

# CREATIVITY

a human factors challenge

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proband **15**

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what is

# CREATIVITY



what is

# CREATIVITY





what is

# CREATIVITY



what is

# CREATIVITY



what is

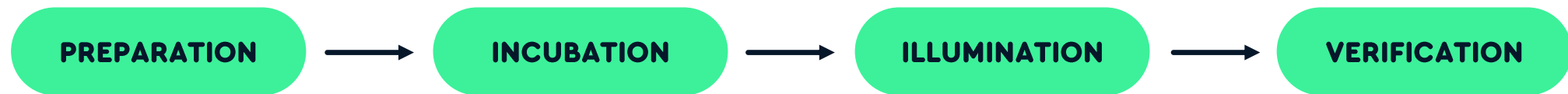
# CREATIVITY





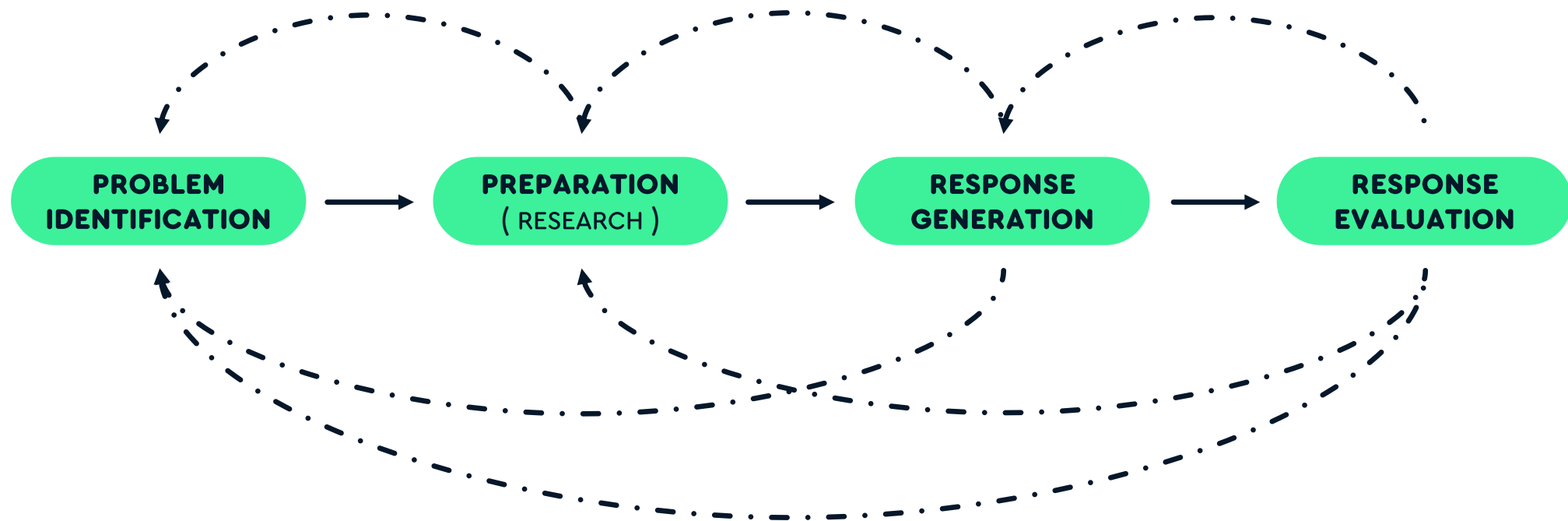
# CREATIVE PROCESS

Wallas (1926)



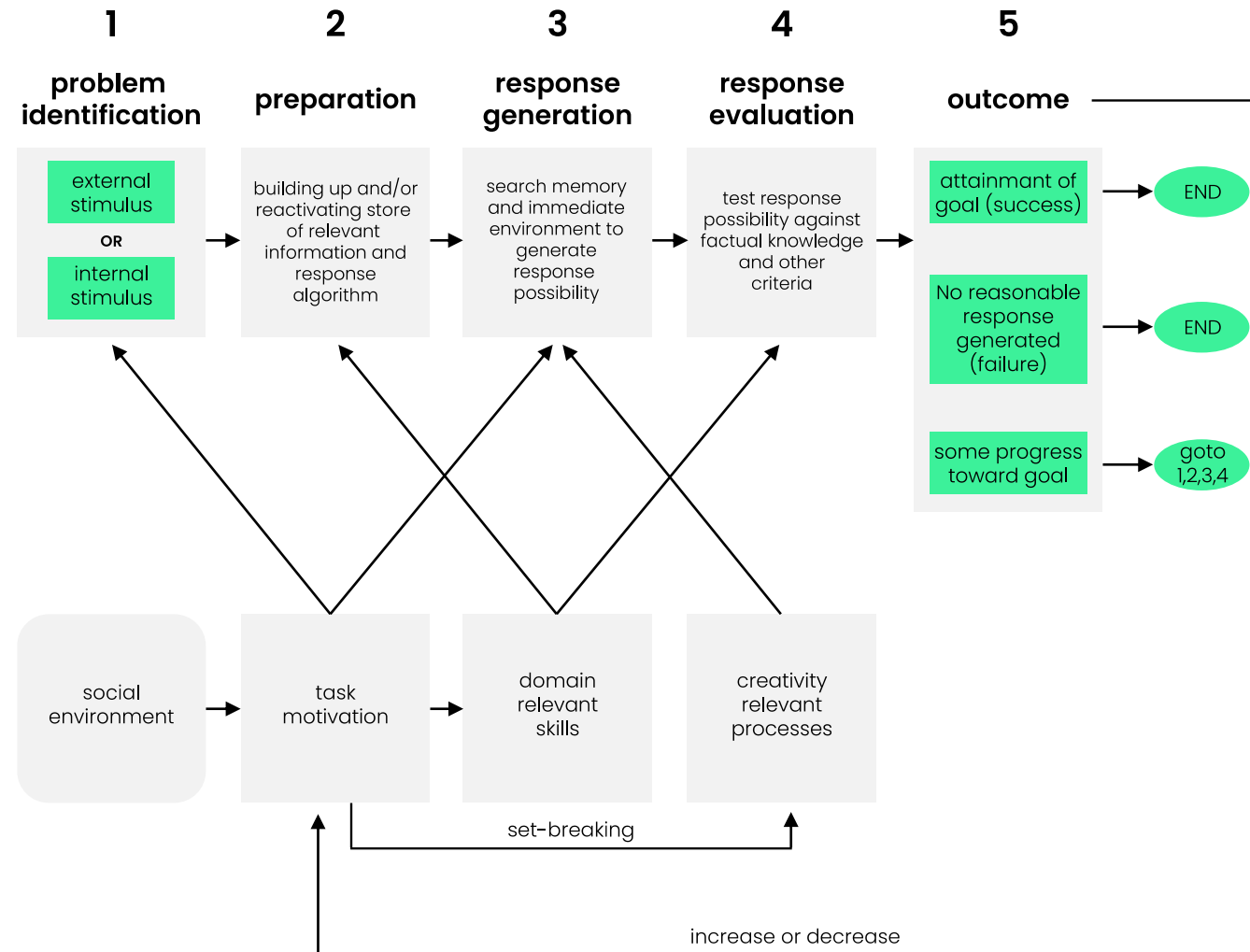
# CREATIVE PROCESS

Amabile (1996)





# COMPONENTIAL THEORY



Componential Theory  
of Creativity,  
Amabile (1996)

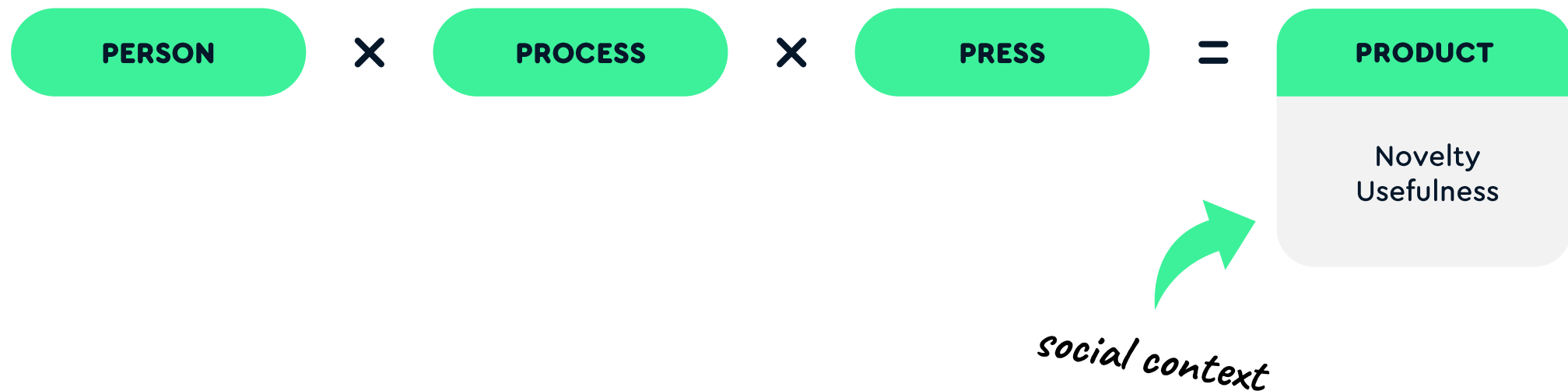
# CREATIVITY

Amabile (1982)  
Batey (2012)  
Gruszka & Tang (2017)  
Rhodes (1961)  
Plucker et al. (2004)



# CREATIVITY

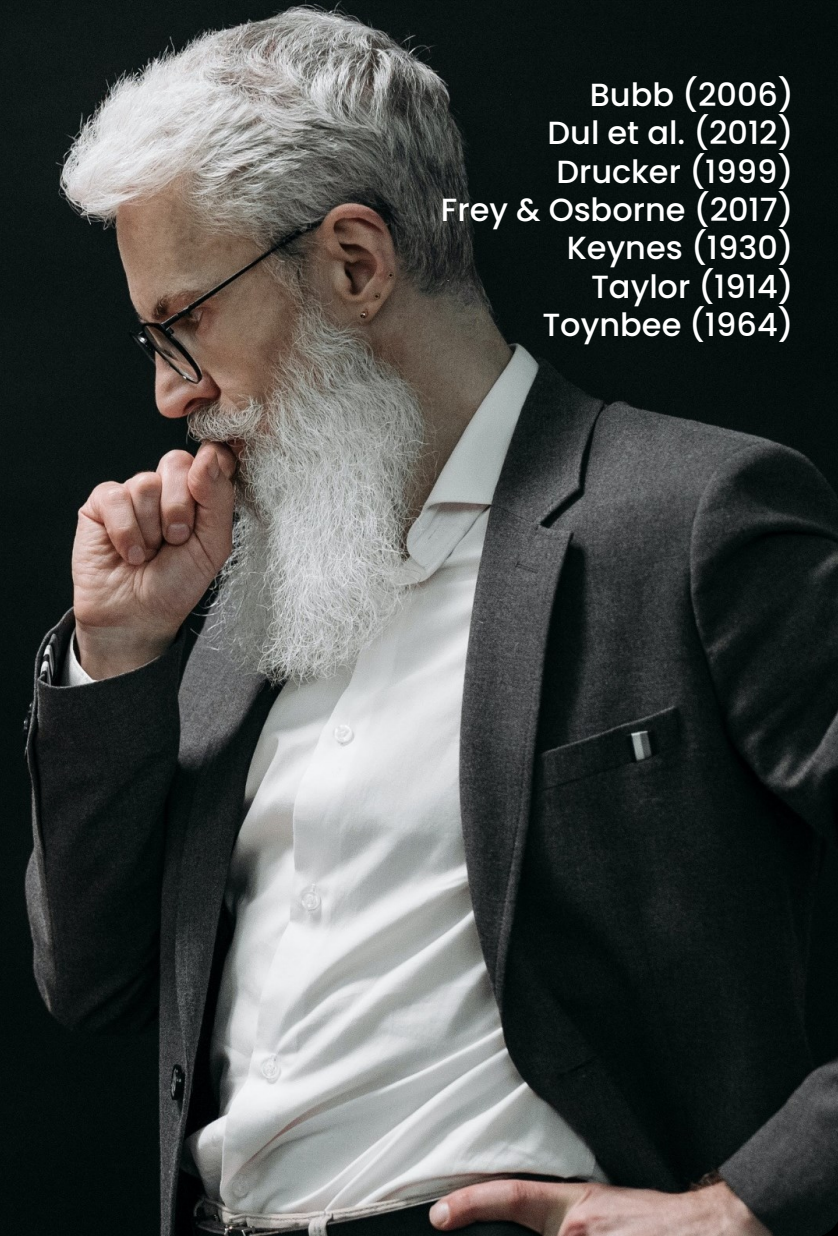
Amabile (1982)  
Batey (2012)  
Gruszka & Tang (2017)  
Rhodes (1961)  
Plucker et al. (2004)





# THE HISTORY OF WORK IS A HISTORY OF OPTIMIZATION

Bubb (2006)  
Dul et al. (2012)  
Drucker (1999)  
Frey & Osborne (2017)  
Keynes (1930)  
Taylor (1914)  
Toynbee (1964)





**CHILDREN IMAGINE LIFE IN  
THE YEAR 2000**

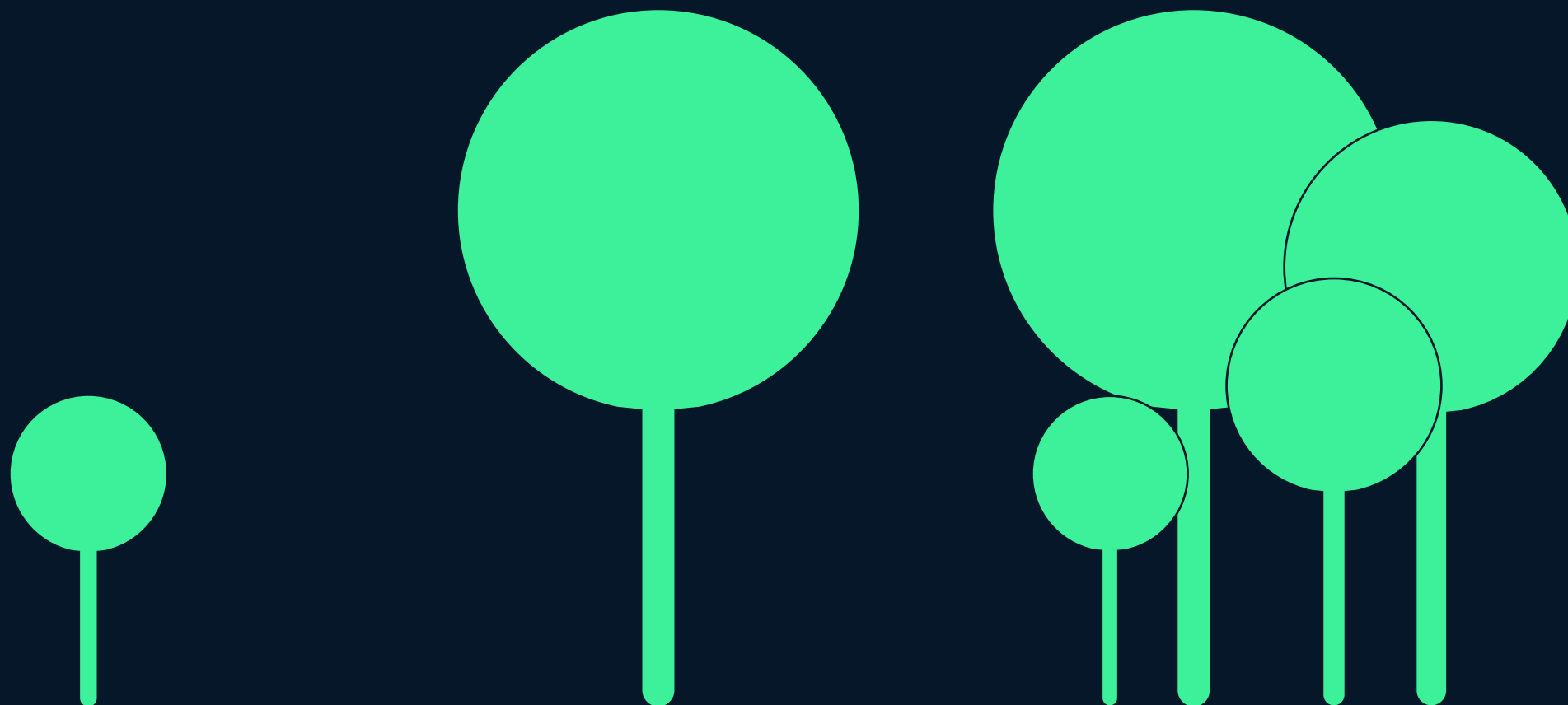
BBC, 1966



# AI DOES NOT KNOW MEANING

correlation versus causation





Beck (2018)

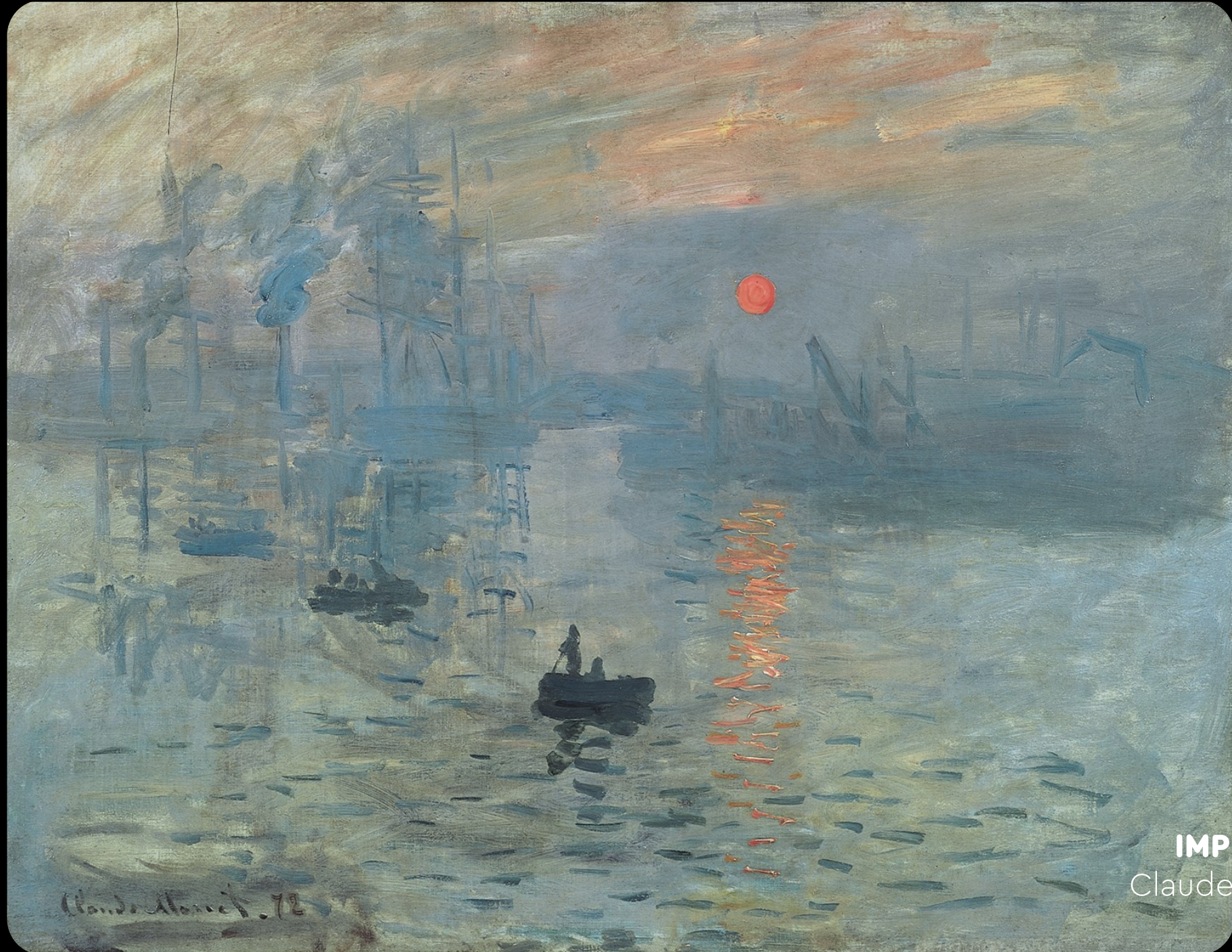
# DATA IS RETROSPECTIVE

so AI can never just make up something new



**ROMANTICISM**  
Caspar David Friedrich, 1818

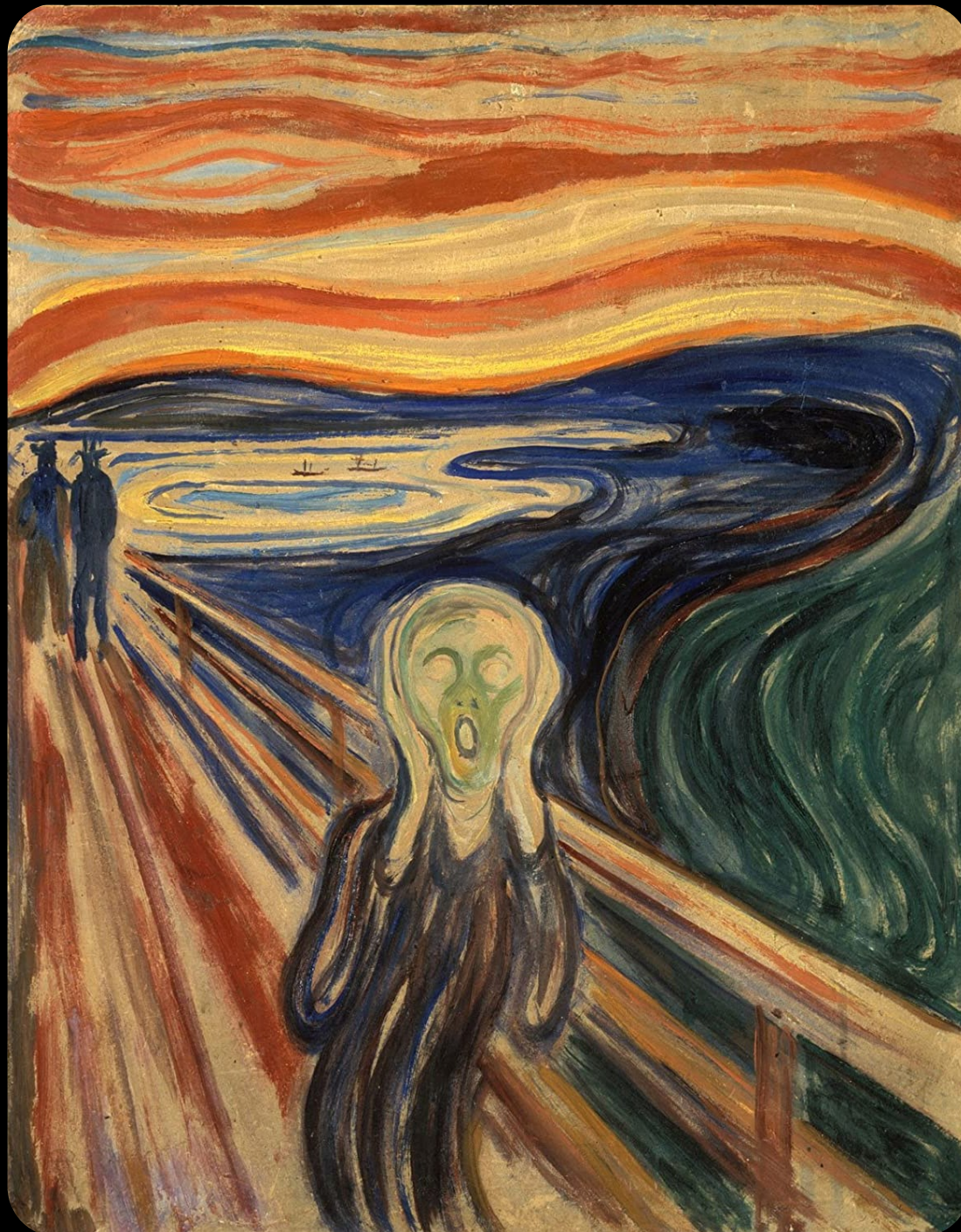




**IMPRESSIONISM**

Claude Monet, 1872





**EXPRESSIONISM**  
Edvard Munch, 1910



**MIDJOURNEY AI**

an office worker  
trying to be creative





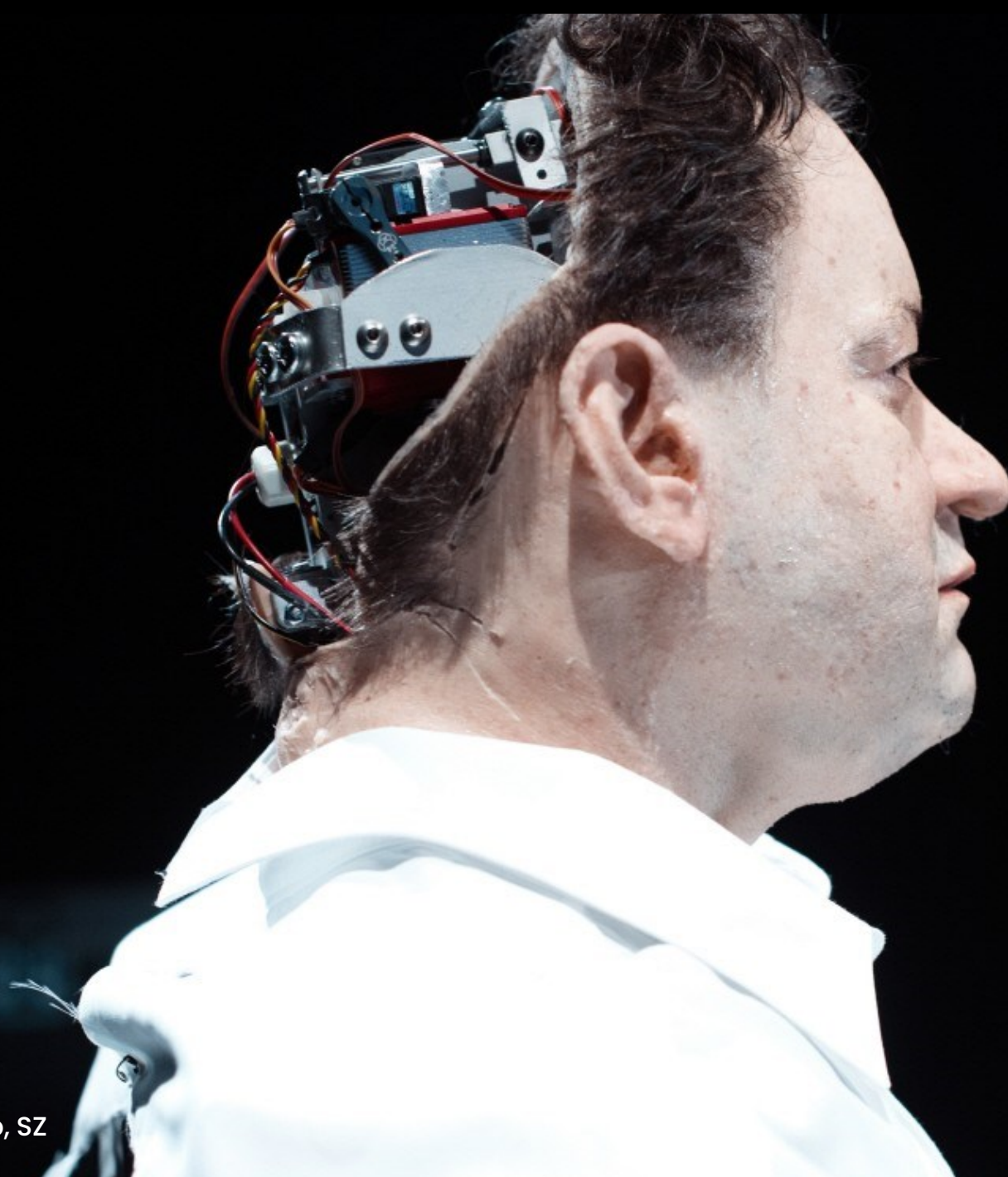


**DALL E 2**  
salmon swimming  
down a river, 2022





**UNCANNY VALLEY**  
Münchner Kammerspiele, 2018



[4] Image: Gabriela Neeb, SZ

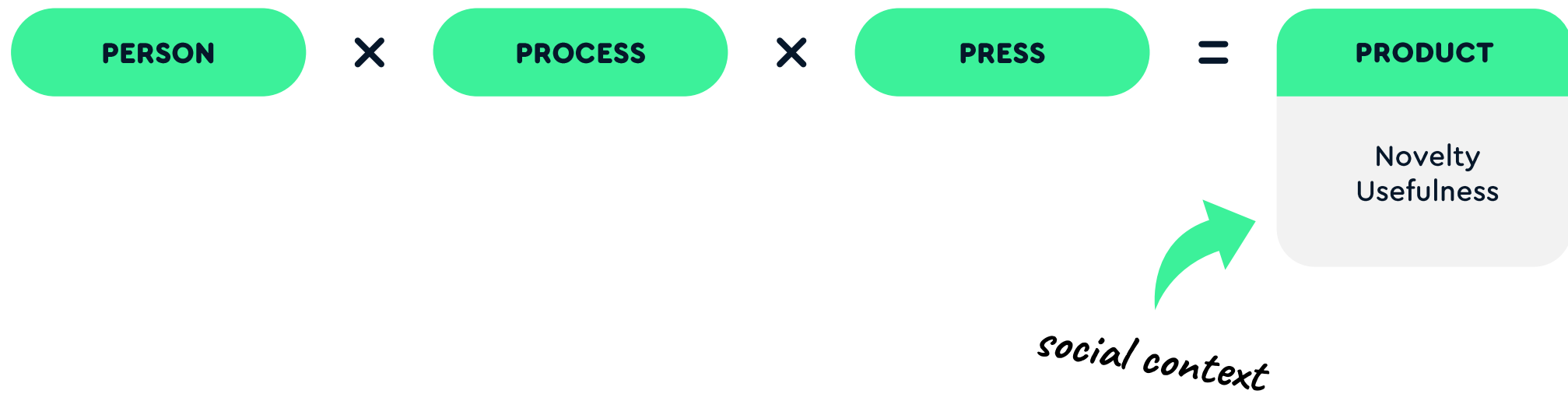
**UNCANNY VALLEY**  
Münchner Kammerspiele, 2018

# ERRARE HUMANUM EST

perseverare autem diabolicum

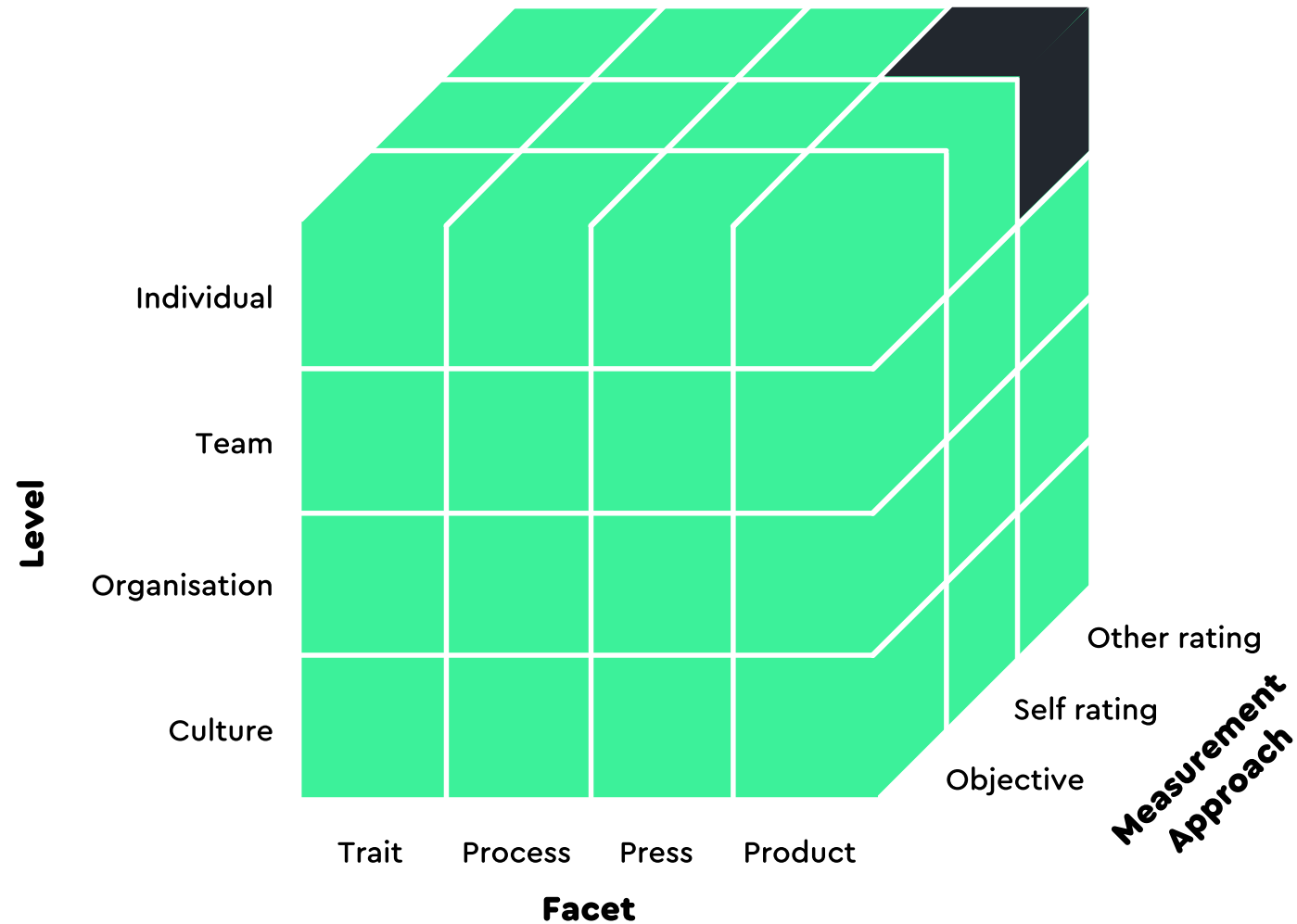
# CREATIVITY

Batey (2012)  
Plucker et al. (2004)



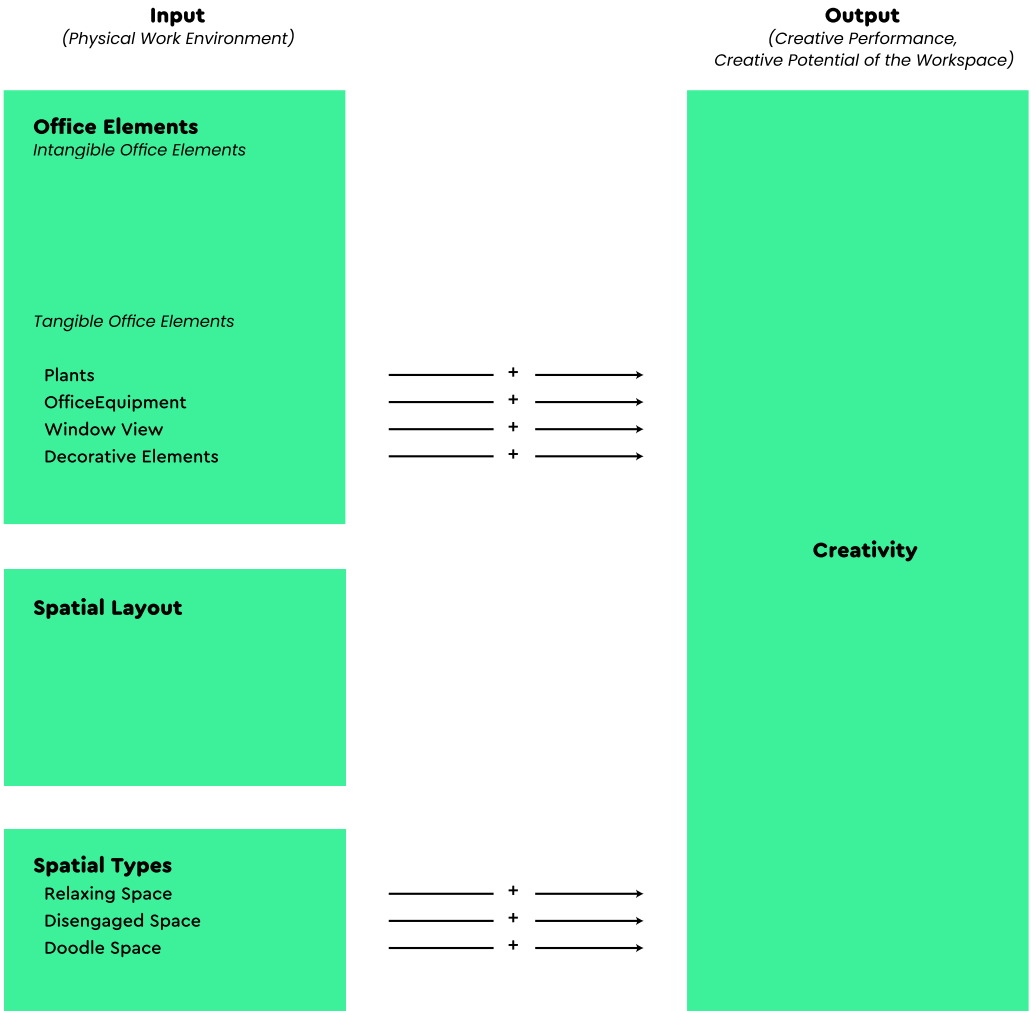


# CREATIVITY MEASUREMENT



Amabile (1982)  
Batey (2012)

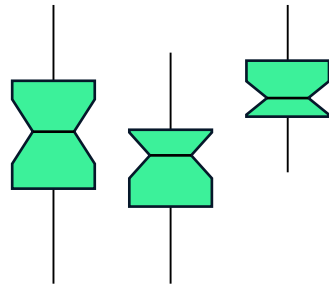
# CREATIVITY MEASUREMENT



Meinel et al. (2017)

Note: + positive effect; ± positive and negative effects; n.s. no significant effects; effects in brackets indicate tendencies

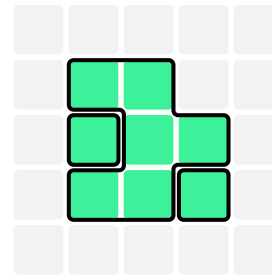
# LESSONS LEARNED



## CREATIVITY MEASUREMENT

was and is the achilles heel

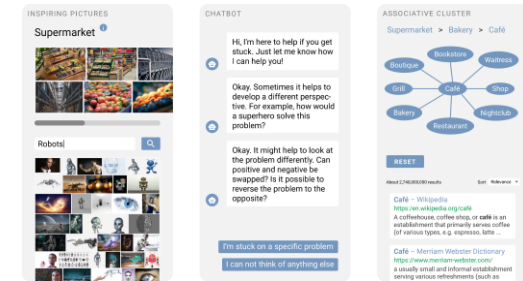
Cseh et al. (2019)  
Prasch & Bengler (2019)



## OBJECTIVE MEASUREMENT

can be easy to use but often not valid

Prasch et al. (2020)  
Olson et al. (2021)

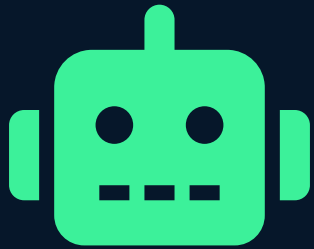


## THE RISE OF CSS

user needs and ease of execution

Wang & Nickerson (2017)  
Prasch et al. (2021)

# A CHALLENGE OF THREE PARTS



**INCREASED RELEVANCE**  
for work of the future



**INTERDISCIPLINARY CORE**  
enables research and teaching



**NEED FOR ERRORS**  
contrary to current human factors



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# IMAGES

[1] <https://www.knuspr.de/2132-dr-oetker-ristorante-pizza-diavola>

[2] <https://www.tk-report.de/2020/09/dr-oetker-aus-fuer-pizzaburger/>

[3] [https://www.codecheck.info/essen/fastfood\\_ganze\\_fertiggerichte/pizza\\_pizzabaguette/ean\\_4001724020929/id\\_30077924/Dr\\_Oetker\\_Pizzaburger\\_Hot\\_Dog.pro](https://www.codecheck.info/essen/fastfood_ganze_fertiggerichte/pizza_pizzabaguette/ean_4001724020929/id_30077924/Dr_Oetker_Pizzaburger_Hot_Dog.pro)

[4] <https://www.sueddeutsche.de/image/sz.1.4158600?v=1538758673&format=webp>

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