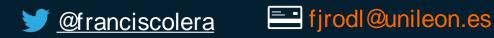
## Creativity in Robot Behaviors

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Creativity is the ability to produce original and unusual ideas, or to make something new or imaginative

(Cambridge Dictionary 2020)

Creativity is a process extended in time and characterized by originality, adaptiveness, and realization.

(Runco & Albert 1990:145-146.)



The 2 C's

## **reativity**

solutions to extremely difficult problems, or significant works of genius

С

# Imagine that we want to make a portrait, paint a flower or write a book

#### patricktresset











http://www.stefanopadoan.art/



### Who has the creativity?

#### https://patricktresset.com/new/

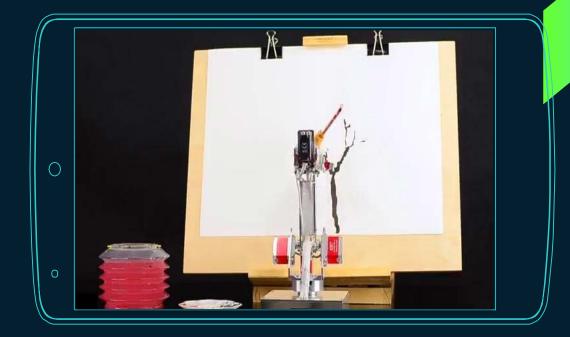




Who decided to draw in this manner? Why?

# Where is creativity?

algorithm engineering manufacturer what to draw? calibrations



The 2 C's

## reativity

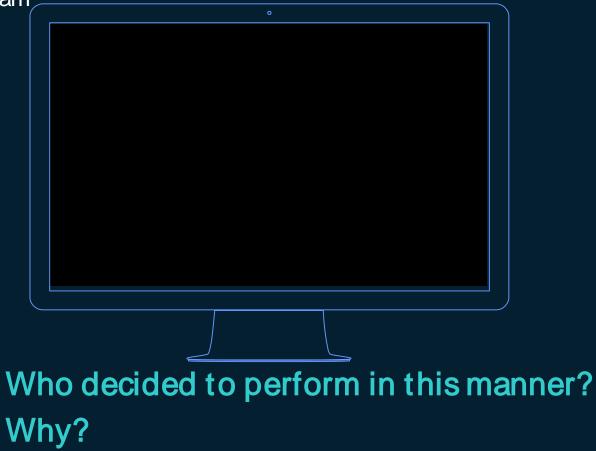
solutions to extremely difficult problems, or significant works of genius

#### Creativity solutions to everyday activities



### Who has the creativity?

Gentlebots Team





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### The process should be easy

Cognitive Variables Environmental Variables

# Personality Variables?

# Maslow (for humans)

#### **Self-actualization**

achive full potential => creative activities

Esteem prestige and feeling of accomplisment

**Love and Belonging** 

be accepted => friends

Safety Needs

security and safety

**Physiological Needs** 

food, water, rest, breathing

# Maslow (for ROBOTS)

Self-actualization

Esteem Understand feedback, exploration tasks

**Love and Belonging** 

Be accepted by users, have a place

#### **Safety Needs**

Navigation, interaction, protection mechanisms

**Physiological Needs** 

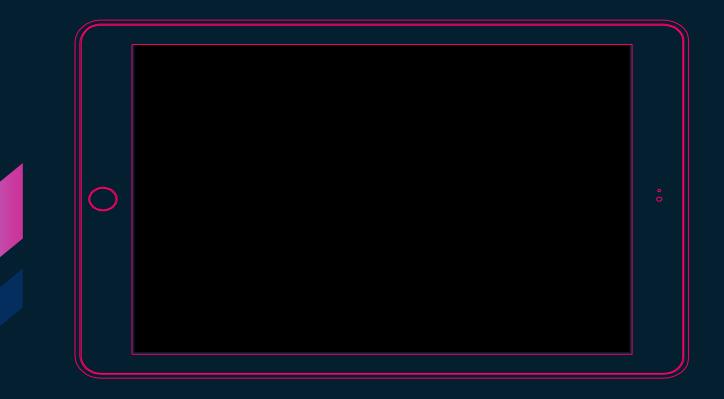
Power Supply, Tuning, self-cleaning



When is a robot considered creative?

The creative ROBOT can program/decide for himself or herself or itself to ask the right questions for solving problems

## ... and an artist?



## Creativity in Robot Behaviors

# Thank you!



