

AMAN NARENDRA ALI

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EDUCATION

B.Sc in Computer Science	Ashoka University	2024	3.6/4 CGPA
CLASS XII in SCIENCE	The Shri Ram School Aravali	ICSE	2021
CLASS X	The Shri Ram School Aravali	ICSE	2019

Technical Proficiency Photo Editing, Communication Skills, Communication Written, Social Media Communications, Microsoft PowerPoint, Microsoft Word, Microsoft Excel, Python, Java, SML

INTERNSHIPS EXPERIENCE

THE GLOBAL EDUCATION & LEADERSHIP FOUNDATION (TGELF) <i>Intern</i>	Jun 2020 - Jun 2020
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I was heavily involved in documentation, organisation of online events and technical support.

GRAPHENE SERVICES <i>Intern</i>	Jun 2019 - Jun 2019
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I was shown the language model Graphene were working on at the time. I helped with presentations, documentation and data curation and was involved in design meetings.

WORK EXPERIENCE

MAITRI <i>Teacher</i>	May 2019 - May 2019
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Maitri is an NGO that provides education to underprivileged children. I was a teacher there for two weeks and taught children between classes 1-8 Mathematics and English.

POSITIONS HELD

Chief Editor/Head Writer <i>PluggedIn/Radio Check</i>	Jul 2020 - Nov 2020
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Was the head writer and chief editor at Radio Check, a website for publishing music reviews (hosted on the PluggedIn platform).

EXTRA CURRICULAR ACTIVITIES

SOCIAL MEDIA CONTENT AND MANAGEMENT	Handled design and content for the Radio Check on Instagram (https://www.instagram.com/pluggedin.blog/). Have a high awareness and interest in social media content and management.
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AWARDS AND ACCOMPLISHMENTS

Subject Topper Award for Computer Science The Shri Ram School Aravali

Obtained 100% in 10th and 12th grade Computer Science and received the Subject Topper award.

CONFERENCES AND WORKSHOPS

TEDED Club Organized by: TED Date: Jun 2018

Was a member of the TEDED Club from August 2017 to June 2018. It enriched my knowledge and capabilities in the fields of constructing a speech and public speaking.

Link: [How to be funny | Aman Narendra Ali | The Shri Ram School Aravali \(senior school\) - YouTube](#)

TEST SCORES

TEST NAME	DATE OF EXAM	SCORE
SAT	Dec 7, 2019	Score: 1510/1600

LANGUAGES KNOWN

English, Hindi

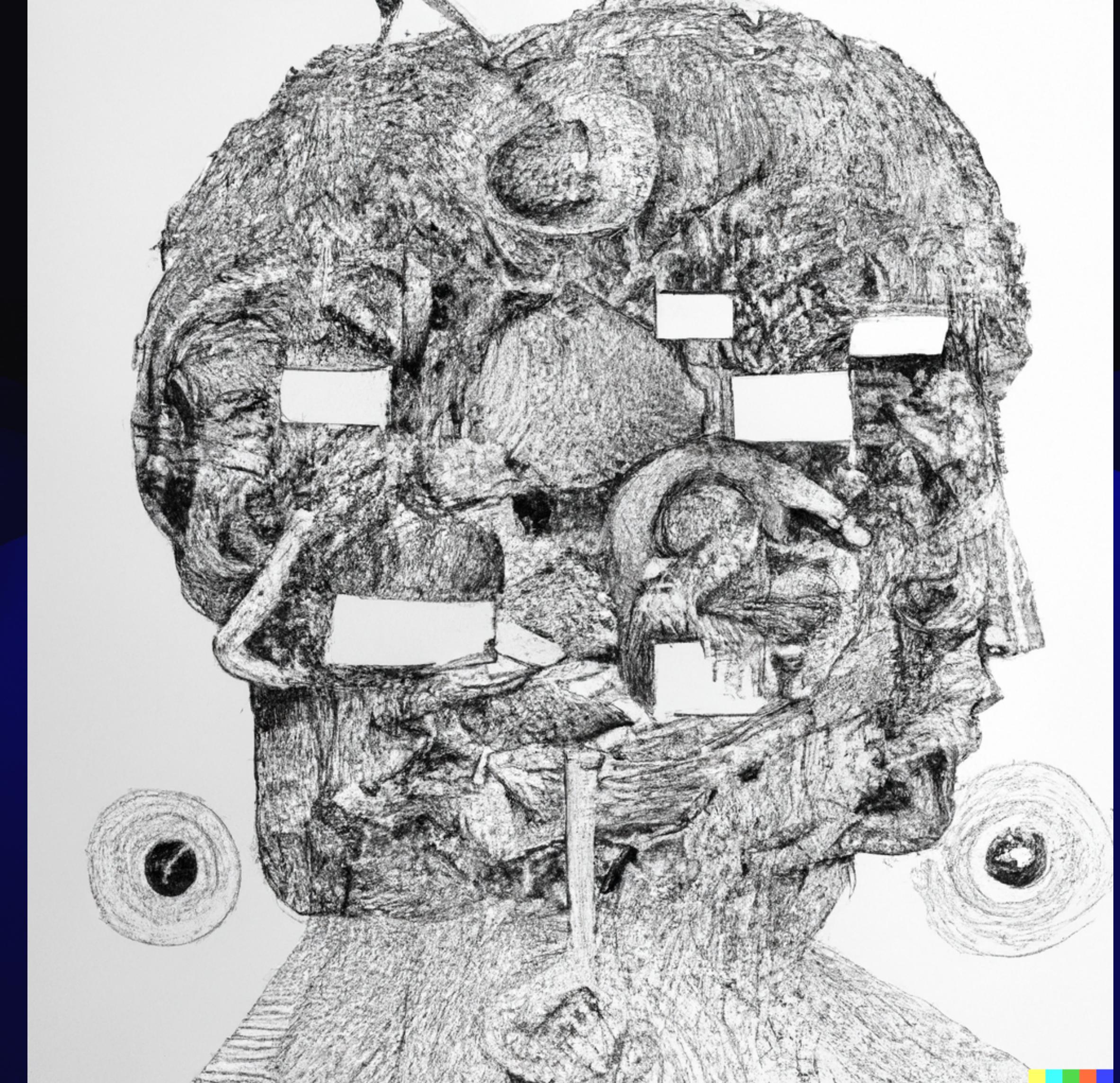
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Historical Foundations: Theory of Mind and Computers



Warm up.

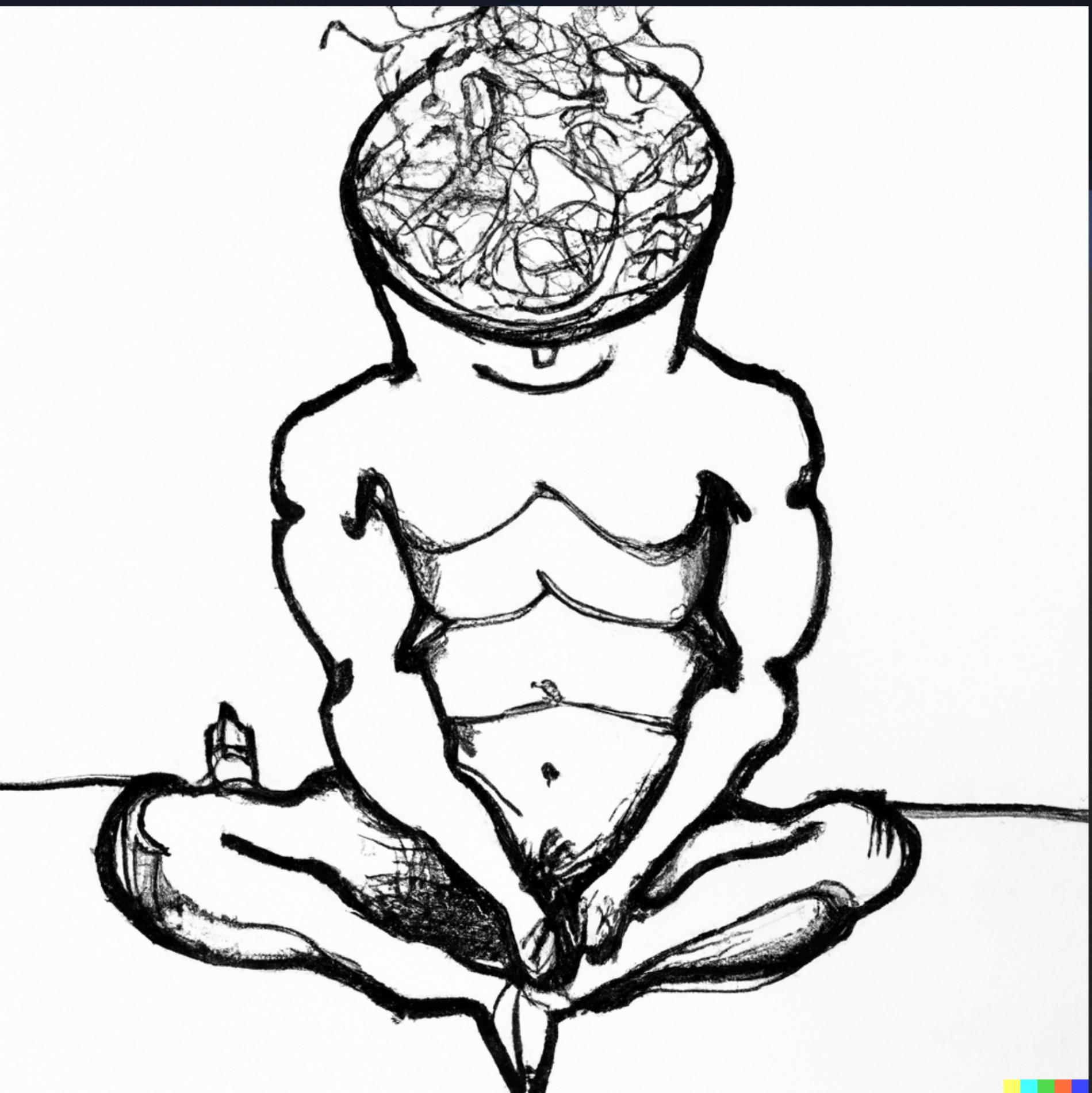
What features of entities with minds distinguish them from entities that lack minds?



The Mind-Body Problem

Historical Foundations

- What is the relationship between the mind and the body?
- Otherwise put, what is the relationship between mental properties (e.g., having the belief that there is beer in the fridge) and physical properties (e.g., having a certain bodily configuration)?



Computational theory of mind (CTM)

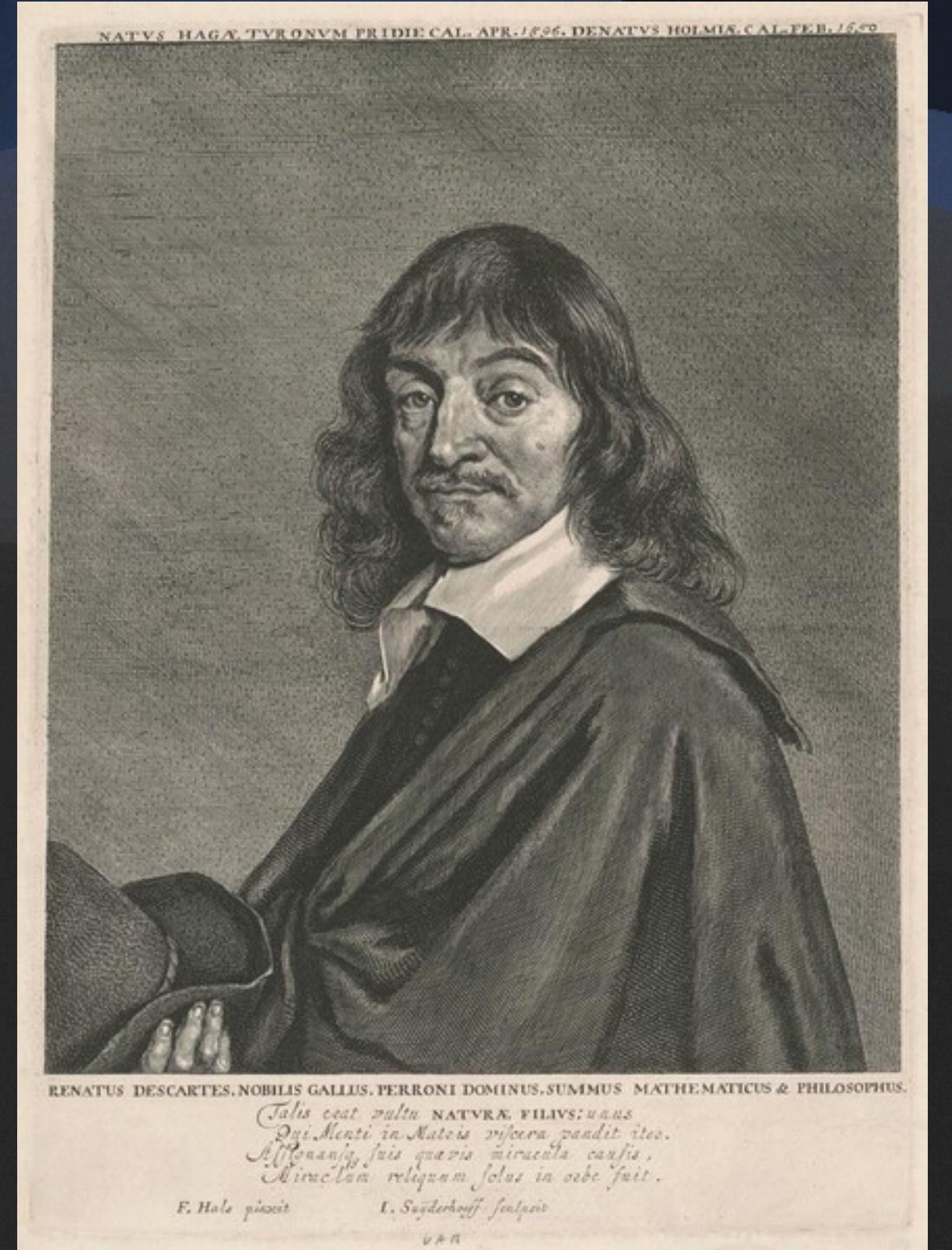
Historical Foundations

- Our central target in this course is the computational theory of mind; this may be understood as a specific answer to the mind-body problem.
- **Computational theory of mind (CTM)** – the mind *is* a computational system implemented by the body.
 - Analogy: the mind is to the brain as computer software is to computer hardware.
- But how did we arrive at this view?

Theory of Mind - A brief overview

Substance Dualism

- René Descartes (1596 - 1650)
- **Substance (Cartesian) Dualism** – Mind and body are distinct entities that causally interact with one another.
- Argument for Substance Dualism
 1. It's possible my mind exists without my body.
 2. If it is possible that my mind exists without my body, then my mind and my body are distinct entities.
 3. Therefore, my mind and my body are distinct entities.



Theory of Mind - A brief overview

Materialism or Physicalism

- **Materialism / Physicalism** – There is only material substance; minds are, in some sense, material.
- Varieties of materialism:
 - **Reductive Materialism**: mental properties are reducible to physical properties.
 - **Non-reductive Materialism**: mental properties are not reducible to physical properties.
 - **Eliminativist Materialism**: there are no mental properties; only physical properties exist.

Theory of Mind - A brief overview

Behaviorism

- Behaviorism, some varieties
 - **Psychological behaviorism** — the only data we should appeal to in the investigation of the mind is observable behaviors.
 - **Logical behaviorism** — sentences using mentalistic expressions (e.g., ‘belief’, ‘desire’, etc.) are translatable into sentences that are about observable behavior which do not include mentalistic expressions.
 - E.g.,

If Jordan believes there is beer in the fridge, then Jordan will say ‘Yes’ when asked ‘is there beer in the fridge?’.

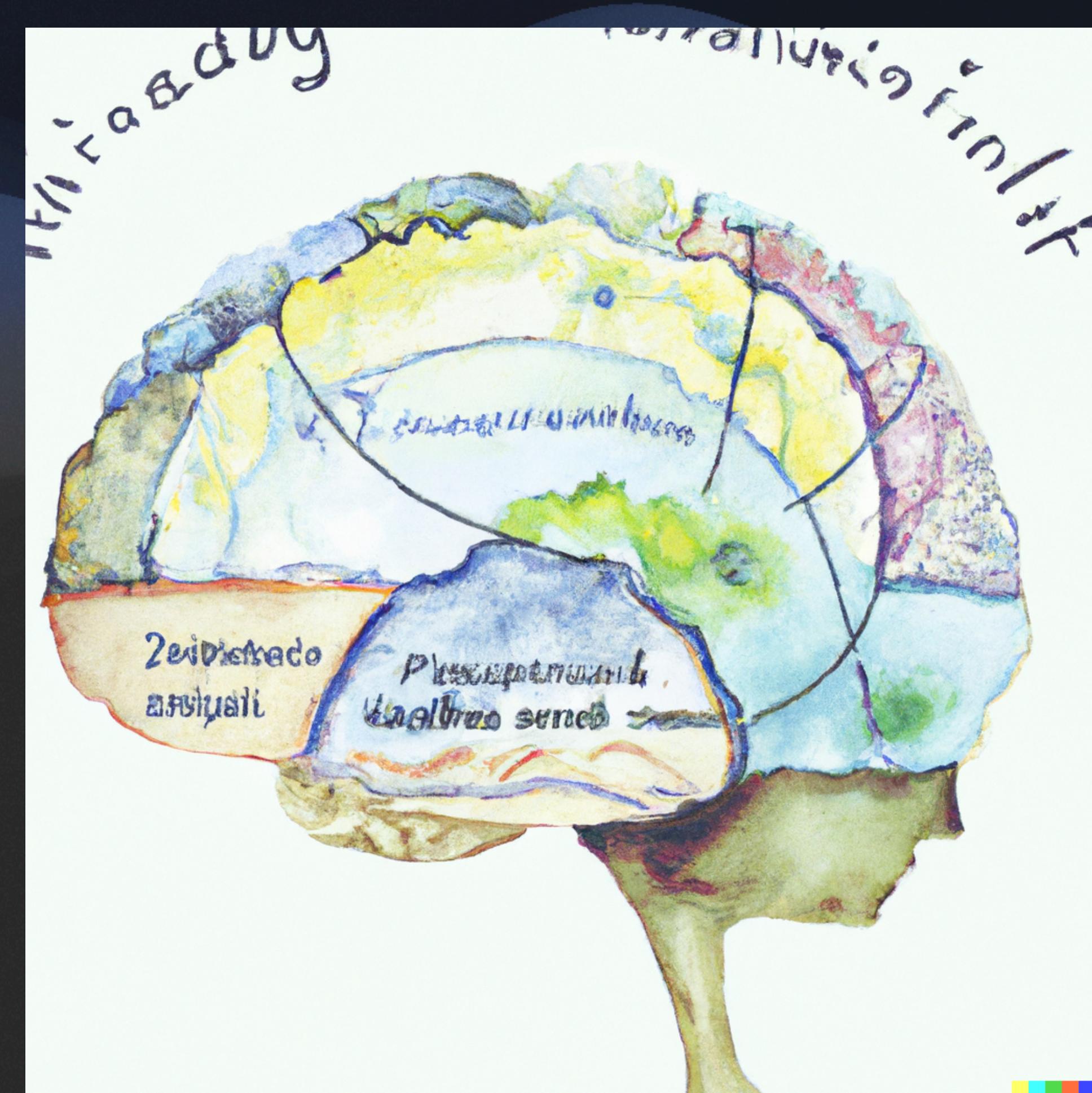
If Jordan believes there is beer in the fridge, then Jordan will get up and take a beer from the fridge if there is one.

...
- Dominant materialist position from the early 1900s - 1940s; championed by Gilbert Ryle (1900-1976)

Theory of Mind - A brief overview

Mind-Brain Identity

- **Mind-Brain (*type-type*) Identity theory** – a version of reductive materialism that claims the mind is identical to the brain; or otherwise put, mental properties are *type* identical to physical properties.
 - E.g., if I am in pain and someone else is in pain, then we share some physical property (presumably some neural configuration).
- Dominant position from the 1950s-1960s
- Championed by J.C.C Smart (1920-2012) and U.T. Place (1924-2000)



Theory of Mind - A brief overview

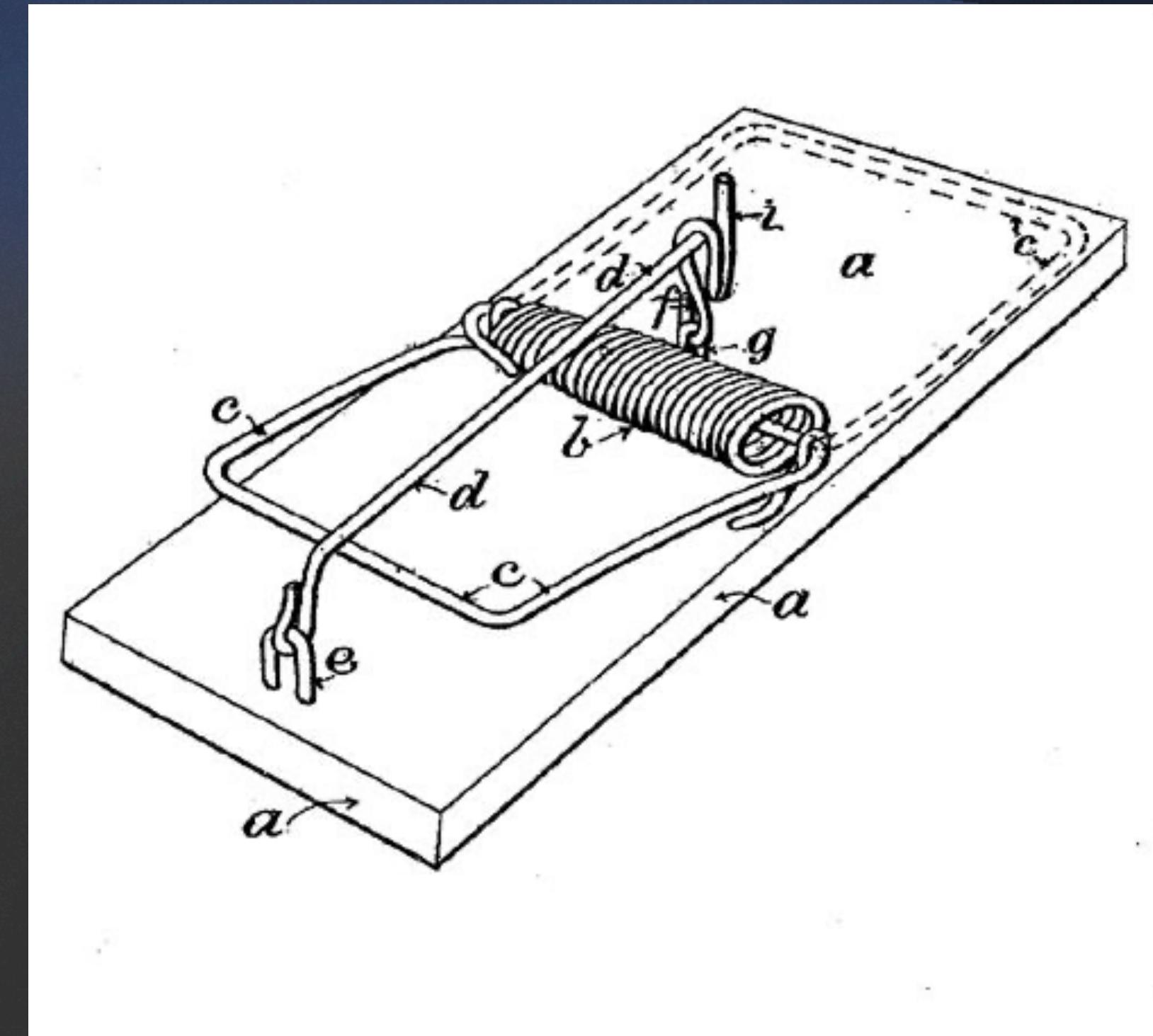
Functionalism

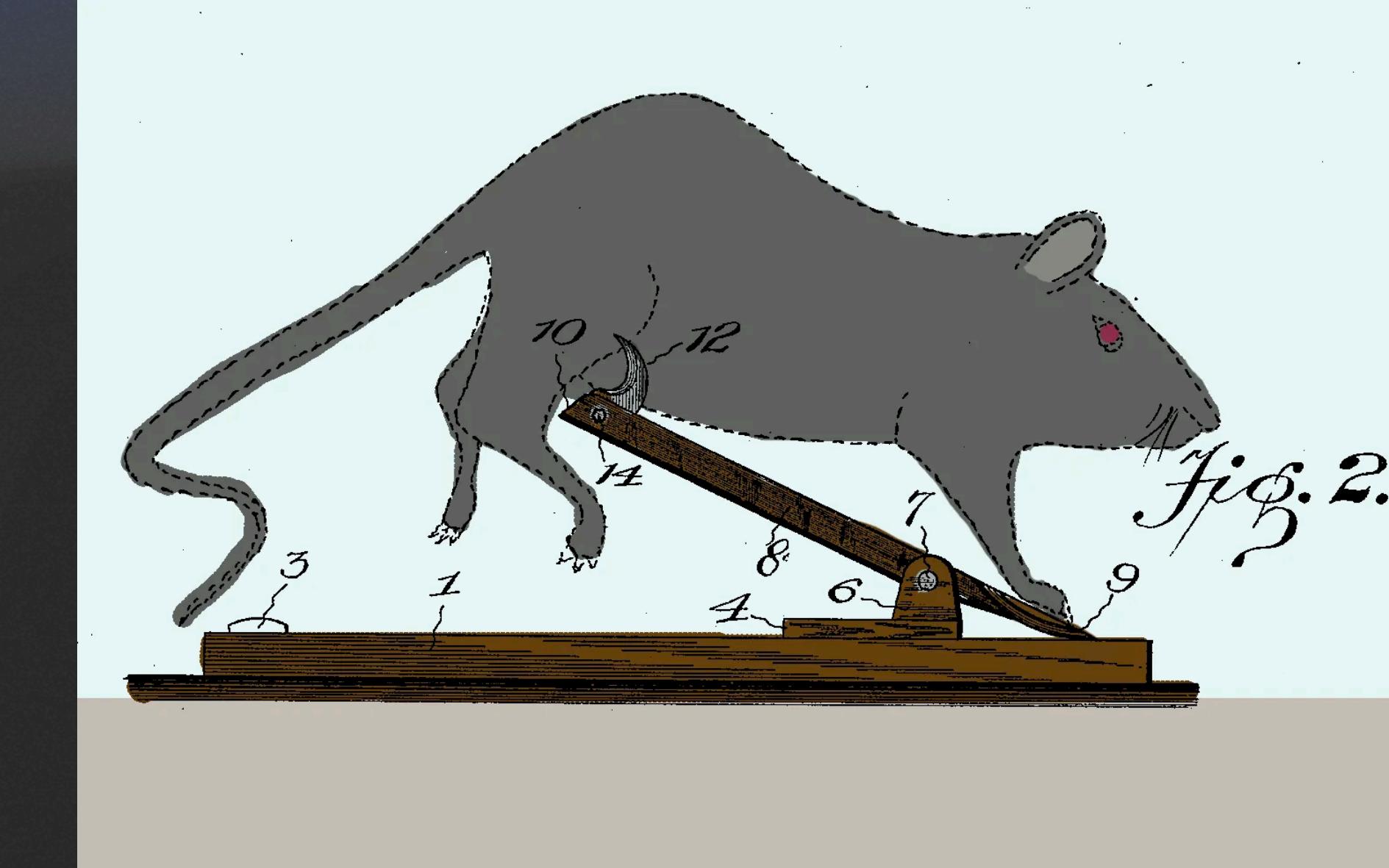
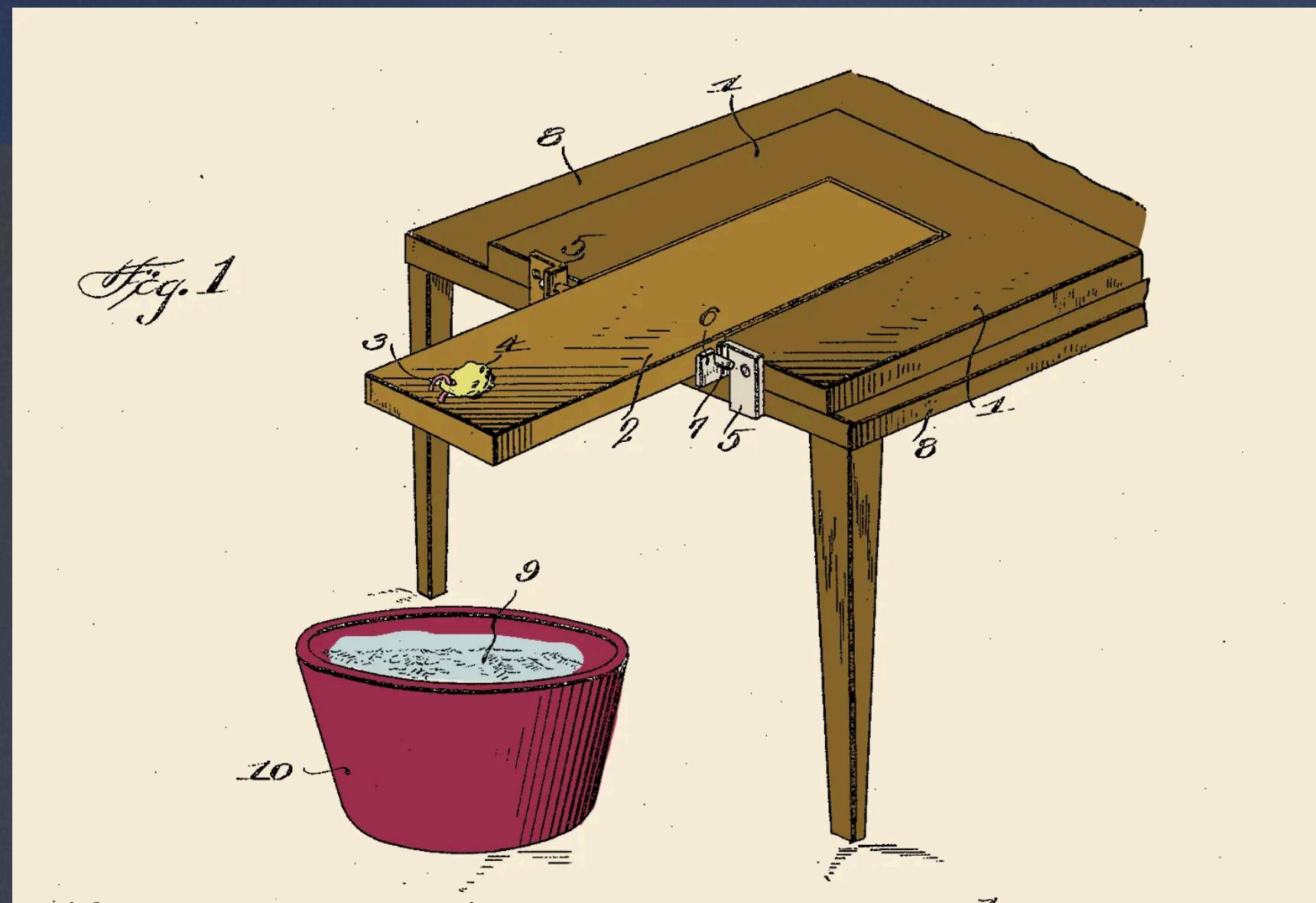
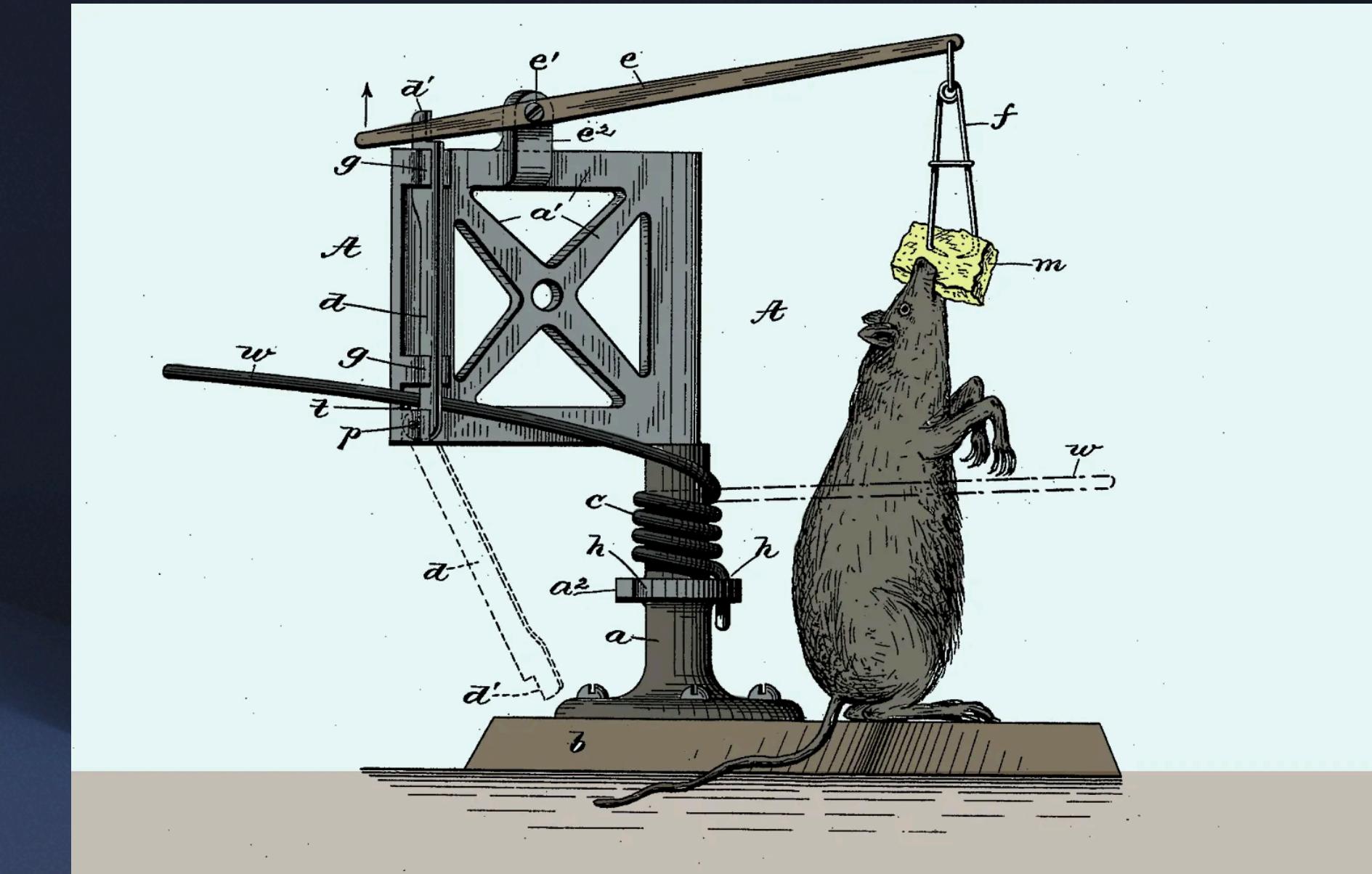
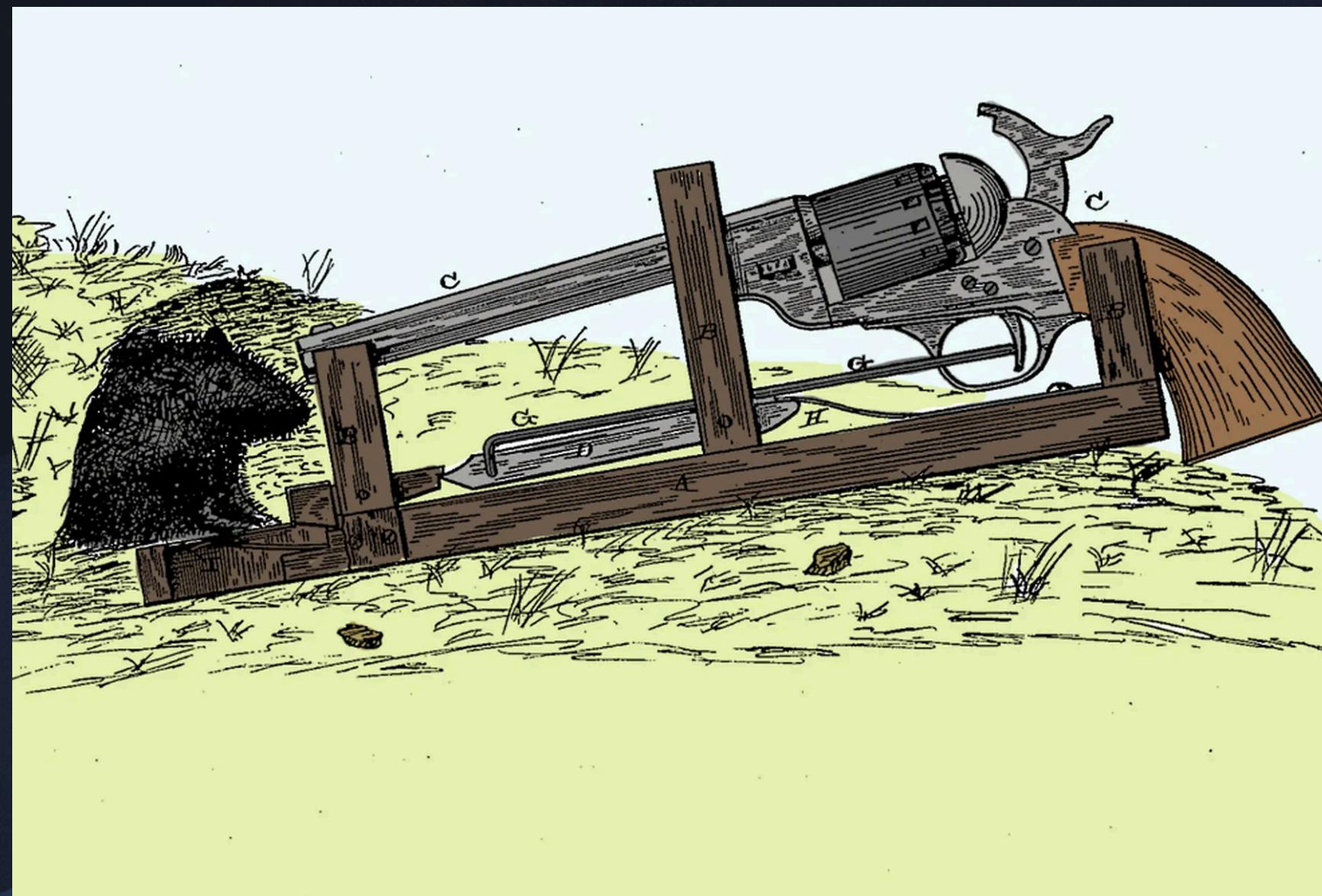
- Functionalism is often understood as a non-reductive materialist position. The computational theory of mind is a variety of functionalism.
- **Functionalism** – *any entity with the appropriate *functional* structure has a mind; otherwise put, having a mind is determined by an entity's structure being so arranged that it shares the same *functions* as those structures that account for minds (e.g., the structure of a human brain at the relevant level of description).*
- Different varieties of functionalism have been the dominant view in philosophy of mind from the 1970s until today; championed by Hilary Putnam (1926-2016), David Lewis (1941-2001), Jerry Fodor (1935-2017), and many others.

Theory of Mind - A brief overview

Functionalism

- Consider a mouse trap.





Theory of Mind - A brief overview

Functionalism

- In short, the functionalist is committed to the claim that minds ought to be ‘constructed’, in a certain sense, out of any materials that, when arranged appropriately, play the right sorts of roles.
 - In the same way that we can create a mouse trap out of many different materials as long as the device functions to capture mice.
- Regarding the **computational theory of mind (CTM)**, we can understand it as the functionalist view that *any* system with the appropriate *computational* structure will have a mind.
 - To be further explicated as we proceed.
 - This brings us to the development of computers and their place in the philosophy of mind.

Foundations of Computing

Historical Foundations

- Here is a brief documentary from Cambridge Educational that covers the history of computers from Babbage to (1791-1871) to the early 90s:
https://youtu.be/ApJSz_OrkiA
- Take note of how the materials used to construct computers have changed over time.

This is Samarth ghais food indexing

Favourite foods	least favourite foods	everyday foods
burger	mice	rice
Hot dog	armadillo	beans

Once upon a time, in the bustling city of Glimmeringville, there lived a wealthy and rotund young man named Rehaan Raha. Rehaan was born into a family that had amassed a vast fortune through their successful potato chip empire, ensuring his life was filled with opulence and indulgence from an early age. Despite his luxurious lifestyle, Rehaan's insatiable appetite and knack for attracting misfortune led to countless hilariously disastrous encounters.

Rehaan's tale began on a sunny morning when he woke up late, his plush bed engulfing him like a marshmallow. Realizing he had missed an important business meeting, he scrambled out of bed, crashing into a painting that came crashing down, narrowly missing his head. His alarm clock, startled by the commotion, decided to join the chaos by malfunctioning and blasting an ear-piercing siren. Disheveled and panicking, Rehaan tripped over his own slippers, sending him tumbling down the grand staircase, where he slid into his butler, Mr. Pompousbottom, who fell down with him.

Bruised but undeterred, Rehaan hopped into his sleek sports car, revved up the engine, and zoomed out of the mansion. However, his gluttonous tendencies got the better of him as he spotted a food truck on the way. Unable to resist, he parked the car haphazardly and rushed towards the aromatic delicacies. Just as he reached the front of the line, his trousers split open, exposing his polka-dotted boxer shorts to the astonished onlookers. Mortified, Rehaan decided it was best to make a hasty exit.

Determined to turn his day around, Rehaan visited a renowned tailor to mend his unfortunate wardrobe malfunction. Unbeknownst to him, the tailor, Mr. Stitchman, had a peculiar habit of sneezing at the most inopportune times. As Rehaan explained his predicament, Mr. Stitchman's nose tickled, causing a colossal sneeze that sprayed a rainbow of thread all over Rehaan's face, leaving him looking like a walking tapestry.

With his sartorial disaster remedied, Rehaan decided to seek solace in a local park. As he sat on a bench, enjoying the tranquility, a flock of pigeons descended upon him, mistaking him for a mobile feast. In a panic, he leaped up, flailing his arms, only to accidentally knock over an ice cream cart nearby. Ice cream flew in all directions, covering him from head to toe. The park-goers, initially amused by the spectacle, erupted into laughter, prompting Rehaan to make a swift exit.

Feeling downtrodden but determined to find joy, Rehaan turned to his favorite pastime: karaoke. He entered a popular karaoke bar, confident in his ability to dazzle the audience. However, as he took the stage and began his rendition of a classic love ballad, his voice cracked, causing a cacophony of ear-piercing shrieks. The audience, initially stunned, soon erupted into fits of uncontrollable laughter, leaving Rehaan standing on stage, his face crimson with embarrassment.

Dejected but not defeated, Rehaan retreated to his mansion, seeking refuge from the relentless stream of misfortune that seemed to follow him. As he closed the door behind him, a strong gust of wind swept through, knocking over a precariously balanced stack of antique vases. The domino effect began, resulting in a symphony of shattering glass that echoed throughout the mansion.

In that moment, Rehaan couldn't help but laugh. He realized that despite all the misadventures and mishaps that plagued him, he had managed to find humor in the chaos. He embraced the fact that life's misfortunes were inevitable and decided to view them as entertaining anecdotes rather than burdensome obstacles.

Rehaan gathered his shattered composure and invited his friends and family over for a grand gathering. The mansion was repaired, and the remnants of broken vases were repurposed into an eccentric art installation. The event became a celebration of laughter and mishaps, where guests shared their own stories of hilarious misfortune.

As the years passed, Rehaan's reputation as the "King of Comedy Mishaps" grew. His stories spread far and wide, and people from all walks of life eagerly awaited his next escapade. He embraced his role as a catalyst for laughter, bringing joy to others through his own mishaps.

Rehaan's life continued to be a whirlwind of amusing incidents. From mistaking a statue for a real person and having a lengthy conversation with it to inadvertently crashing into a synchronized swimming performance at a fancy gala, his adventures became legendary.

But amidst the laughter and chaos, Rehaan's heart remained kind and generous. He used his wealth to support charitable causes, often dedicating his misfortunes to raising awareness and funds for various organizations. His willingness to laugh at himself and help others made him a beloved figure in the city of Glimmeringville.

In the end, Rehaan Raha's life was a testament to the power of laughter and resilience. He taught everyone around him that misfortunes, no matter how embarrassing or outrageous, could be transformed into moments of joy and connection. And so, the legend of the rich, young, and hilariously unfortunate Rehaan Raha continued to inspire and amuse generations to come.

Vir Khanna

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SUMMARY

Accomplished Software Engineer with a proven ability in Machine Learning, Natural Language Processing, and efficient data management using Node.js and Python. Track record includes developing a sophisticated AI Chatbot at CK Birla Healthcare and a strategic price comparison tool at Zomato, both contributing to significant operational improvements. Renowned for enhancing cross-functional collaborations and driving project success. Eager to apply these skills to tackle complex problems and drive innovation in a forward-thinking environment.

EXPERIENCE

Machine Learning Engineer

CK Birla Group

July 2023 - September 2023, Gurugram, Haryana, India

- Orchestrated the design and deployment of an AI Chatbot using advanced Natural Language Processing (NLP) and Deep Learning models, significantly improving access to company information and reducing data retrieval time.
- Leveraged Reinforcement Learning for continuous AI Chatbot optimization, achieving a 30% increase in query handling efficiency.
- Championed Machine Learning Ops (MLOps) practices, seamlessly integrating and scaling AI models across the organization's tech stack.
- Conducted AI workshops and led a cross-functional team, fostering a culture of tech-savviness and knowledge sharing within the company.

Software Developer intern

Zomato

July 2022 - August 2022

- Developed an innovative price comparison tool that aggregates menu prices across major Indian food delivery platforms, enhancing Zomato's market competitiveness.
- Employed advanced web scraping techniques for large-scale data extraction, enhancing the tool's accuracy and reliability.
- Optimized tool performance with efficient data structures and algorithms, significantly improving data processing speed and accuracy.
- Seamlessly integrated this tool into Zomato's existing system architecture, increasing the strategic efficiency of the Menu and Catalog Team.

Software Developer Intern

MakeMyTrip

June 2019 - August 2019

- Spearheaded the successful migration of user data to the 'My Orders' page's ACME tab, enhancing user experience and increasing customer data accessibility.
- Employed Node.js and Python, along with various libraries, to streamline data transfer processes, resulting in improved performance and operational efficiency.
- Crafted sophisticated data pipelines and APIs, fostering secure, accurate, and timely data flow between different components of the system.
- Collaborated with cross-functional teams, ensuring the seamless integration of the new data migration solution with existing MakeMyTrip systems, bolstering the company's overall operational workflow.

Founder and Developer

EdSync

April 2020 - September 2021, New Delhi, Delhi, India

- Started a free online peer tutoring service where high school seniors could teach middle school students on challenging topics before their exams.
- Built our website using WordPress, HTML, CSS and PHP to display content, perform user registration and authentication.
- Integrated cloud-based scheduling system on Calendly to conduct virtual classes on Zoom and Google Meets.
- Tutored 100+ students in the first month of operations with a team of 20+ teachers.

Producer & Performer

Stand-up Comedy Club @ UCDavis (StUCC)

January 2023 - Present, Davis, California, USA

- I also do Stand-up Comedy!

Watch my bits - youtube.com/@vir_khanna

EDUCATION

Computer Science

University of California • US, California, Davis • 2025 • 3.8

COURSEWORK

Algorithms

Data Structures

Operating Systems

Theory Of Computation

Discrete Mathematics

Object-Oriented Programming