

# **AI IS A FLYING BLUE BRAIN?**

HOW METAPHORS INFLUENCE OUR VISIONS ABOUT AI.

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Why is Artificial Intelligence so commonly depicted as a machine with a human brain?

Media reports, policy papers, and discussions of AI are permeated with visual and textual metaphors for both its development as well as the technology itself. Research shows that metaphors are powerful: they access our memories, trigger emotions, influence our attitude and may shape our collective expectations about the future.

## METHOD & THEORETICAL BACKGROUND

#### Metaphors

#### By definition, Metaphors are transmissions of meaning; they create a linguistic link between two separate semantic domains . One phenomenon is understood and experienced through the properties of another.

#### Metaphorical Concepts

Metaphorical concepts can be understood as patterns that structure emotions, thought processes, actions, and cultural reservoirs through which we are socialized as given means of expression.

Future visions are manifested linguistically hence language becomes the medium and interface between present constellations and the future.

## ANALYSIS & REFLECTION

#### Anthropomorphism: attributing human characteristics to Al systems

### These narratives often mirror a paradoxical wish to create a superhuman intelligence



concrete concepts (figurative domain, experienced physically) abstract or unknown concepts (less well understood)

The methodology is based on systematic metaphor analysis by Schmitt, Schröder, Pfaller (2018).

Amongst other aspects, anthropomorphic metaphors render non-human entities worthy of moral care and consideration. By depicting AI as a human brain, a sense of familiarity and kinship is created. The brain metaphor implies that we are creating something that is intimately related to us that shares the brain as a source of the qualities that define us as humans. By comparing AI systems to the human brain, it is suggested that AI systems are analogous to human minds and with adequate training and resources, human intelligence can be technically simulated. Pictorial metaphors of AI such as the brain-inspired AI metaphor are commonly depicted in blue, green, and purple colors counterbalancing the attributed human resemblance with coldness and distance.

# Myths and Metaphors of Recreation: Is there anything human in these machines?

The desire to recreate a living conscious being has been a prevailing motif in human cultural history: from the tales of golem in Mary Shelley's Frankenstein to more recent portrayals like the replicants in the movie "Blade Runner".



that is, however, subdued in status. Cultural imprints underpin the anthropomorphization of AI, which supports the repeated use of the metaphor that so effectively captures the popular imagination.

#### Mind (brain) is a computer is a mind (brain)

Describing machines as a human brain is a bidirectional metaphor, the source and target domain of the metaphor can be exchanged.

Historically, new technologies were compared to the human brain. Back then the simpler, sensuously known object was the mind, whose characteristics were used to illustrate the functioning of telegraphs, hydraulic machines or electrical circuits. And each time a new technology was introduced, new analogies to human brains were drawn. This directional reversal eventually also gave rise to a multitude of derivative metaphors prevalent in everyday language such as "I am feeling wired" or "I am still processing this". This insinuates that "computing" is "thinking" and vice versa, emphasizing the similarity of source and target.



Metaphors also help us to understand new technologies and tools. However, their impetus is threefold: a metaphor emphasises the novel by referring to something familiar thereby identifying hidden similarities at the expense of some crucial features being abstracted away.

When we think and talk about the future we use concepts of the past to imagine and explain unknown phenomena through metaphors, yet they carry normative implications that shape our thoughts.

The combination of linguistic and visual metaphors, as well as the multitude of derivative metaphors reinforce the metaphor's communicative strength and comprehensibility that avail a global narrative coherence. Yet, this metaphor may dissolve with ongoing research and more dissimilarities surfacing. More rational and concrete language could make new technologies more transparent as sociotechnical systems that are imbued with human decision making and further help a more calibrated understanding of its capacities.

Shifting linguistic frames through new metaphors and narratives for AI could help us make alternative future visions plausible and allow needed new visions to emerge.

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