

# Large Language Models and the Patterns of Human Language Use

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# Outline

1. Beyond Anthropomorphism
2. Cultural Technique of Flattening and its Artifice
3. Chatbot's Dialogicity and Understanding as Category Mistake
4. Media-Theoretical and Linguistic-Philosophical Argument against Eliza's Trap
5. Letter Statistics form a Kind of *Collective Unconscious* of literate societies
6. Describing alternative, non-human Forms of Intelligence: Token Statistics, Combinatorics, and correlation

# **Beyond Anthropomorphism**

Like a shadow,  
anthropomorphism  
is a companion of the philosophical  
debate.

## **Our scenario:**

Looking for an  
*alternative, 'non-human'* form of  
practiced intelligence, communication,  
language processing, and  
understanding of meaning.

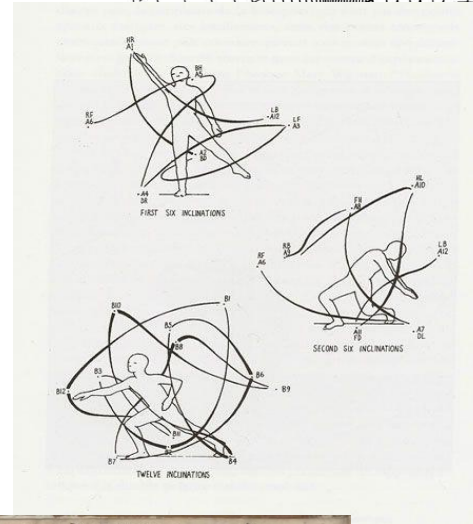
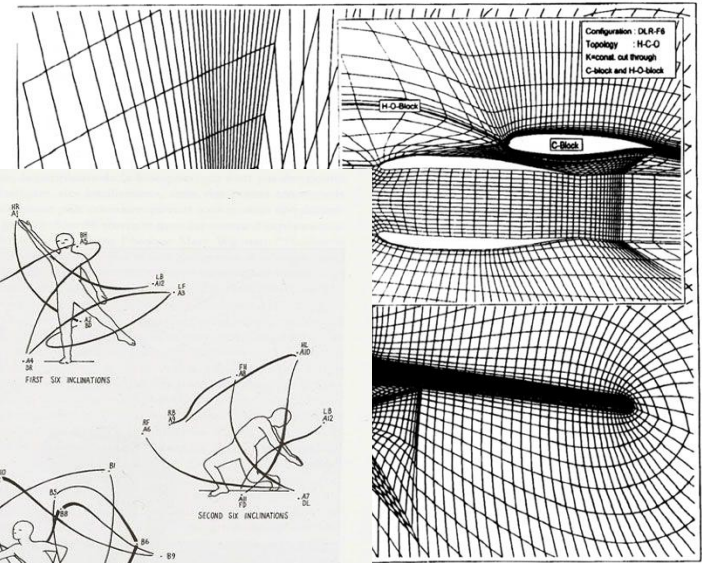
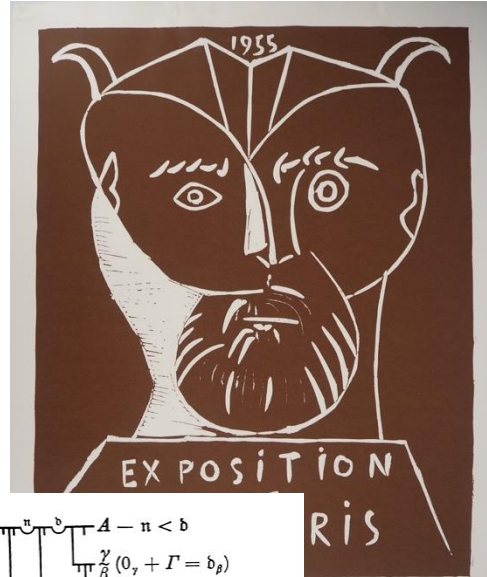
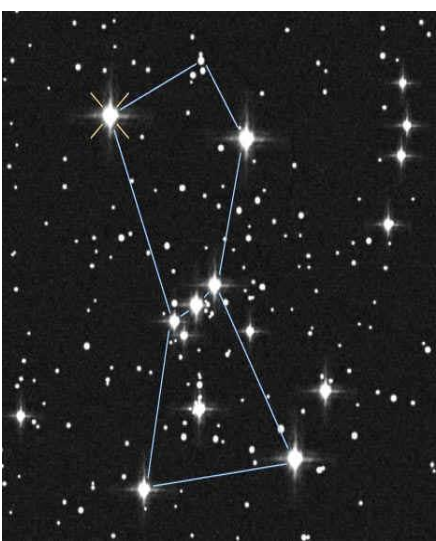
# **Methodological approach inspired by ,cultural techniques‘**

Not only physical but also symbolic artifacts, i.e. sign systems, form elements of a genuine technicality of *all* human forms of life.

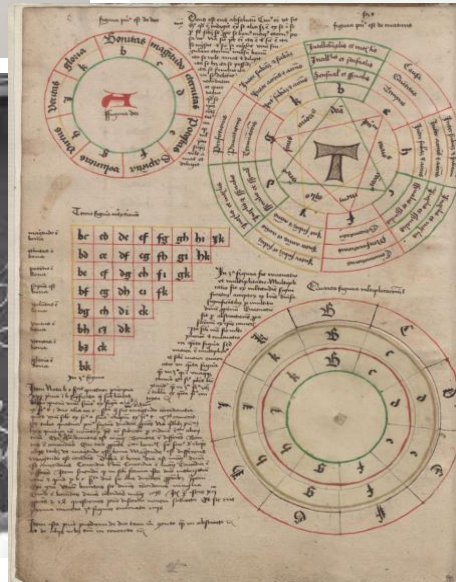
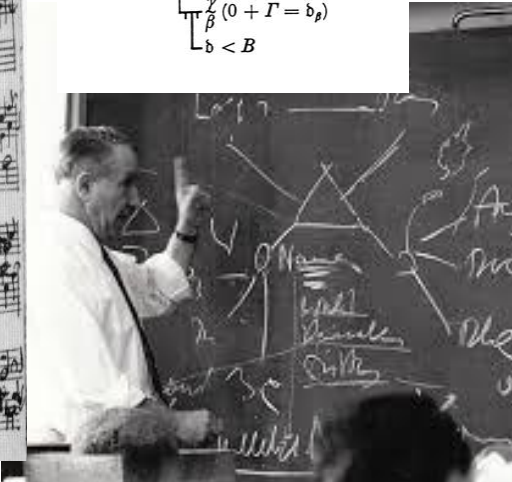
# Operative, meaning-neutral symbolism

It is the possibility of a temporary absence of meaning and significance that turns symbolic artifacts into tools of the mind.

# ,Cultural Technique of Flattening‘



$$\begin{array}{l}
 A - n < b \\
 \frac{\lambda}{\beta} (0, + \Gamma = b_p) \\
 b < B \\
 n > 0 \\
 A \geq b \\
 \frac{\lambda}{\beta} (0 + \Gamma = b_p) \\
 b < B
 \end{array}$$



# Artificial flatness' artifice

Temporal performance is objectified into spatial structure, which in turn can be liquefied and performed in temporal fluidity.



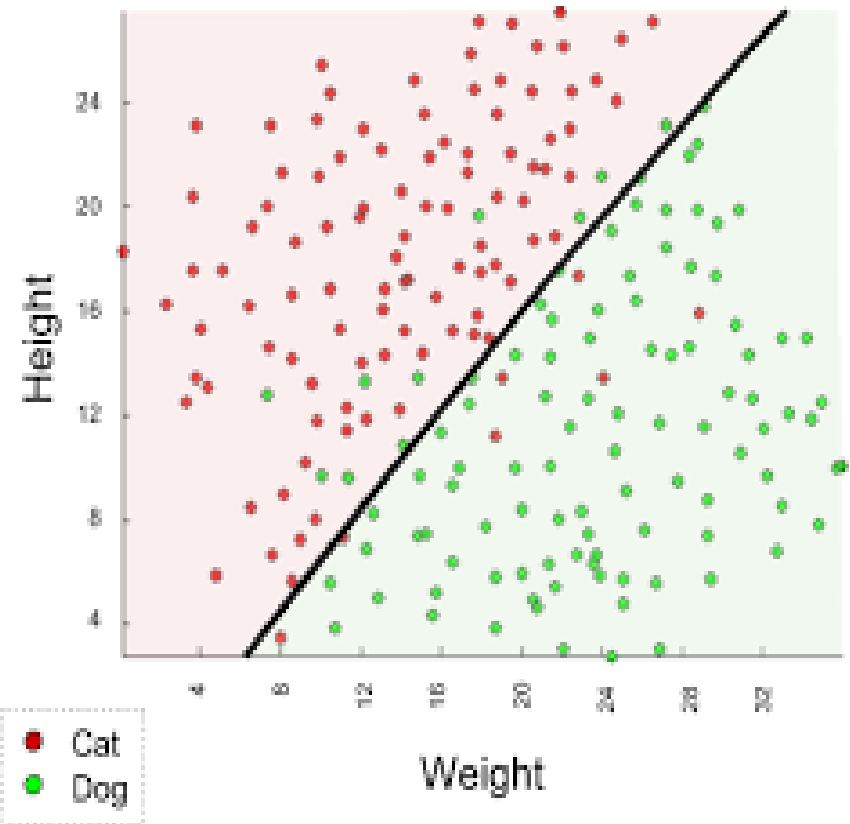
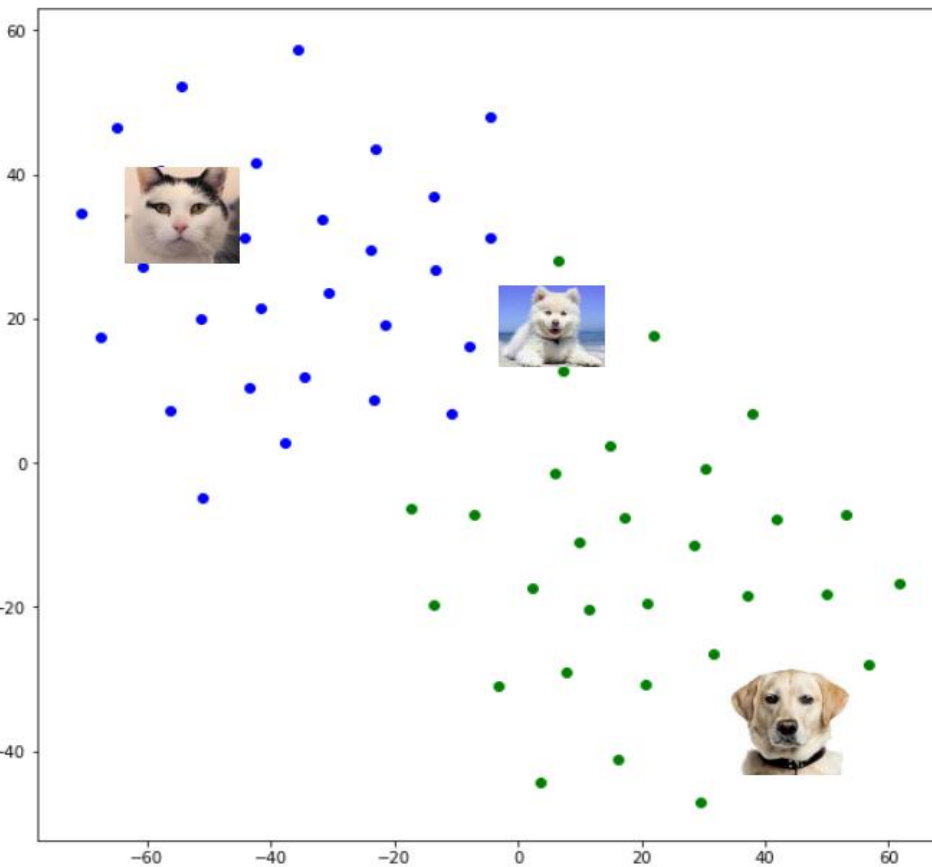
# Alfred North Whitehead

“Civilisation progresses by expanding the number of important operations that can be performed without thinking about them.”

Introduction to Mathematics, 1911, pp 35

# Clustering Cat-and Dogimages by Sorting Points

The algorithm's training consists of calculating the line that distinguishes the two sets of dots as clearly as possible



# Trapped in Weizenbaum's Eliza Effect?

- The anthropomorphic seductiveness of chatbots lies in the fact that we can enter into a dialogue-based resonance relationship.
- But this is an illusion.

# Chatbot's Dialogicity and Understanding as Category Mistake

- Projecting properties that are well-known from interpersonal communication, cognition, and interaction to chatbots is a *category mistake*.
- But how to argue in favour of a non-anthropomorphic interpretation of chatbots?

# How to argue in favour of a non-anthropomorphic interpretation of chatbots?

## Two suppositions

- A fundamental functional and ontological difference between humans and machines must be assumed. But this *disparity* is the prerequisite for entering into a complementary relationship.
- Interpretation-neutral operativity is a cultural technique that humans realized by hand long before the invention of the computer.

# Media-Theoretical Argument

- LLMs constitute a medium, the interface between individual users and the written collective memory of a community. Large Language Models give users access to digitalized parts of the collective memory.
- A distant analogy for this relationship is the use of libraries .

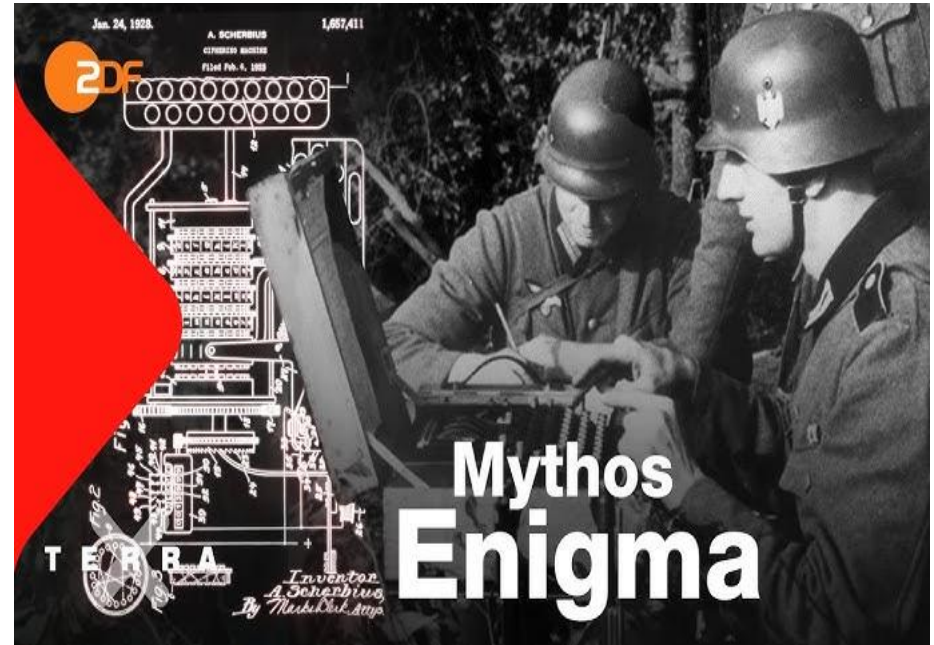
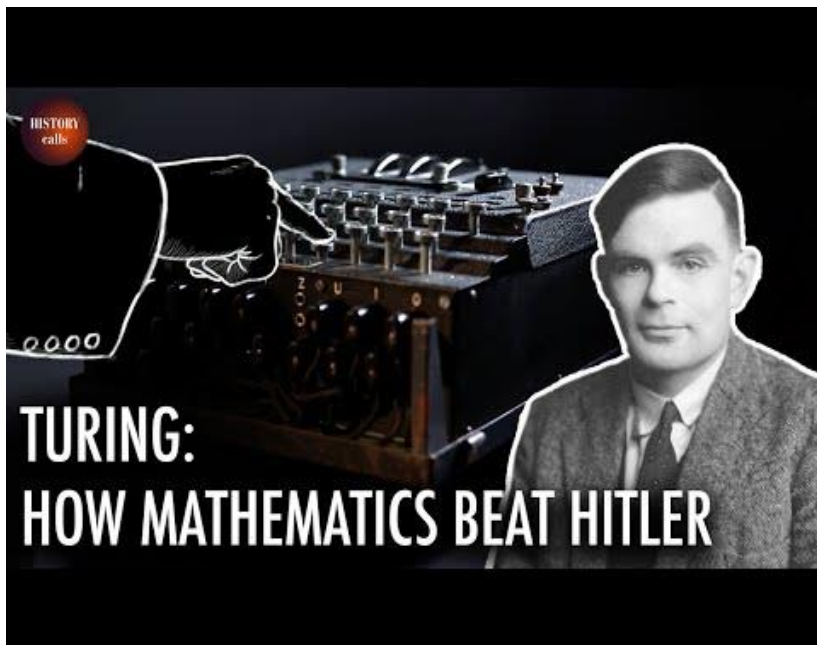
# The Linguistic Unconscious

- Every system of letter writing implies underlying statistical relations.
- The writers and readers have neither knowledge nor awareness of these mathematical relations.
- Letter statistics form a kind of *collective unconscious* of literate societies.
- The intuitive human language sensorium is incapable of recognizing this statistical dimension.

# Decoding the German radio messages by letter statistics: Alan Turing

Turing decrypts the Enigma code of the German army

Source: National Museum of Computing  
Bletchley Park, Trailer



Source: Youtube: Imitation Game. Trailer



# **Describing alternative, non-human forms of intelligence**

The triad of token statistics, combinatorics, and correlation characterizes the type of alternative intelligence encountered in chatbot activities.

# Entering the *Cultural Unconscious* via Chatbots

- We can enter into an epistemic relationship with the *cultural unconscious* via LLMs.
- That is the reason for the methodological efficiency of Digital Humanities.
- But this is an *epistemotechnical* interaction and never has the character of interpersonal dialogue.

- Chatbots do not interpret or understand what they say.
- They do not realize speech acts.

# Chatbots:

## Tools in Social Epistemology

- Chatbots function (sometimes) as instruments of social epistemology. The trust that is required here is similar to trust in technical objects.
- It is important, however, to understand LLM's trust type as a one-sided, *epistemic-technical trust* that can never release us from the obligation to verify factual content.

- Artificial intelligence can neither think nor be reasonable or unreasonable. Its systems belong to the genre of 'non-reason'.
- Practicing reason and unreason remains a prerogative of its human designers and users.