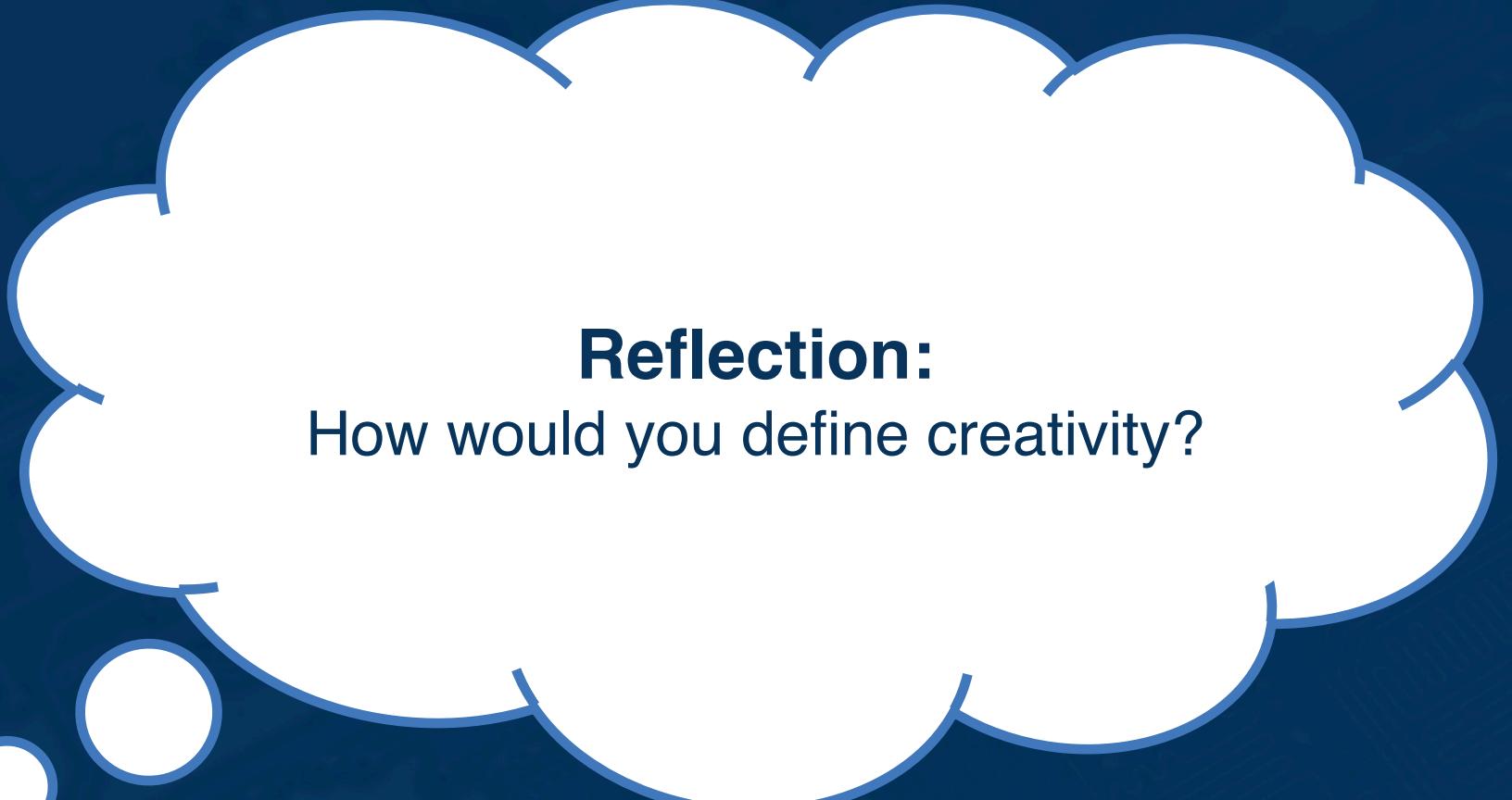




Relationship to Creativity



Creativity



Reflection:
How would you define creativity?

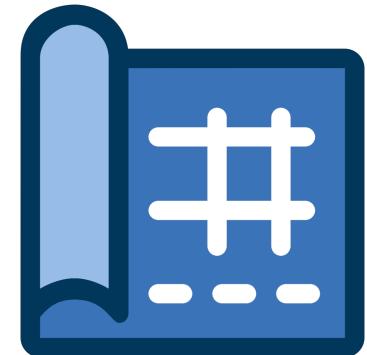
Margaret Boden



“Creativity is the ability to generate
novel, and **valuable ideas**.”

commons.wikimedia.org

*“The ability to generate novel, and valuable, **ideas**.”*



Define Creativity

*“The ability to generate **novel**, and valuable, ideas.”*



Psychological
(P-Creative)



Historical
(H-Creative)

Define Creativity

*“The ability to generate novel, and **valuable**, ideas.”*



“beautiful”



“useful”



“interesting”



“simple”



“important”



“complex”

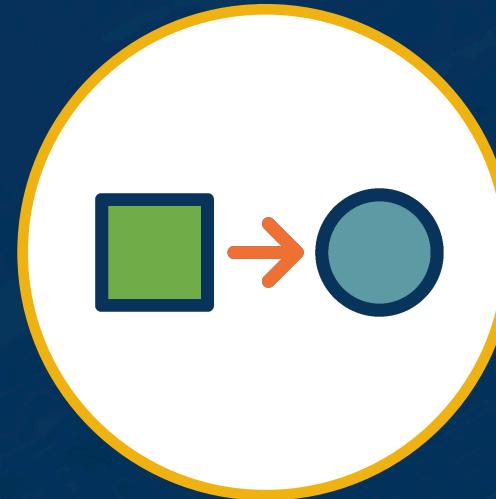
Define Creativity



Combinational
Creativity



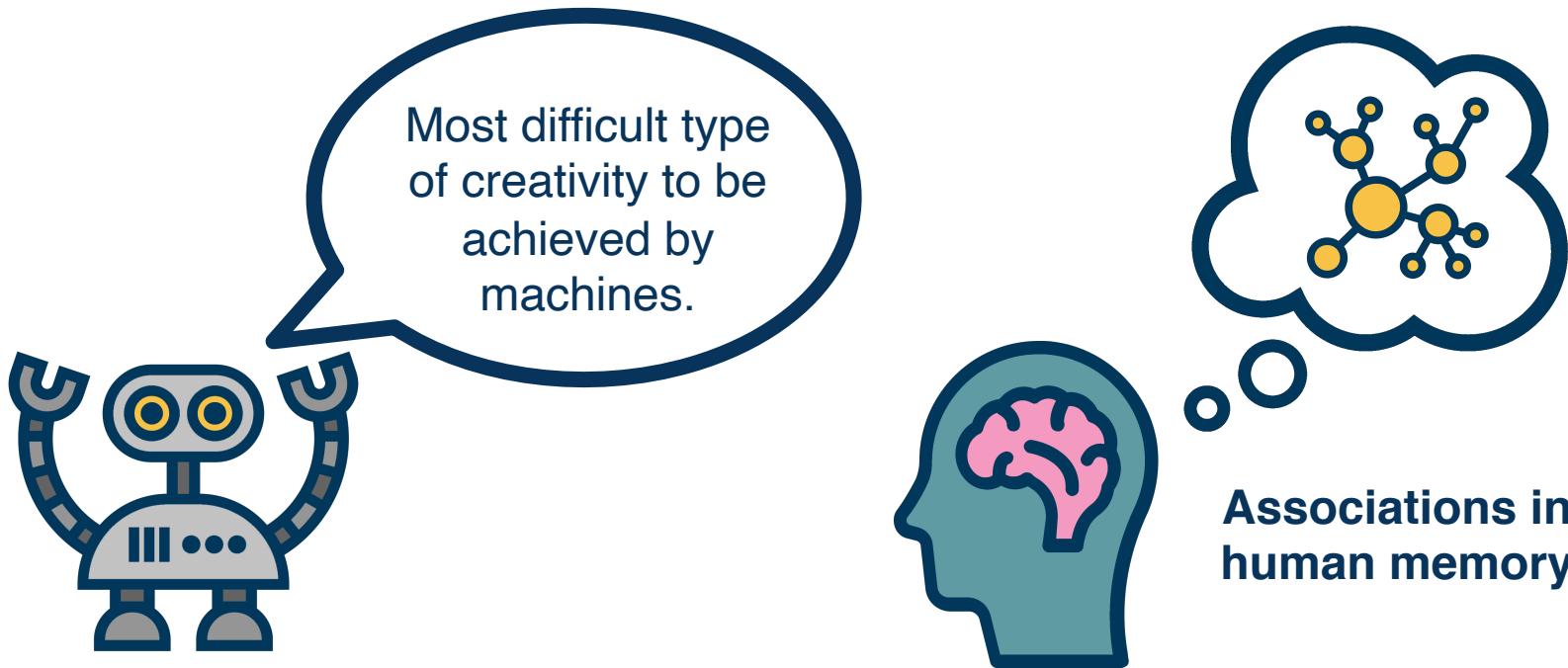
Explorational
Creativity



Transformational
Creativity

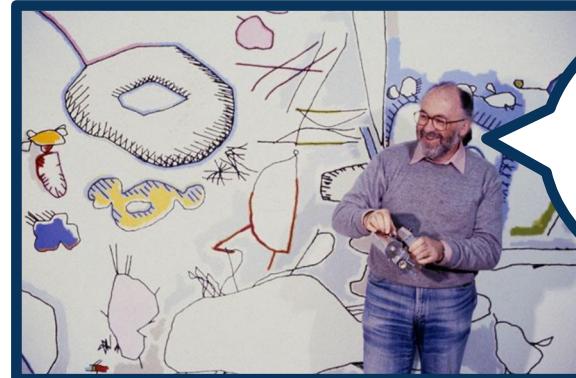
Creative Processes (Margaret Boden)

Unfamiliar combinations of familiar ideas.



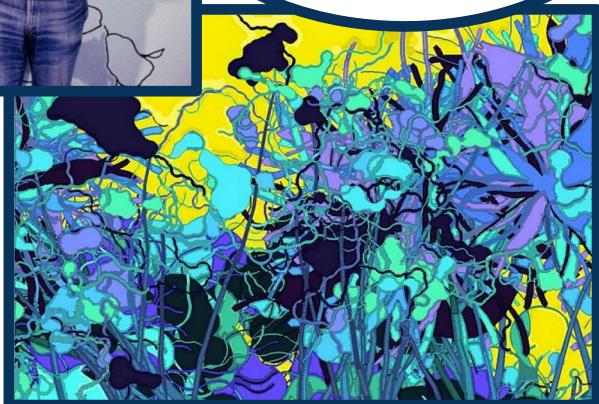
Combinational Creativity

Explore the limits and potential of a clearly-defined space.



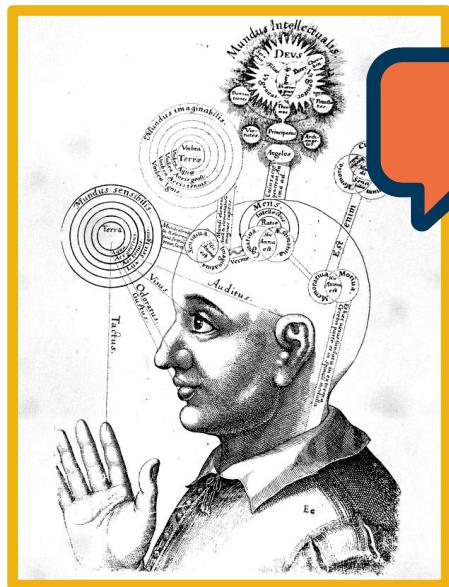
Harold Cohen and
the arts generated by
AARON, a computer
program

"I am a first-class
colorist. But AARON
is a world-class
colorist."

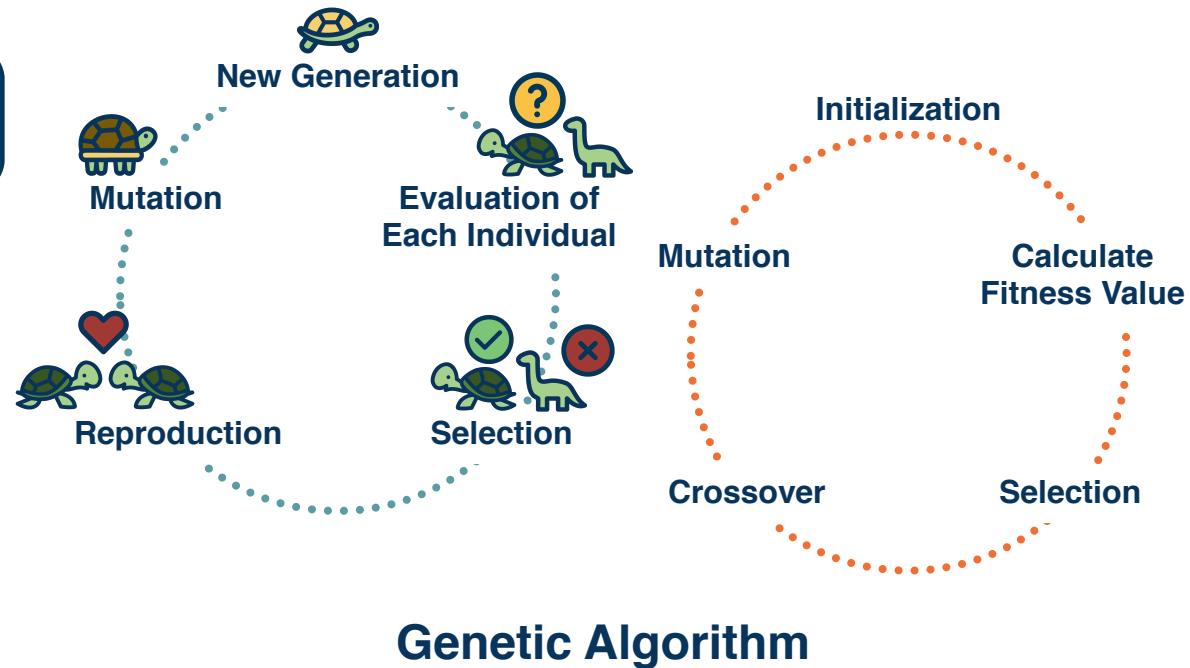


Explorational Creativity

“Transform a space by altering (or dropping) one or more of its defining dimensions.”



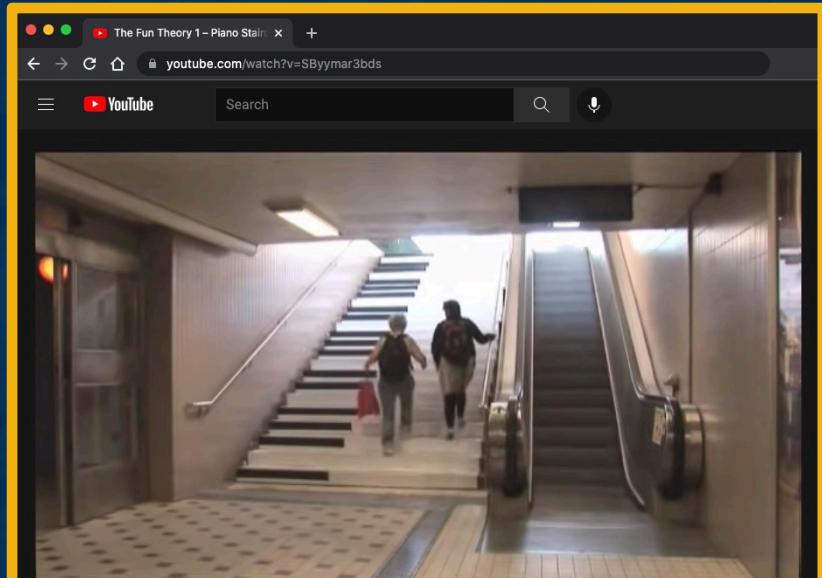
CRUM



Genetic Algorithm

Transformational Creativity

Watch this clip “The Fun Theory 1” about Musical Stairs:



The Fun Theory 1 – Piano Staircase Initiative | Volkswagen

9,744,933 views • Oct 26, 2009

287K DISLIKE SHARE DOWNLOAD SAVE ...

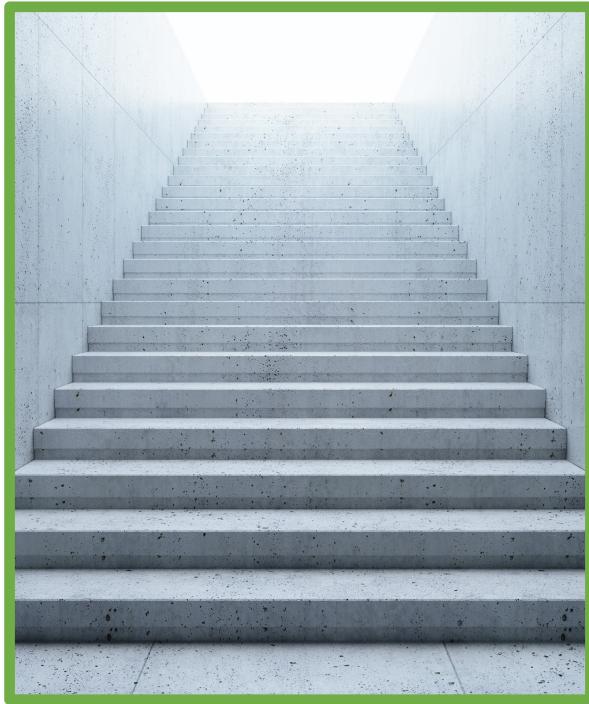
Volkswagen 278K subscribers

The Fun Theory - an initiative of Volkswagen. This is one of a series of experiments for a new brand campaign of VW. Have a look - the piano stairs are really funny. Fun can obviously change behaviour for the better.

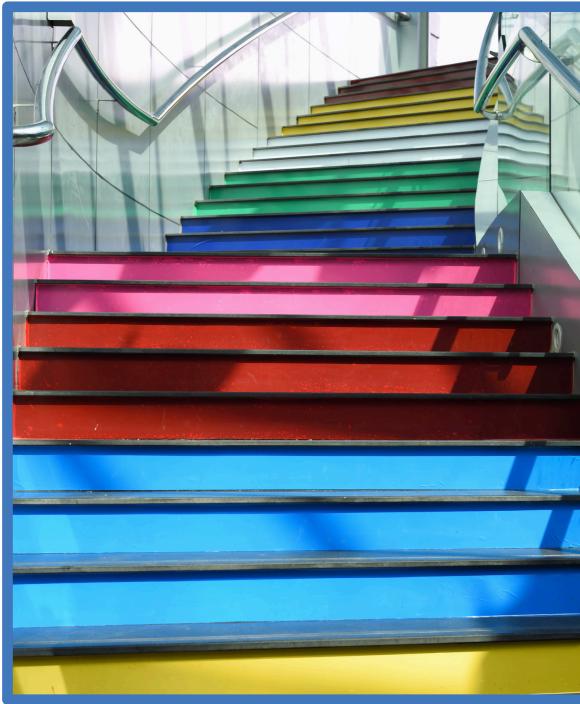
SHOW MORE

A screenshot of a YouTube video player. The video shows two people walking up a set of stairs where the steps are painted with black and white piano keys. The video is titled "The Fun Theory 1 – Piano Staircase Initiative | Volkswagen". It has 9,744,933 views and was uploaded on October 26, 2009. The video is owned by Volkswagen, which has 278K subscribers. The video description explains that it is part of a brand campaign for Volkswagen, demonstrating how fun can change behavior for the better. A yellow border surrounds the video player.

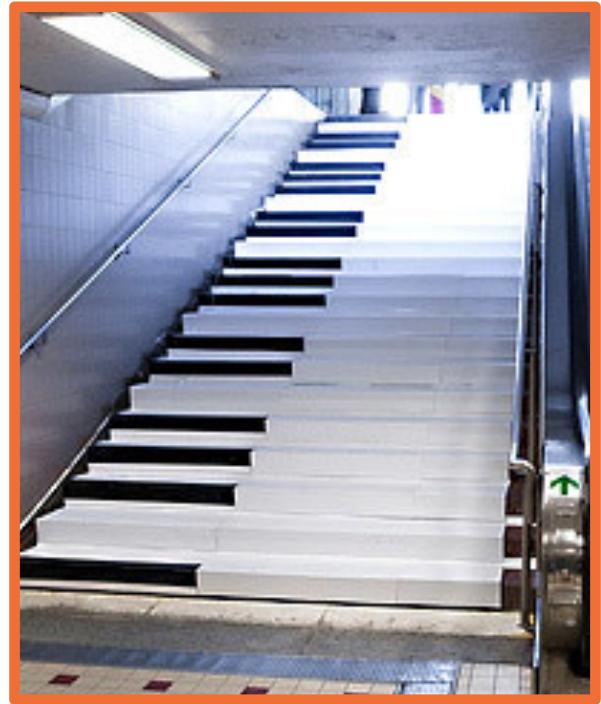
<https://www.youtube.com/watch?v=SBbyymar3bds>



Ordinary Stairs

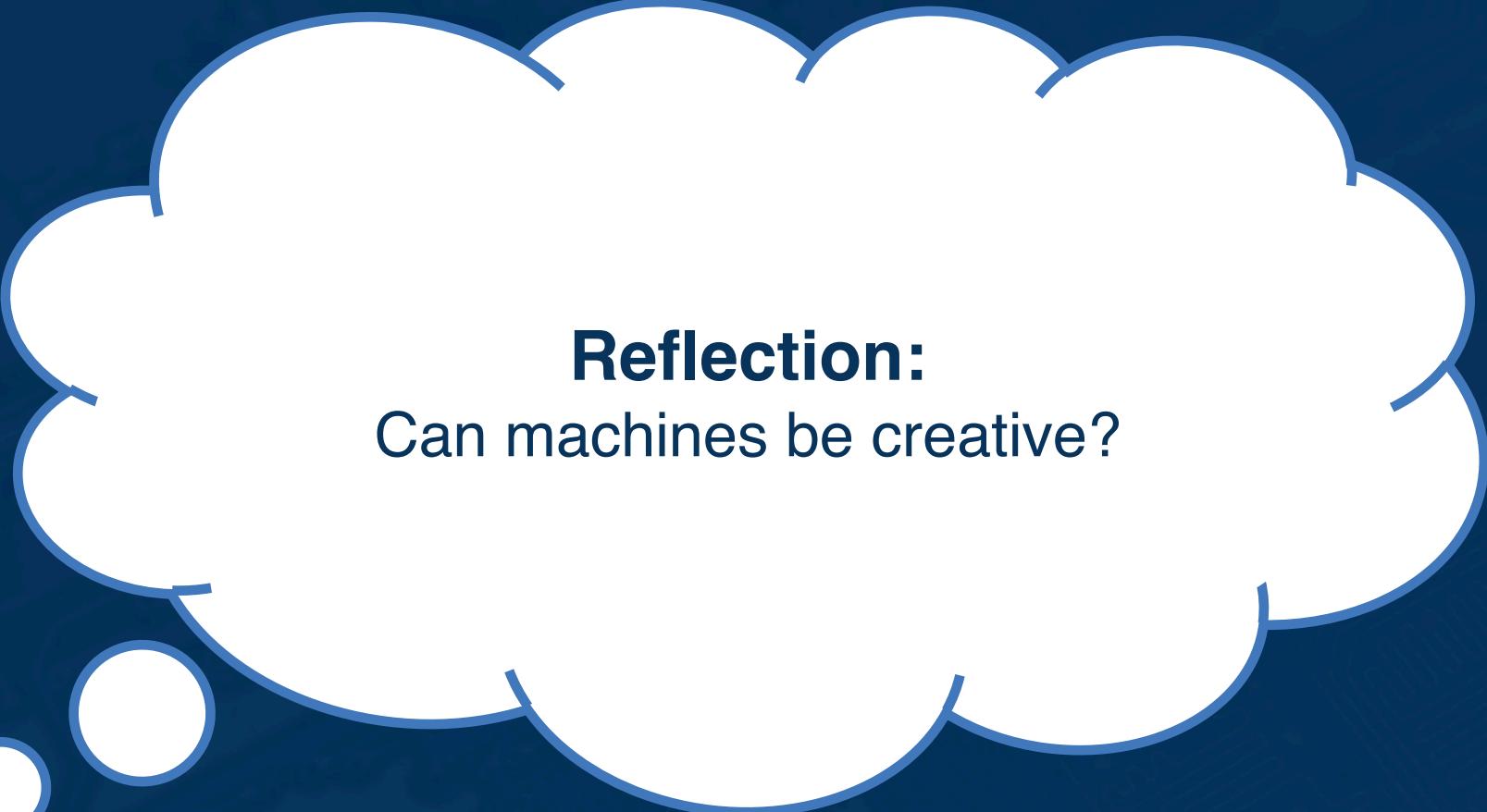


Stairs with Color



Stairs with Color & Music
(musical stairs)

Variables and Values



Reflection:

Can machines be creative?



Understand human creativity



Generate creative outcomes

Goal of Computer Creativity



Philosophical
Question

Are computers
creative, really?



Scientific
Question



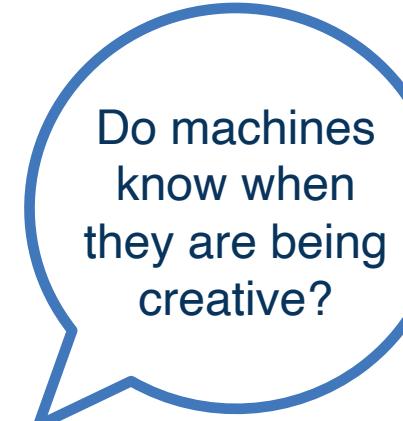
Do humans
know when
they are being
creative?



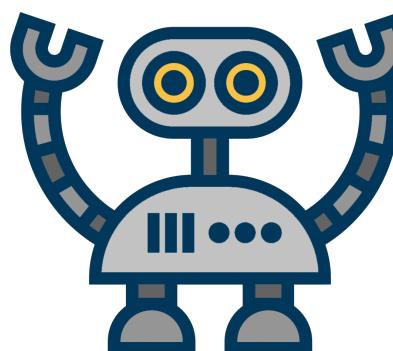
Can humans
evaluate their
own creative
products?



Can machines
evaluate their
own creative
products?



Do machines
know when
they are being
creative?





Restrain Human Creativity



Copyright and Ownership