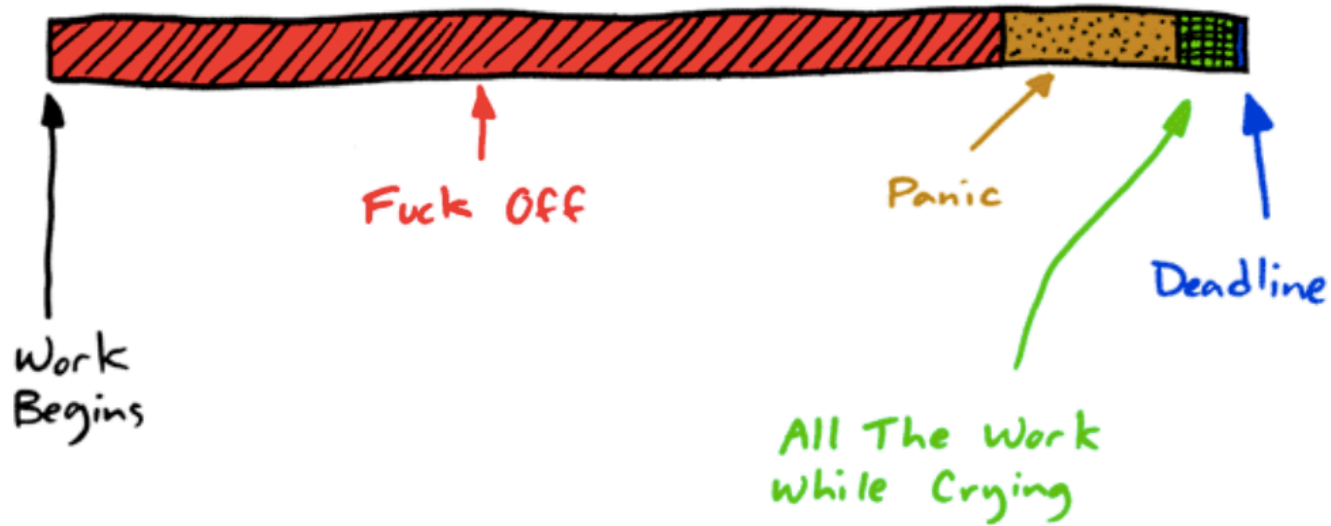
Wallas 1962

What makes a person creative?



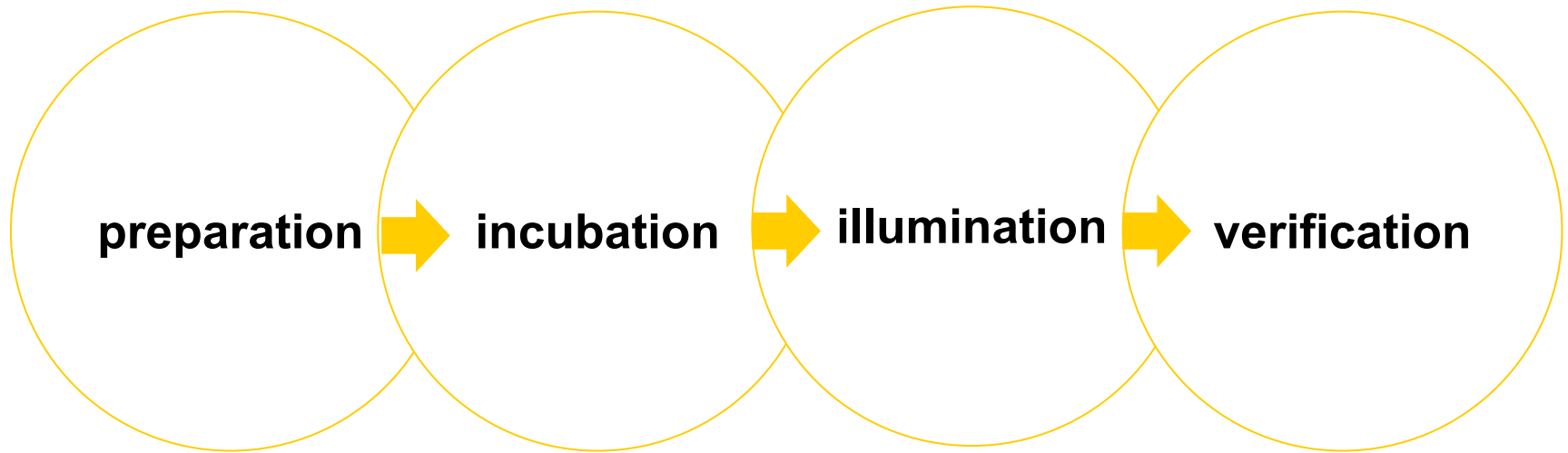
Amabile et al. 1998

The creative process

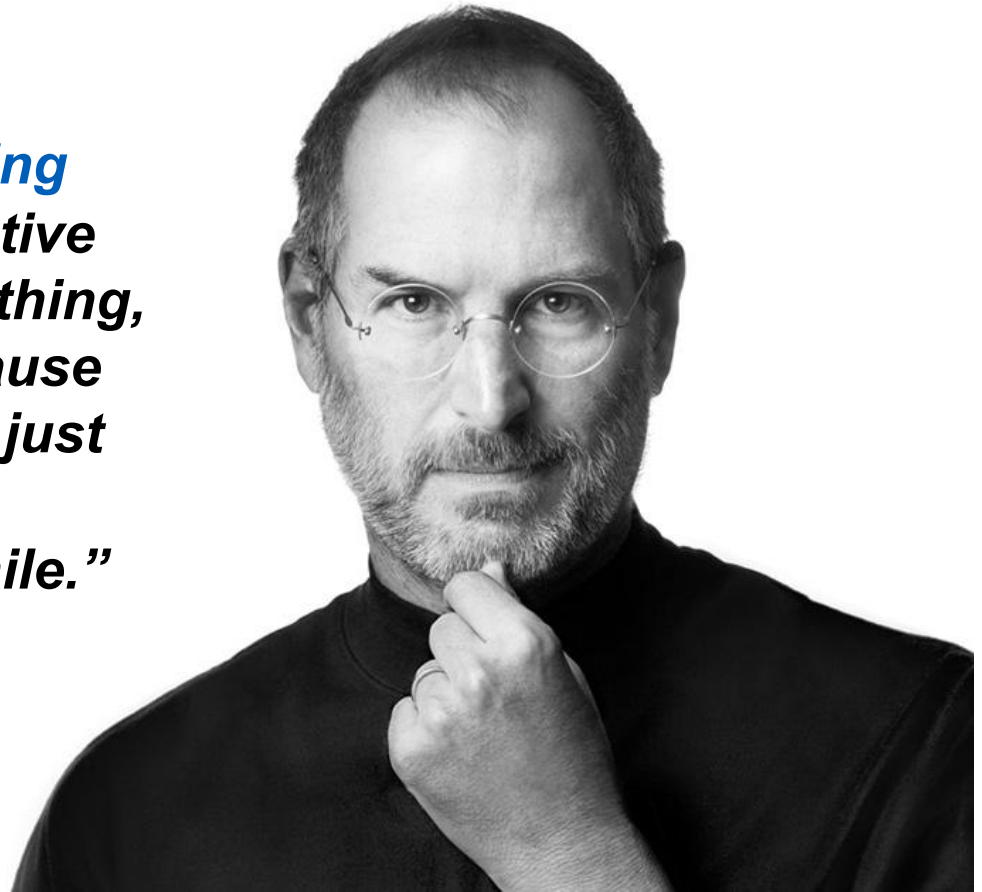


toothpastefordinner.com

The creative process (well, one classic depiction at least)



”Creativity is just **connecting things**. When you ask creative people how they did something, they feel a little guilty because they didn’t really do it, they just saw something. It seemed obvious to them after a while.”



”All new ideas are novel combinations of old ideas”

Associative thinking

”I end up using quite a lot of time - hours if not days - just going to the library of the University and browsing through all kinds of magazines and books with **no specific focus**. I have my notepad and pen with me and I **make notes** of ideas I have, like, maybe there could be something like this in the product”

Experienced finnish designer

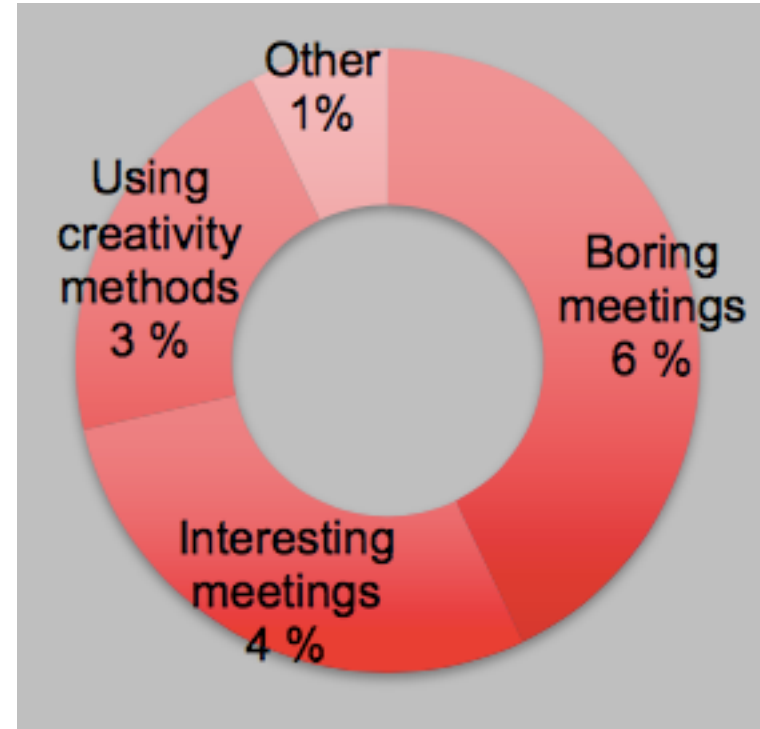
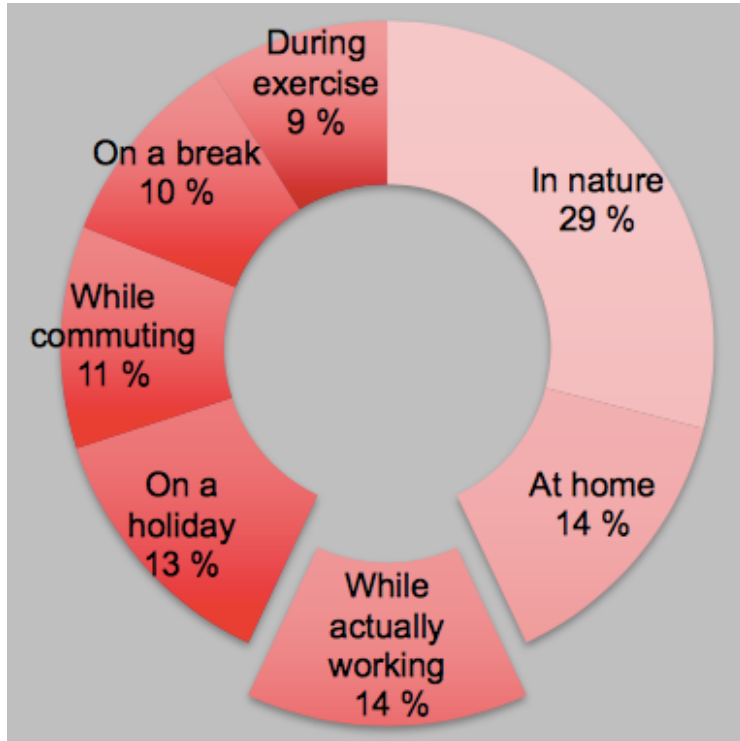
Directed search, opportunity identification

- **Competitor/product benchmarking**
- **Technology and patent searches**
- **Market trends**
- **Users and clients**
- **Own employees, subcontractors, collaborators**
- **Trade fairs**
- **Analogous fields and products**
- **Nature**
- **Personal passion**
- **+++**

In-class exercise

Write down as many ideas for 3D-printed products as you can in 5 minutes

Where do we get our ideas?



Berth, 1999

Where do we get our ideas?

”The method I use is going out for a cigarette. That’s where the problem crystallizes and the solution appears. Sometimes I go alone, but if I bump into any of the other smokers on the way, I ask for them to join me.”



Experienced designer

Exercise: draw an imaginary alien in 3 minutes

Very similar outcomes

Borrowing from sci-fi etc.

- 89% have eyes
- 78% have feet
- 59% have a nose



Ward (1994, 1995)

How many of you came up with the following?

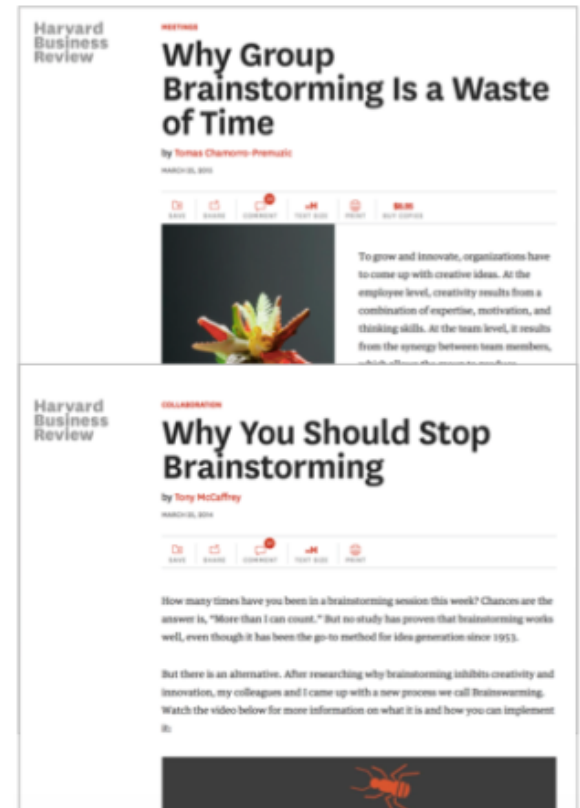


Group ideation might not increase the amount or quality of ideas

...but it has other positive effects

- Use and distribution of knowledge
- Gathering and displaying ideas is efficient
- Strengthening social bonds
- Motivation
- Supports the creative process

The creative process is complicated: one ideation session is rarely enough



Share your ideas with your team

- Don't go through all of them: share only your craziest, easiest and best ideas



As a team, decide on which of the team's ideas are the craziest, easiest and best

- **Prepare to briefly present these 3 ideas to the class**
- **As a team, you will have to decide on an idea to pursue for this course**
 - You don't have to decide yet, but start the process now
 - You will need to have an idea to pursue by your 1st tutor meeting (29.5.)
 - Changing the idea during the course's duration is fine