

# HoGent

BEDRIJF  
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ORGANISATIE

## Creative Thinking

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# Inhoud

- ① What is creative thinking
- ② Attitudes towards Creative Thinking
- ③ Creative techniques
- ④ Conclusions & lessons learned

# What is creative thinking



# What is thinking?



## Intro

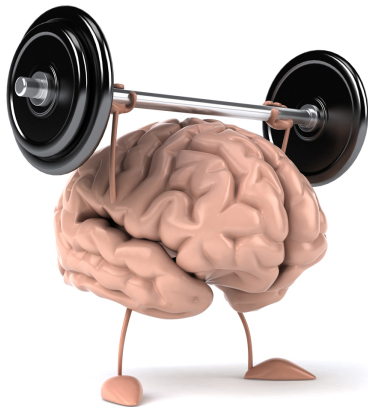
- └ What is creative thinking

- └ What is thinking?



Descartes tries to give a definition of "thought" in principle I.9. By "thought" he tells us, he means to refer to anything marked by awareness or consciousness. This does not just include reasoning or other such intellectual activities but also imagining, sensing, willing, believing, doubting, hoping, dreading, and all other mental operations.

# What is thinking?



## Intro

- └ What is creative thinking

- └ What is thinking?



Your brain is made of approximately 100 billion nerve cells, called neurons. Neurons have the amazing ability to gather and transmit electrochemical signals (up to several feet or a few meters) and send messages to each other. Dendrites or nerve endings. These small, branchlike projections of the cell make connections to other cells and allow the neuron to talk with other cells or perceive the environment. Dendrites can be located on one or both ends of a cell.



# What is thinking?

Is this an example of thinking?

# Excercise

Take a sheet of paper and draw an **alien**

2017-05-10

## Intro

└─What is creative thinking

└─Excercise

Exercise

Take a sheet of paper and draw an **alien**

Most of the studenst will have drawn a default alien with arms and legs and eyes. But why not a blob, or a dot, or just a line

# What is creative thinking?

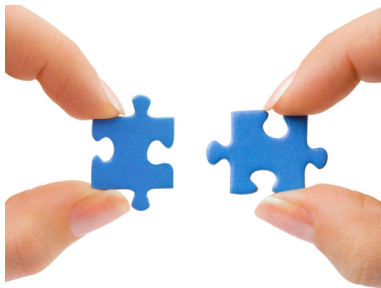


# What is creative thinking?



# What is creative thinking?

- Experience is the sum of patterns.
- Patterns which we have created throughout our life
- **Creative thinking** is trying to break these patterns which we are so accustomed to.



# Excercise

- There is blood on the ceiling. There has been no murder of killing or accident. Nobody has played a trick on me. Can you suggest an explanation.

2017-05-10

Intro

└─What is creative thinking

└─Excercise

Exercise

- There is blood on the ceiling. There has been no murder of killing or accident. Nobody has played a trick on me. Can you suggest an explanation.

A mosquito bit me, landed on the ceiling and and I swatted it.



# Excercise

- There is a flash of light and a man dies. The man is not killed by any other person and he does not die of an illness like a heart attack ... It is not suicide. Can you suggest an explanation?

## Intro

## └ What is creative thinking

## └ Excercise

## Excercise

- There is a flash of light and a man dies. The man is not killed by any other person and he does not die of an illness like a heart attack ... It is not suicide. Can you suggest an explanation?

The man is a lion tamer, posing for a photo with the lion. Somebody took a picture and the lion reacted badly, so he gets mauled

# Excercise

- An ordinary American Citizen with no passport on him visits over thirty oreign countries in one day. He is welcomed in each country and leaves each one of his own accord?

## Intro

└─What is creative thinking

└─Excercise

## Exercise

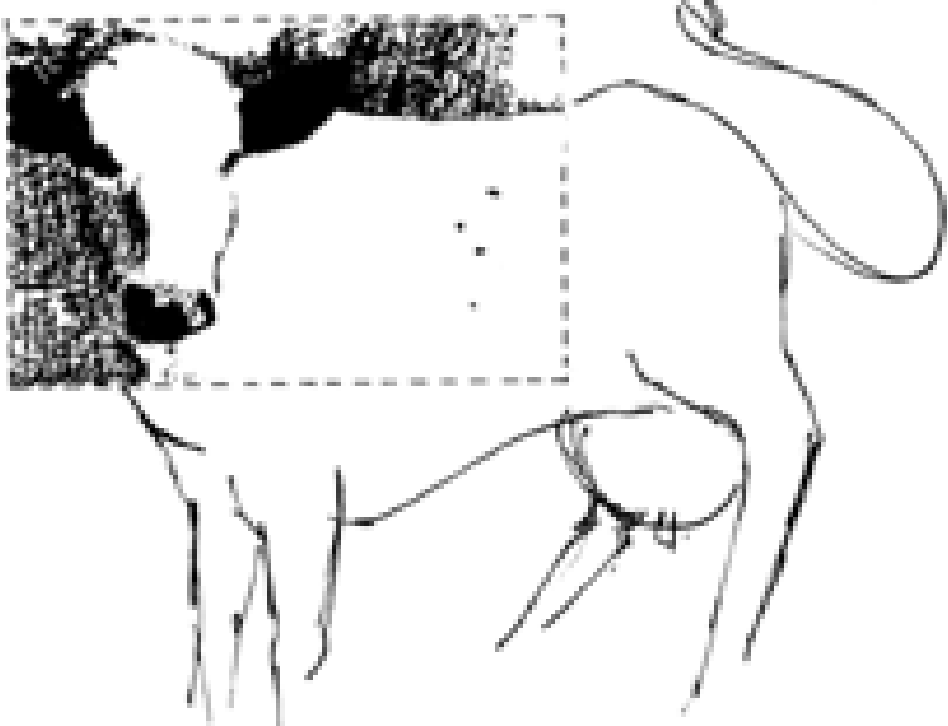
- An ordinary American Citizen with no passport on him visits over thirty oreign countries in one day. He is welcomed in each country and leaves each one of his own accord?

He is a mail courier who delivers packages to different foreign embassies in the embassies. The land of an embassy belongs to the country of the embassy, not the united states.

# Attitudes towards Creative Thinking







# Creative perception

- Creative perception is to recognize your own dominant view and to be capable of finding alternative perceptions



2017-05-10

## Intro

└ Attitudes towards Creative Thinking

└ Creative perception

### Creative perception

- Creative perception is to recognize your own **dominant** view and to be capable of finding alternative perceptions

Bikes were used during the war as a light source and not only a mode of transport

# Creative perception

- **Creative perception** is to recognize your own **dominant** view and to be capable of finding alternative perceptions



2017-05-10

## Intro

### └ Attitudes towards Creative Thinking

### └ Creative perception

#### Creative perception

- Creative perception is to recognize your own dominant view and to be capable of finding alternative perceptions



Bikes were used during the war as a light source and not only a mode of transport







# Postpone judgement

- We judge by different levels
  - Unconsciously: just do not listen
  - You are listening, but you decide if you pay attention
  - You are careful but you do not use the information

Unconsciously: just do not listen

# Postpone judgement





## Postpone judgement: exercise

Think of something that you like very much. TV program, favorite chips . . . Now you have to think of as many bad things as possible - no matter how weird. Try turning these things into something positive now.

# Association

- In association, different things are linked to each other in mind.

Lemon



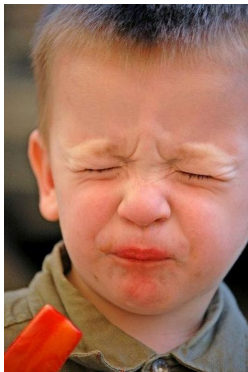
# Association

- In association, different things are linked to each other in mind.

Lemon



Sour



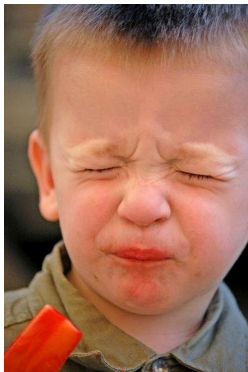
# Association

- In association, different things are linked to each other in mind.

Lemon



Sour



Acid



# Associations

One popular answer to why fire trucks are red goes something like this:

Because they have eight wheels and four people on them, and four plus eight makes twelve, and there are twelve inches in a foot, and one foot is a ruler, and Queen Elizabeth was a ruler, and Queen Elizabeth was also a ship, and the ship sailed the seas, and there were fish in the seas, and fish have fins, and the Finns fought the Russians, and the Russians are red, and fire trucks are always Russian" around, so that's why fire trucks are red!"

# Association exercises

- Normal association
- Association starting with pencil and ending with Jupiter
- Same as above but try to invent a story with the words found
- ...

Continue when you are facing difficulties → then it becomes interesting!

A E I F U

Questions is which letter does not fit the series. Of course there are multiple solutions, the more you look at the letters.



# Diverge

Once you have an idea or a solution, it's important that you thoroughly understand and diverge the solution. For example, use association.









# Creative techniques

# The creative proces

- ① Start and prepare
- ② Expiration phase (diverge)
- ③ Reconcile (converge)

# Start & preparation

- Make a question or query in 1 sentence.
- Do not formulate broadly and maintain concrete focus
- The problem holder must be in the formulation
- Start the question with "How" or "Create"
- Overformulate the question



# Direct analog

Find an analog: an object / animal / ... that satisfies 1 of the following properties.

- As far as possible from the context of problem statement.
- Inspiring

Examples are: Countries (China), Animals (Squid) ...

Write down characteristics of it and use it as a starting point to solve our problem.

# Analog: superhero

- Find a superhero that interests you:
- Examples are: zorro, superman . . .
- How would this superhero solve it?
- Find answers in concrete solutions.

# Personal analogy

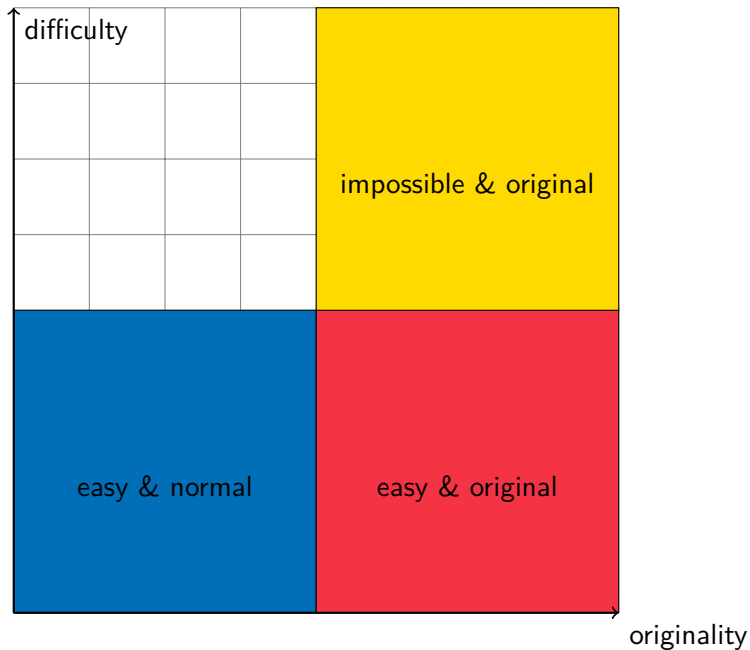
- ① Choose an important object from the question statement.
- ② Describe how you would feel if you were that object in that context. How would you react? How would you solve it?
- ③ Solve solution in concrete solutions.



# Alphabet brainstorm

- Choose for each letter of the alphabet a possible solution ...
  - A ...
  - B ...
  - C ...
- Make possible solution in concrete solutions

# Converge



# Converge & Combine

Tape



# Converge & Combine

Tape



Scissor





# Converge & Combine

Tape



Scissor



Tape deck



# Combine yellow and red ideas

Birthday party in the forest + A theme party + Magic game =

**We celebrate Mum's birthday in the the forest with a magic theme!**

# Combine yellow and red ideas

Everyone takes a strange object + Everybody takes something to sit up on

=

**Everyone takes something to sit up that is not a chair**

# Conclusions & lessons learned



# Conclusions & lessons learned

## Creative thinking is the art of breaking patterns

- Skills and attitudes
- Creative perception
- Deferral of judgment
- Associate
- Diverge

## The creative process consists of three phases

- ① Starting phase
- ② Diverge
- ③ Converge

Results in COCD → Combine fun ideas!