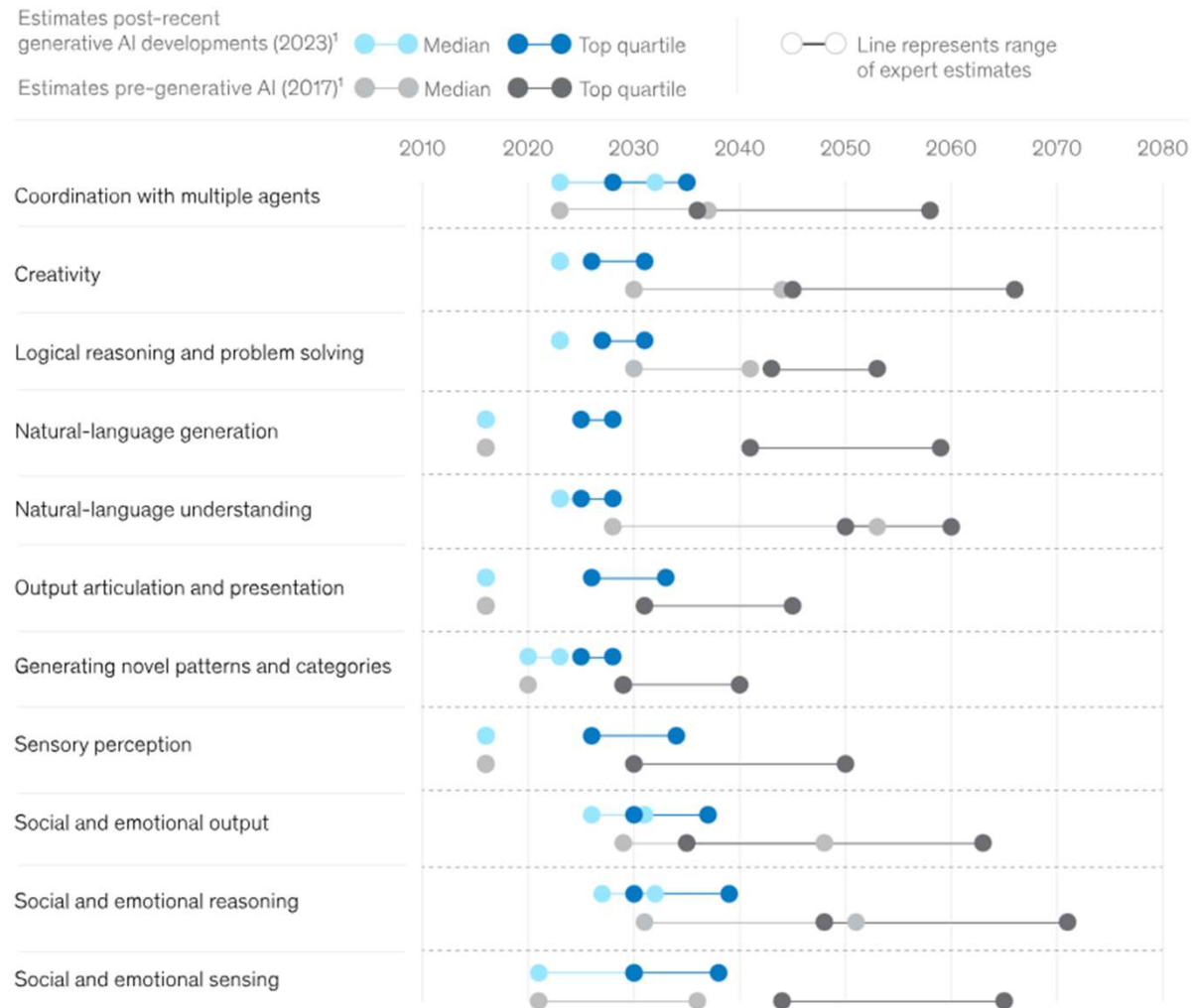




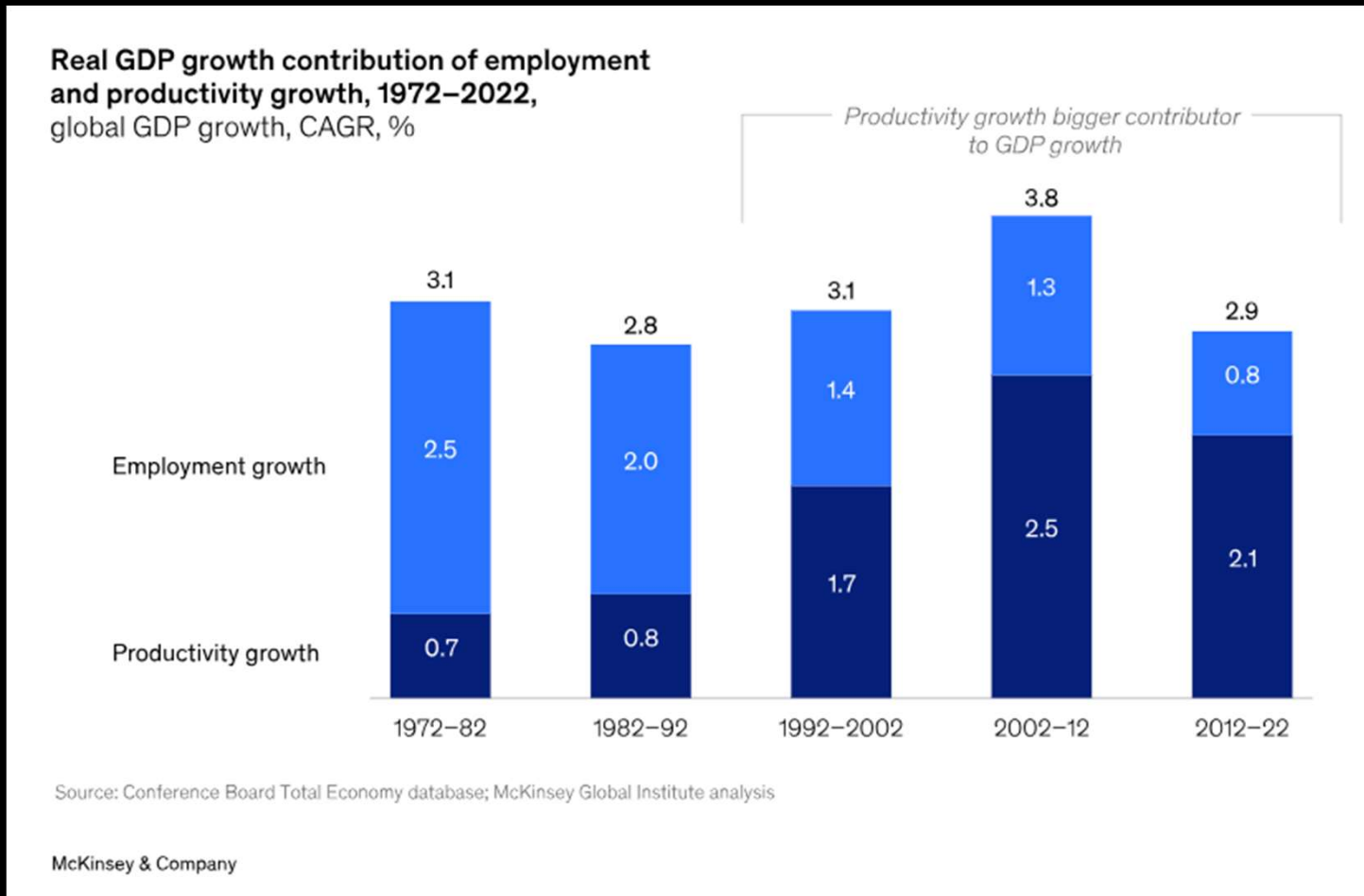
# Generative AI Academy

# Future of Gen AI

## Technical capabilities, level of human performance achievable by technology



# Future of Gen AI



<https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#work-and-productivity>

Anthropic CEO's video

Geoffrey Hinton

# Now or future?



## Add more smile to a face

- Find the vector in the latent space that points in the direction of the most smile.
- Adding this vector to the position in the latent space of the original image we will obtain a new point in the latent space, which when decoded will give us an image with more smile.

Now or future?





Now or future?



# The AI Journey

## TYPES OF AI



### Reactive AI

Can only respond to the current state of the world. They do not have any memory of past events, and they cannot plan for the future.



### Limited-memory

Can remember past events and use this information to make decisions. Cannot reason about the future or understand the intentions of other agents.



### Theory of Mind

Can understand the thoughts and intentions of other agents. Cooperate with other agents and to achieve goals that would be impossible for a single agent.



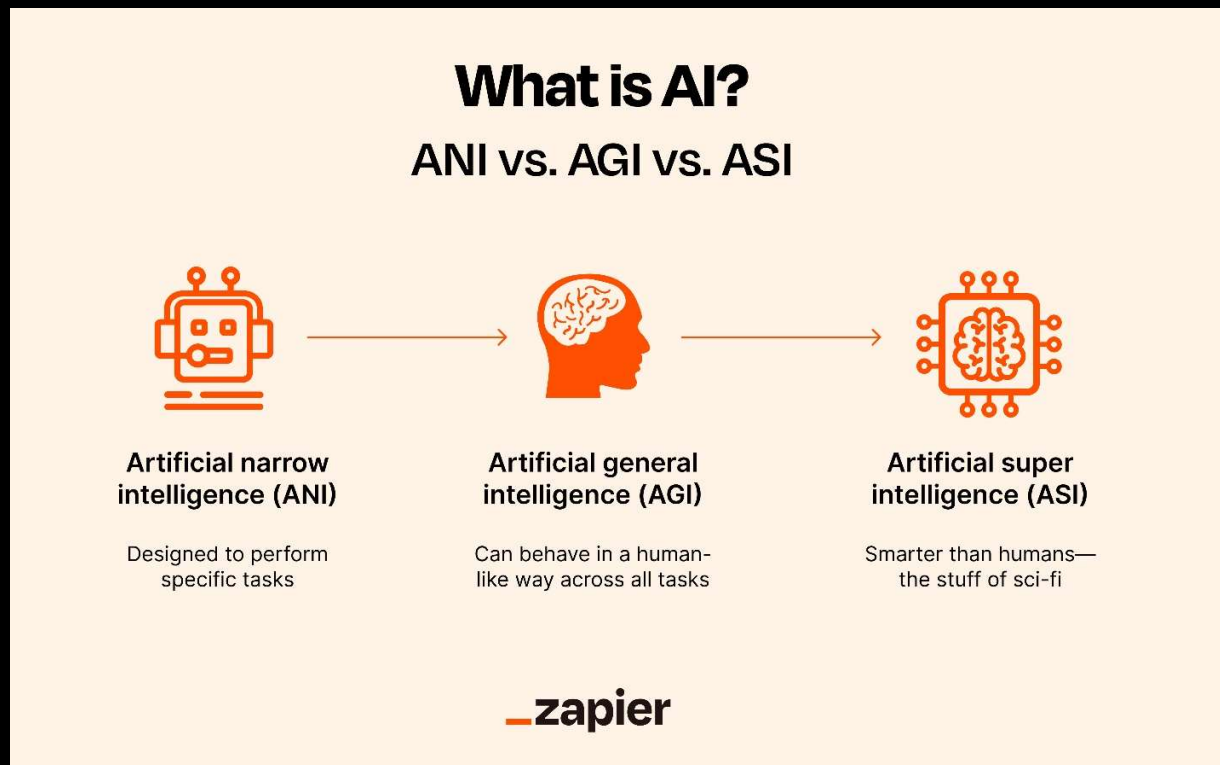
### Self Aware

A hypothetical type of AI that would be conscious and have its own subjective experiences. Does not yet exist, but it is a possibility that some researchers believe is worth pursuing.

# AGI

Artificial General Intelligence – AGI – refers to machines with the ability to understand, learn, and apply intelligence across a wide range of cognitive tasks, akin to human intelligence.

It encompasses general reasoning, problem-solving, and intellectual adaptability.



# Sentience

**Sentience refers to the capacity to experience feelings and sensations, a concept traditionally associated with living beings.**



## AGI and Sentience

The debate centers around whether AGI can achieve true sentience, akin to human or animal consciousness, or if it remains a simulation.

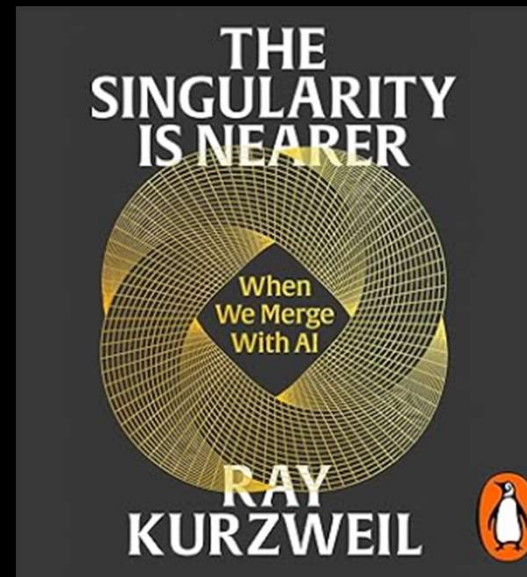
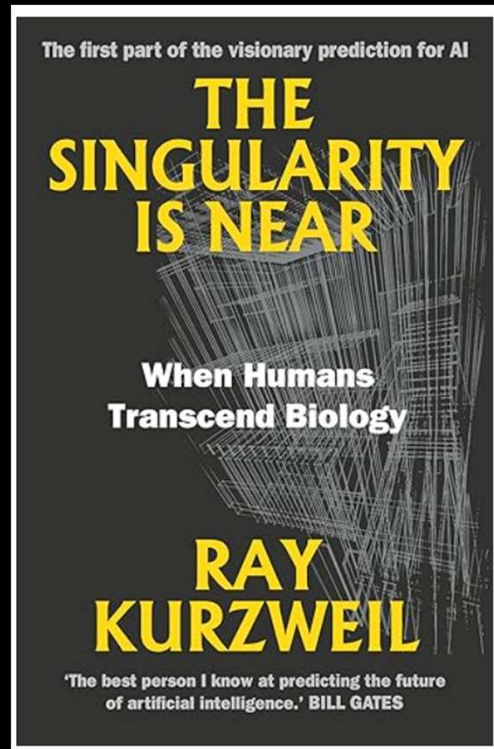
## Challenges in Defining Sentience in AGI

Differentiating between programmed responses and genuine sentient experience is a major philosophical and technical challenge in AGI development.

# Singularity

That point where the advances in 'technology' are so rapid that they blur the lines between nature and technology..

Data mining  
Nanotechnology  
Artificial Intelligence  
Synthetic biology



Close with video from Ilya