

rawlab.xyz

rawlab is a research-driven artistic duo exploring intersections of art and technology. The duo interrogates the evolving relationship between language, human cognition, and emergent technologies. Their practice operates as both critique and experiment, unveiling the broader socio-cultural implications of networked environments, prompting reflection on the entanglements between technological mediation and contemporary experience.

rawlab's practice situates interactivity at the core of their artistic inquiry, transforming audiences from passive observers into active participants within technologically mediated environments. Their installations function as both critique and experiment, interrogating the shifting dynamics between language, cognition, and emergent technologies. By emphasizing the role of the visitor in activating the work, they reinforce the idea that meaning is co-constructed through interaction.

portfolio website
www.rawlab.xyz

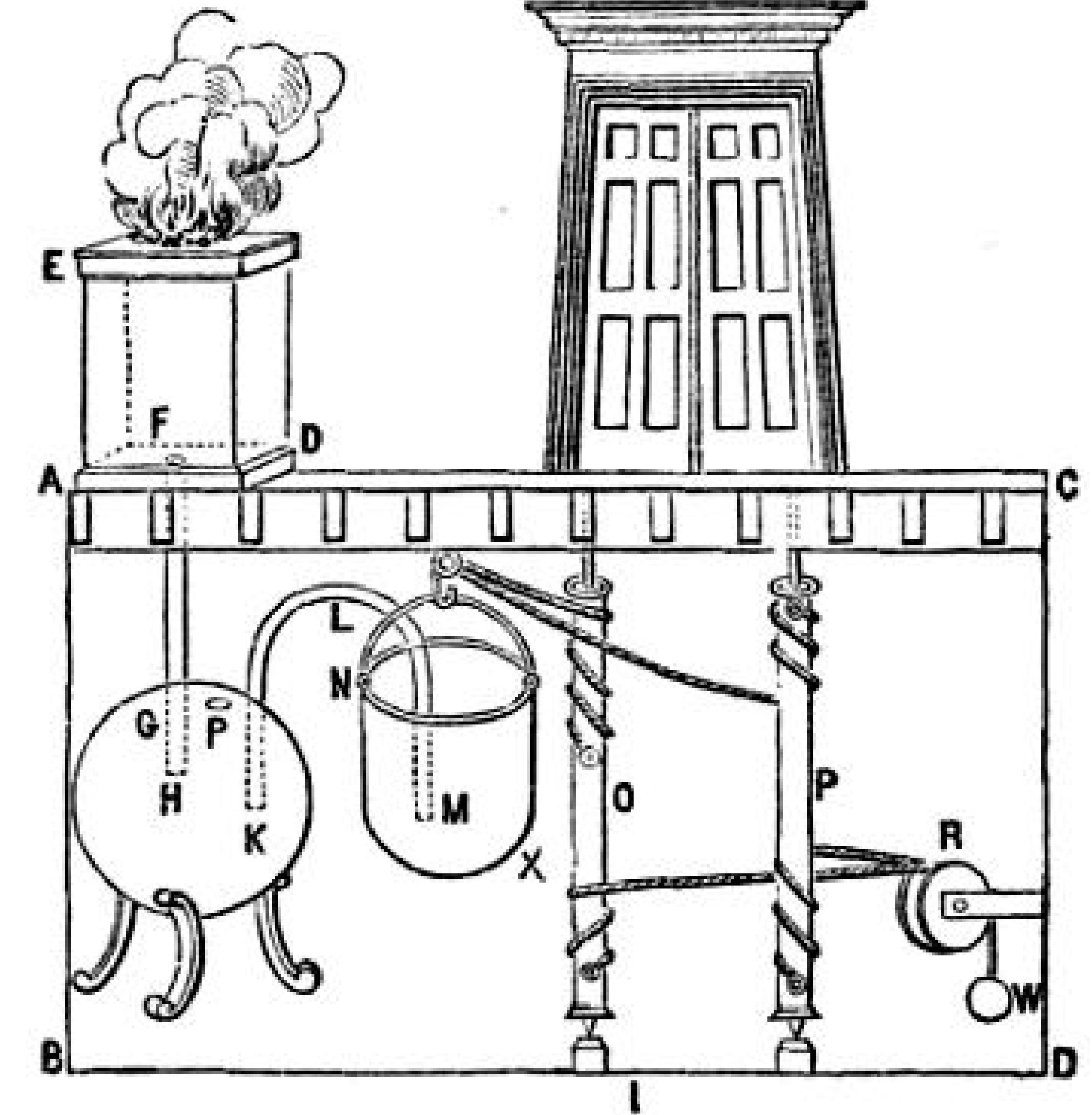
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We shape our tools and, thereafter, our tools shape us.
– John Culkin

Sacred technology



AUTOMATON - TEMPLE DOORS

Diagram of the automaton machinery used to open (as though by magical agency) the doors of a temple. Hot air from fire forces water into a bucket, which in turns pulls at the ropes. After the description given by Hero of Alexandria. c. 65AD

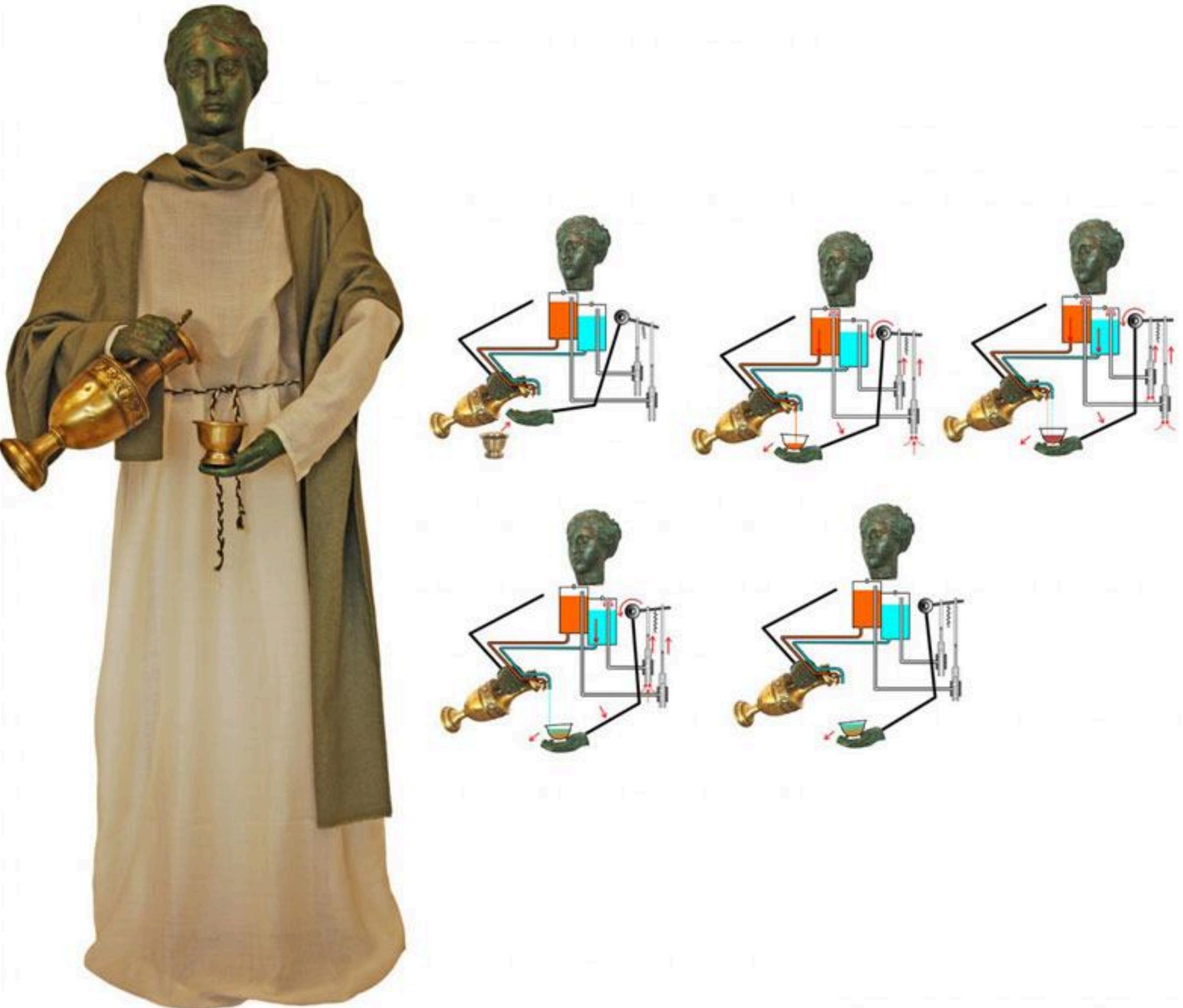
Automata - self operating machines

The impulse for creating automata is not originally driven by practical needs. It comes from the mythical desire to understand some of the deepest mechanisms at the origin of life and cosmological events, a desire that stands at the origin of major developments in mechanical science and in technology, and especially those at the origin of modern robotics.

To qualify as an automaton, an artificial being does not need to be useful; it does not even need to move, or to do anything: it just has to be able to provide a convincing enough illusion of life.

Automata during the Hellenistic period

third century BC



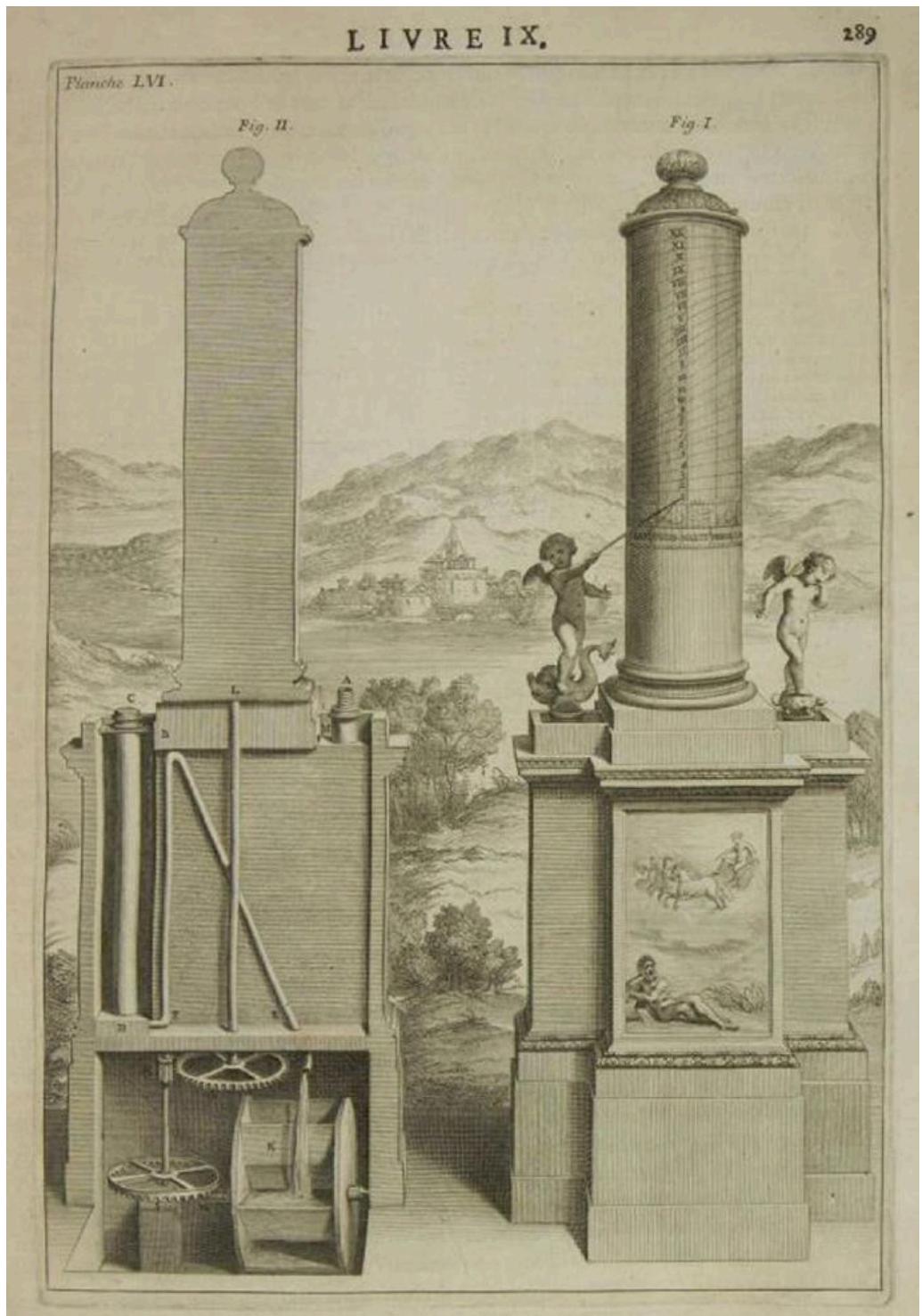
The automata in the Hellenistic world were intended as tools, toys, religious spectacles, or prototypes for demonstrating basic scientific principles.

Philon of Byzantium lived around the third century B.C. and invented an automated waitress that was serving wine and water, and that is generally considered as the first real humanoid robot in history.

Featuring a multitude of springs, pipes and tubes, and utilising air pressures, the result was a life-like maid who could automatically pour wine into a cup which had been placed in its hand by a visitor. The robot was even capable of mixing water into the drink as required.

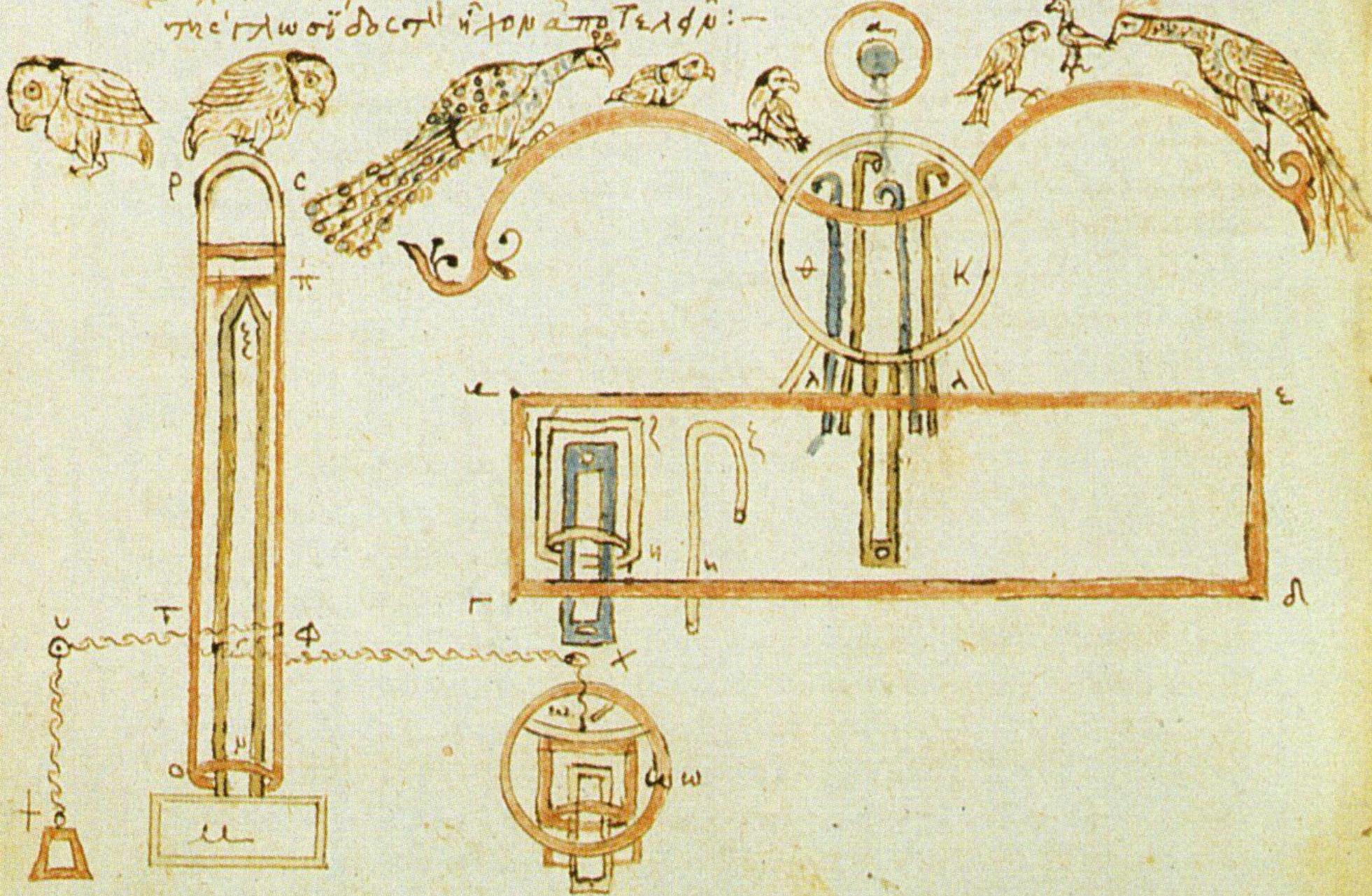
Automata during the Hellenistic period

third century BC



Heron also designed a large animated sculpture of Dionysus in which water flowing from a reservoir to another triggered a sequence of actions: pouring "wine" (red-coloured water) from Dionysus' glass; pouring "milk" (white-coloured water) from his spear; rotating Dionysus central statue; rotating the statue of an angel over that of Dionysus; and finally pouring again wine and milk from opposite outputs.

Τακείκημον οὐ ταπειροῦ τοιούτοις αὐτοῖς. Καπάσιτον εργάζεται πόλιν
φωνας. Λεγούσαντι μάνιον γένετο, διαπομπαπλοίς γίνονται στο
πάνερεν μέντον. Ο τάρπηστος γένεται από μηνατωτερην περιών
ο καλός, απέγινε πάπα τού ποτεμήναρχος. Εσύντεκτονοι ποτέ
του ἀνθράκα, ο τηγανός πίτας φέρει τον τεκνώδωντα τον ποτέ
τερψινην πατέραν μερέσοντος, σημειώνεις οι γάτηστήν
Επύρομφους υγρούς καθιβόμενοντας την παιδιάνθρακα, σια
της πλωοΐδοστην ητοναποτελεῖ:-



Automata in the Byzantine empire



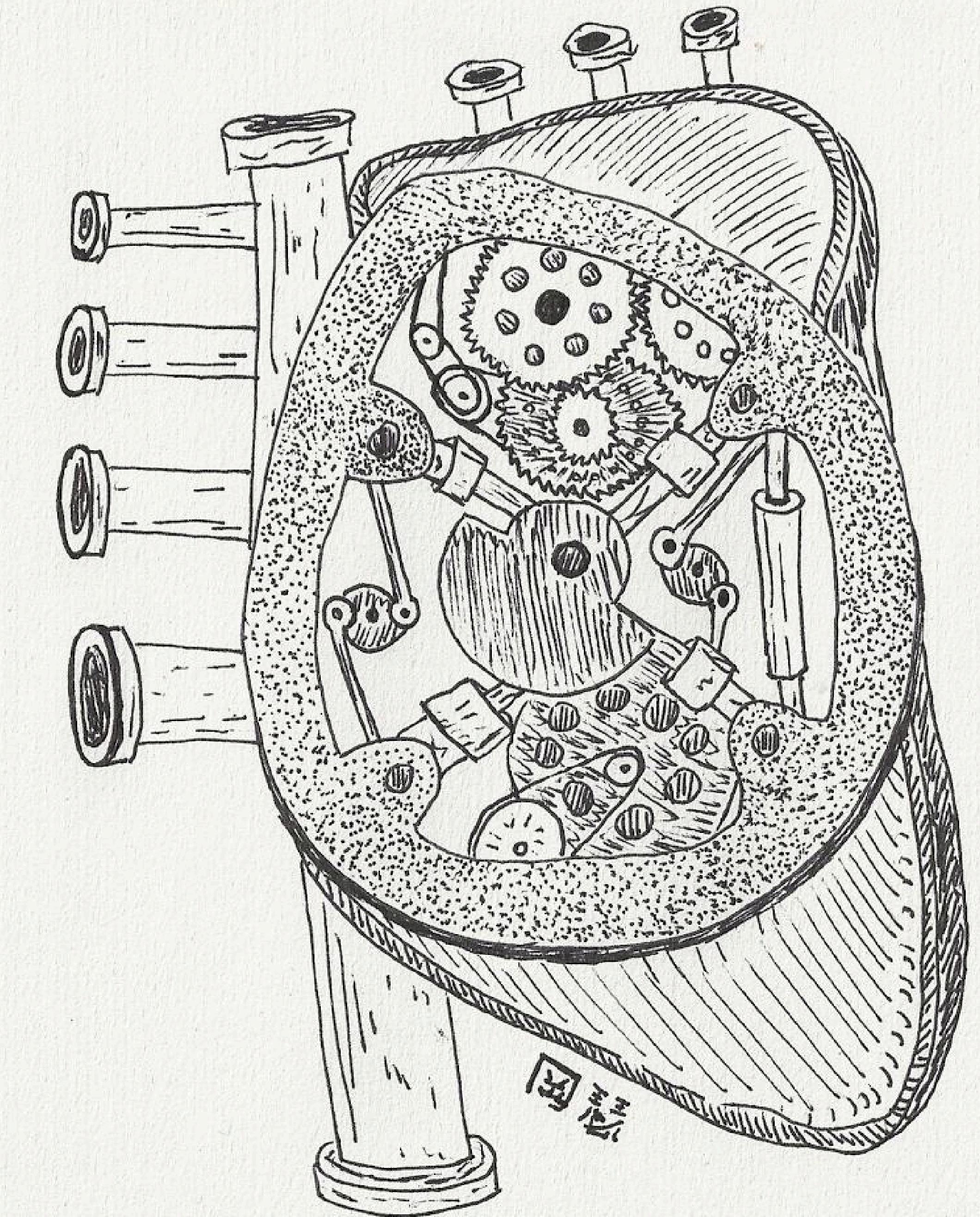
Walking into the throne room of the palace of Constantine VII, visitors were treated to an elaborate special-effects spectacle. First, they passed a golden tree, with gilt leaves fluttering and branches bedecked with twittering golden birds. Next, they came to the throne, framed by two gilded lions, their tails thumping the ground. The lions opened their mouths and roared, as if sounding their approval for the emperor's rule. The emperor's throne began to rise off the ground, soaring to the ceiling of the hall, where he towered over his astonished visitors.

The Byzantines called this device "the throne of Solomon," and its features were meant to evoke the mythic might of King Solomon, who ruled with the will of the Divine, commanding both natural and supernatural forces. This is a common thread in the history of automata: Although automatic devices are marvels of technology, in practice they are often used to evoke the miraculous.

Automata during the Zhou Dynasty



. Sometime around 1023 to 957 BC, Yan Shi presented a marvelous invention before the fifth king of the Chinese Zhou Dynasty, King Mu. Yan Shi had created a life-sized automaton which was able to move and perform several impressive functions. The automation could move in a like-like manner and could sing.

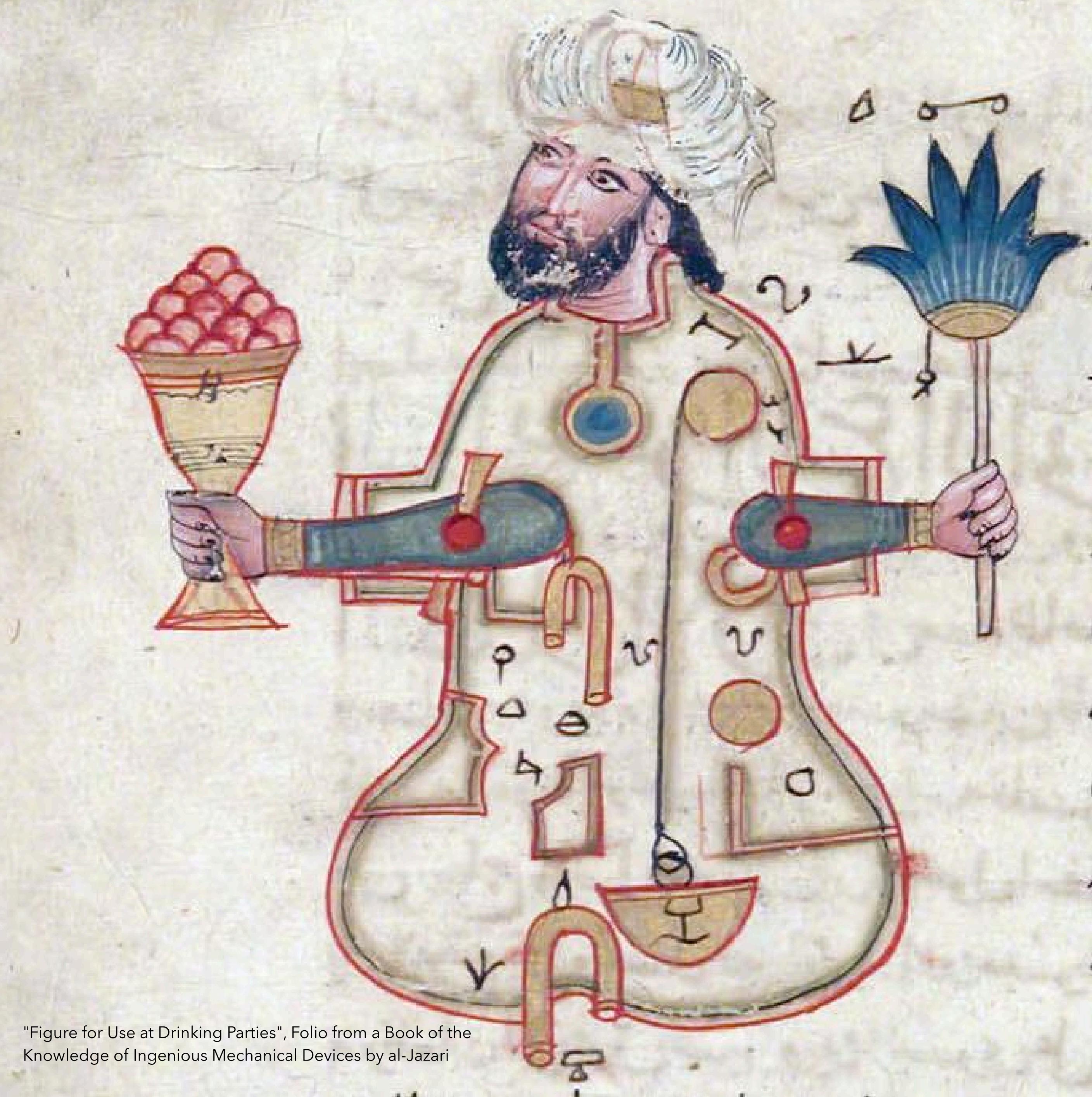


Automata the medieval Islamic world.

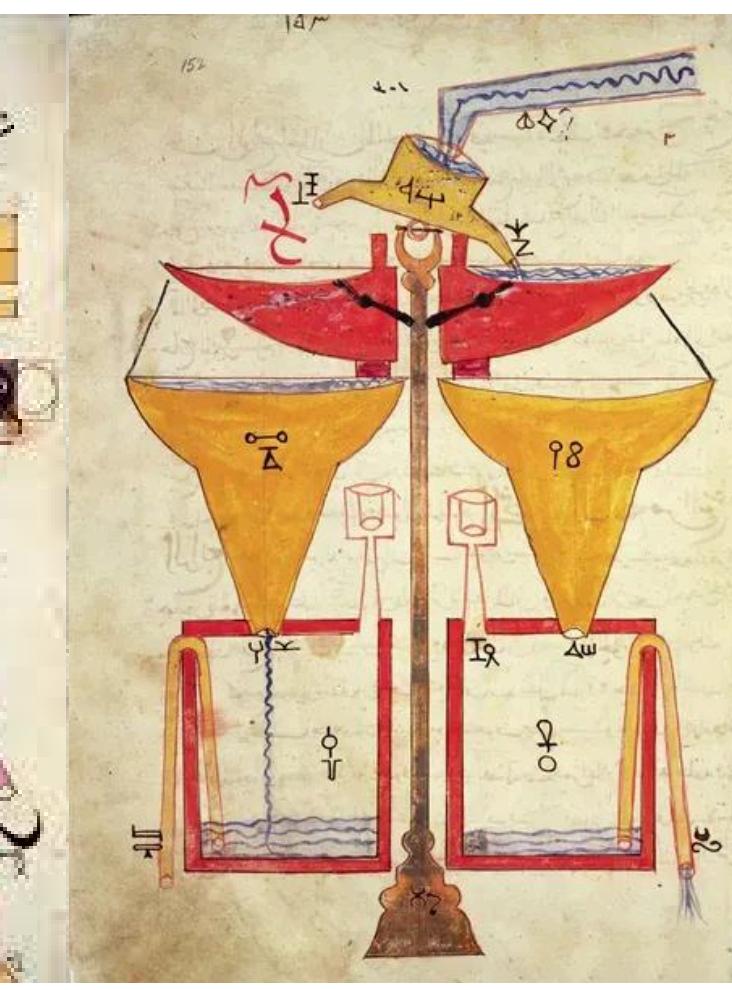
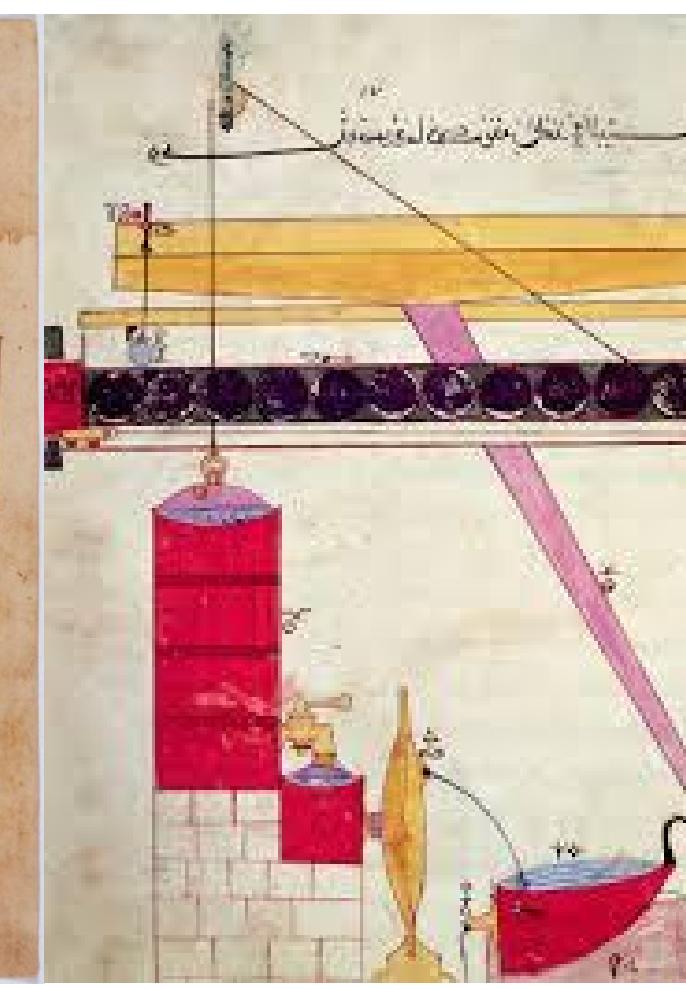
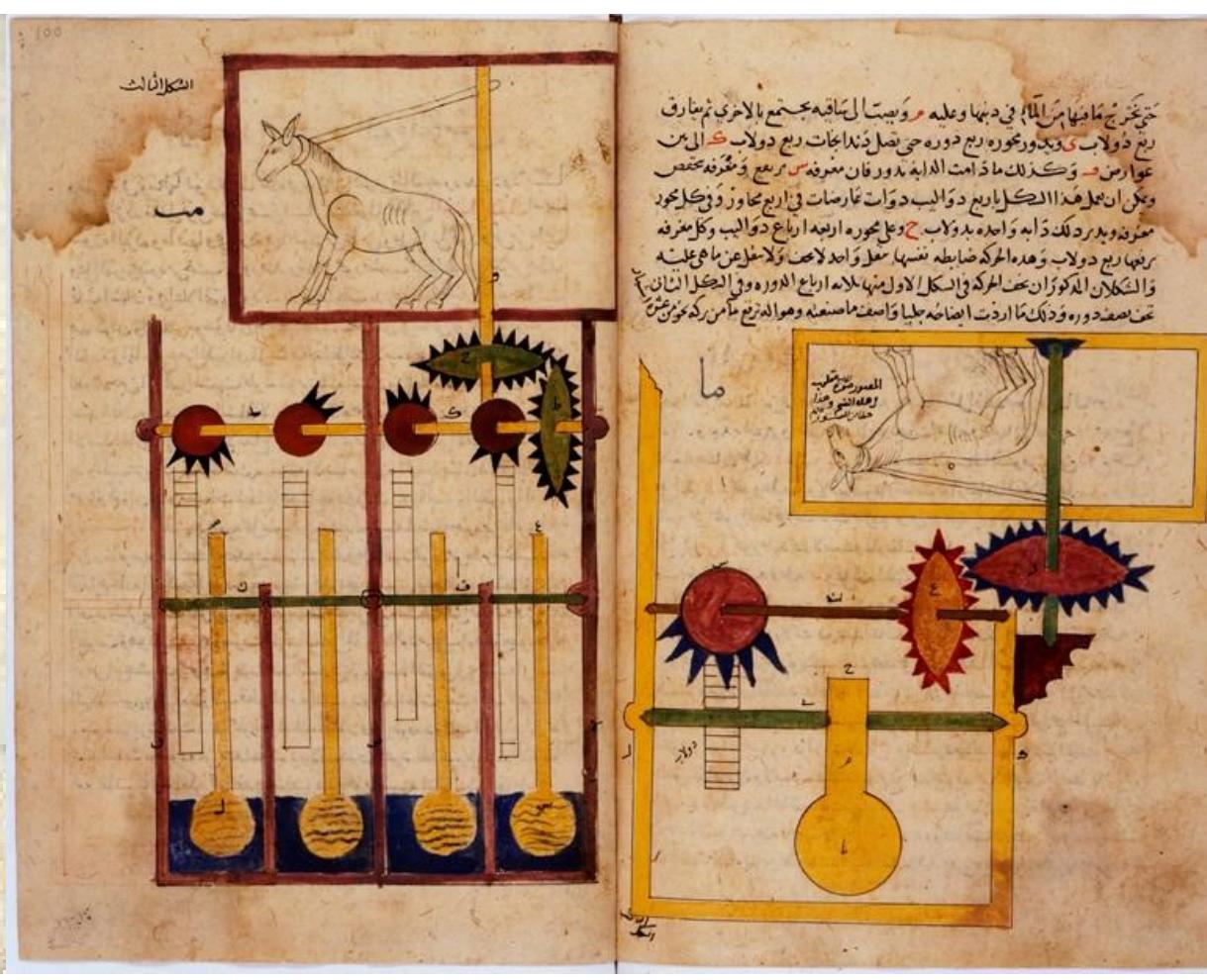
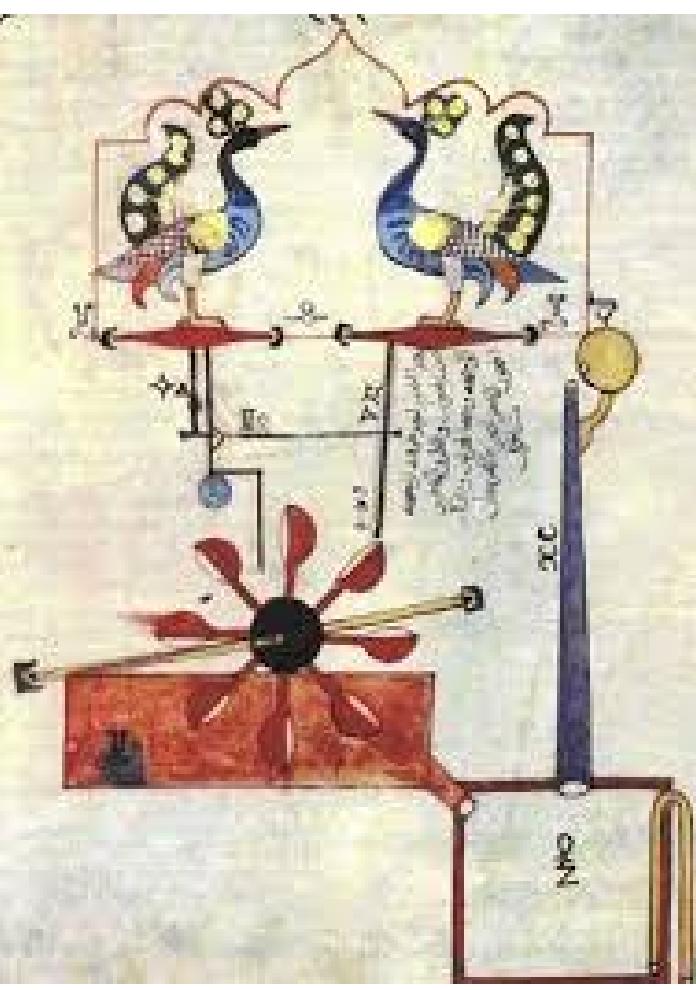
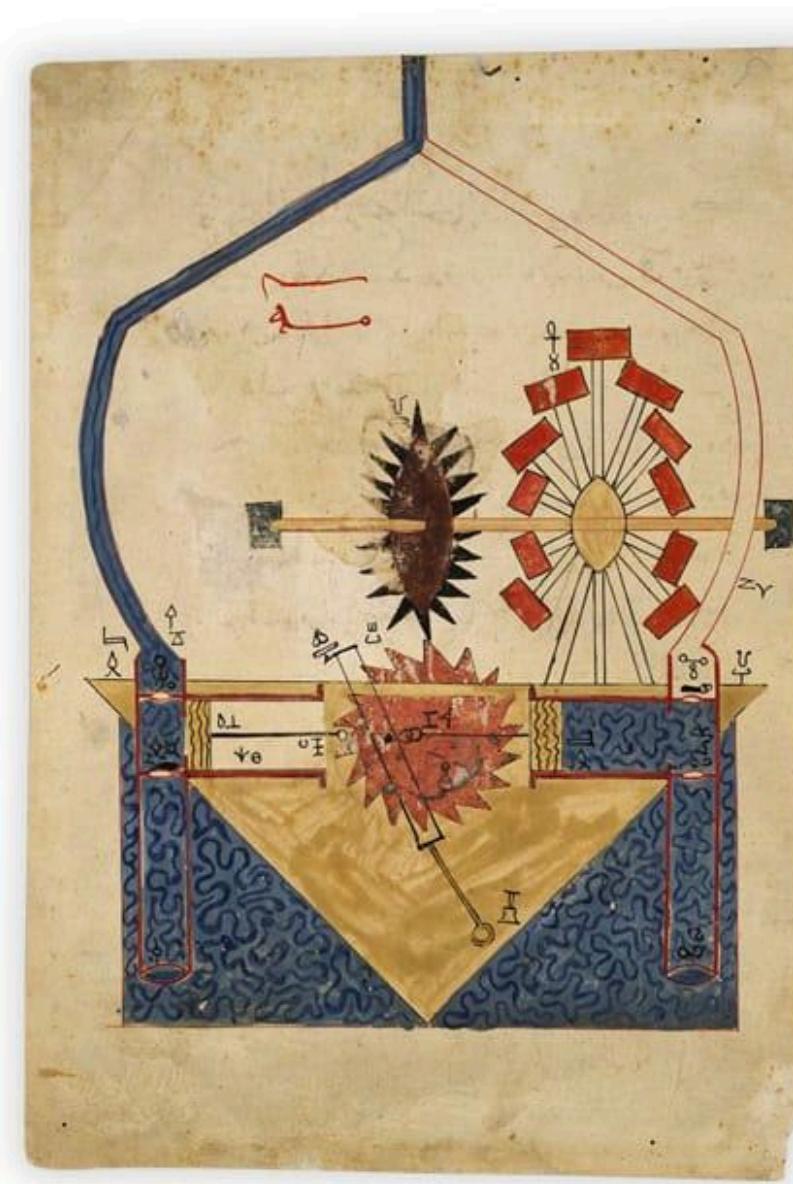
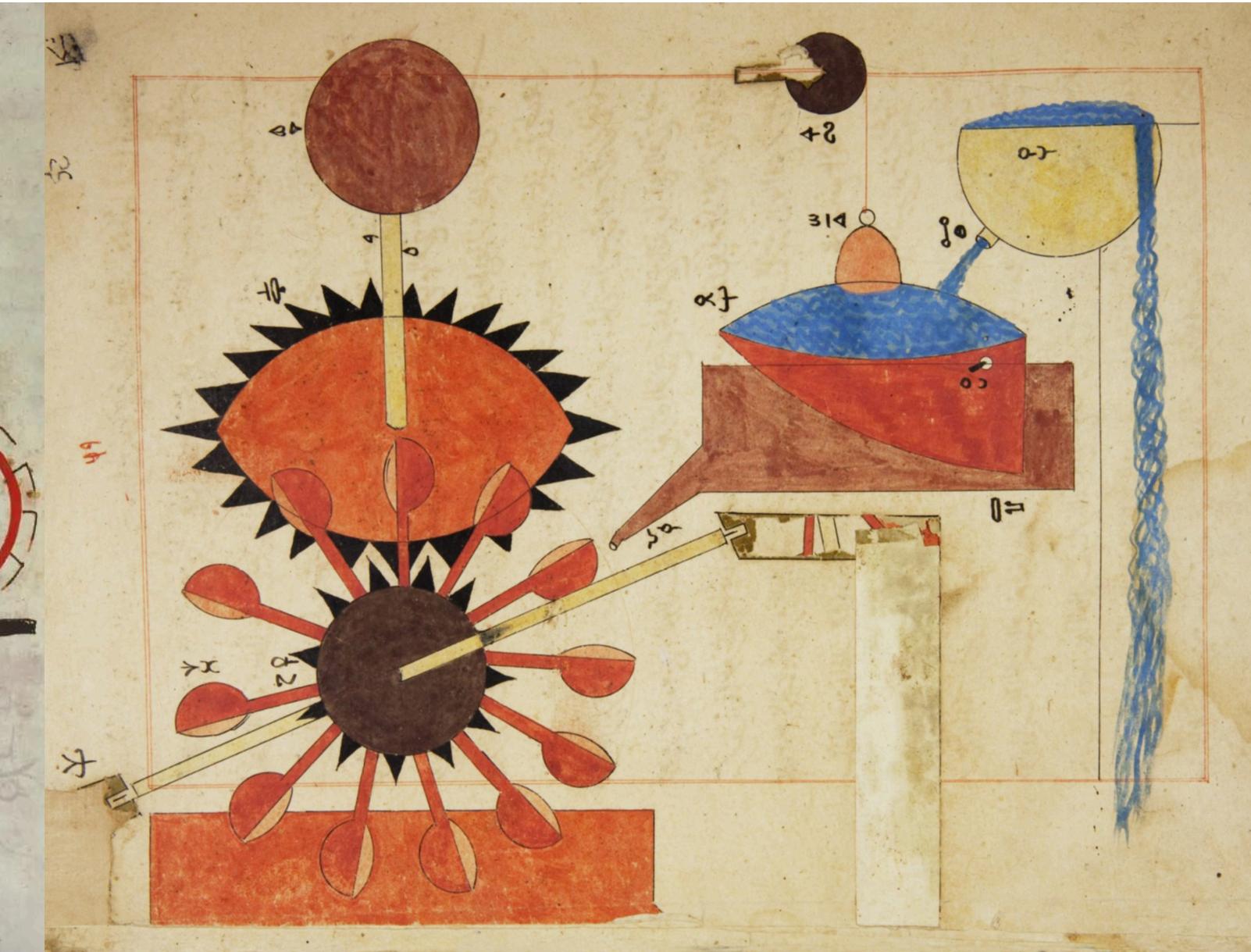
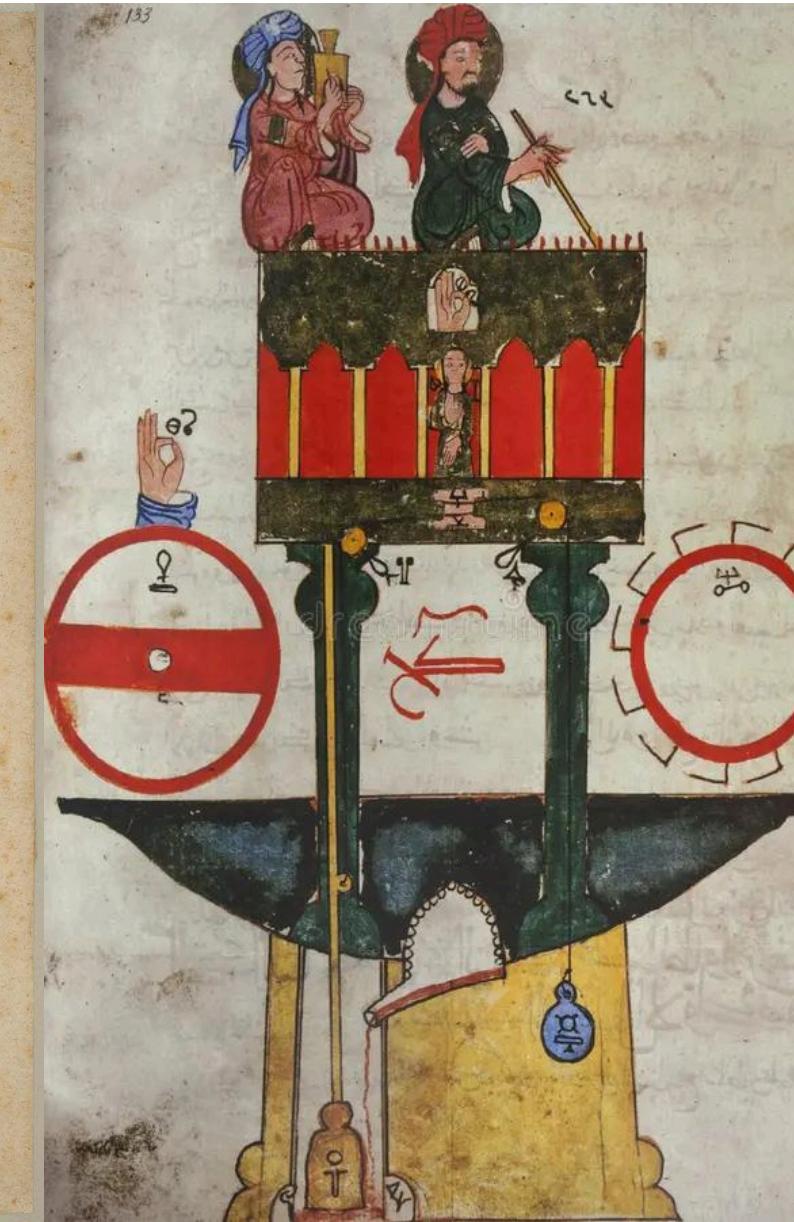
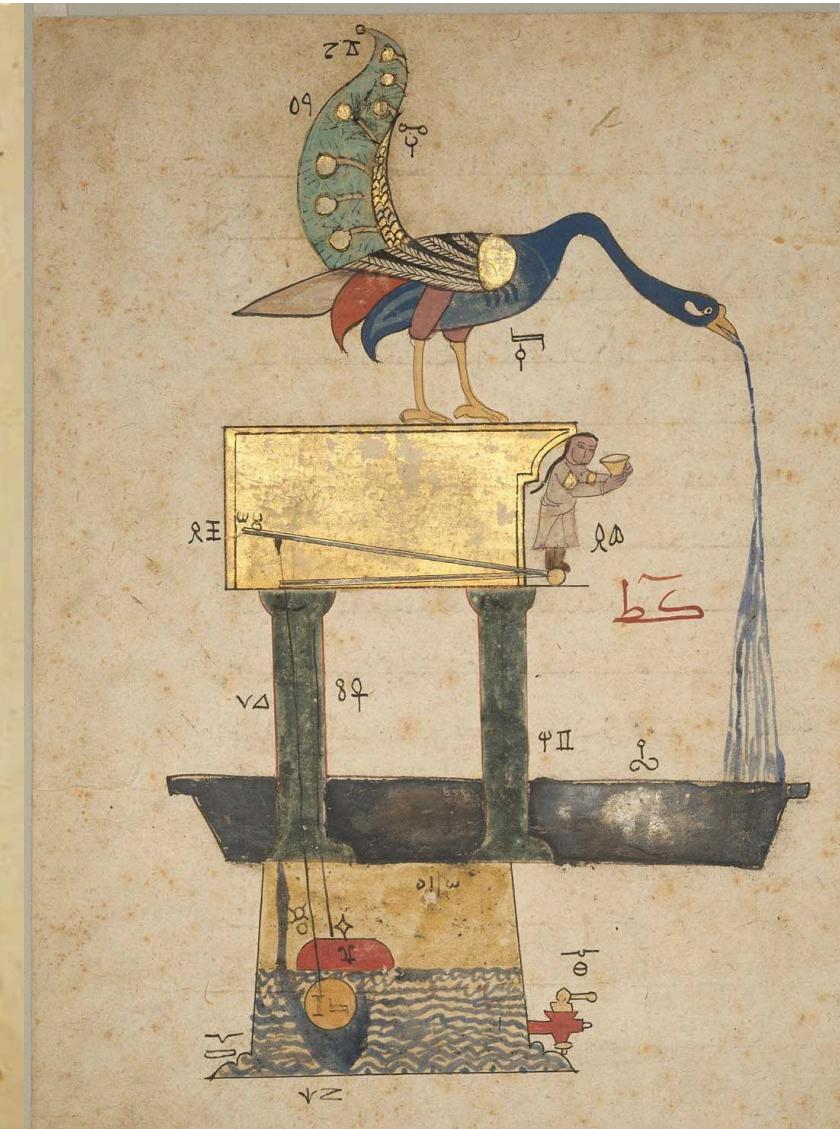
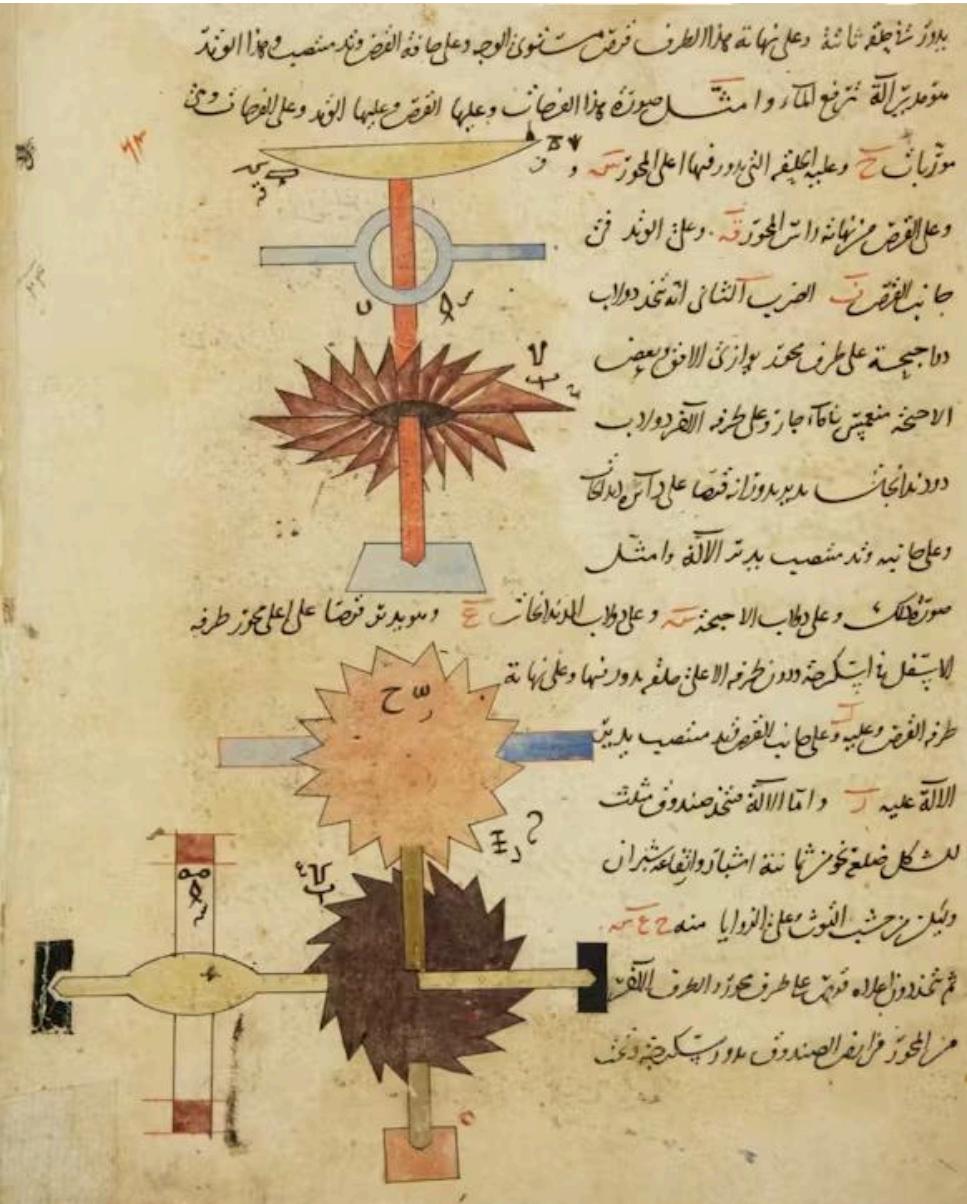


Al-Jazari compiled a catalog of his inventions in 1206, considered one of the most important mechanical engineering texts of the medieval Islamic world. His "Book of Knowledge of Ingenious Mechanical Devices", devised for both educational and entertainment purposes, to the Sultan. In this singularly important work, he described contemporary labor-saving devices and unusual clocks, including some of his own designs.

It includes detailed descriptions of automata, trick vessels, and devices made for both practical and entertaining purposes.. Al-Jazari's "peacock fountain" was a sophisticated hand washing device featuring humanoid automata which offer soap and towels.



"Figure for Use at Drinking Parties", Folio from a Book of the Knowledge of Ingenious Mechanical Devices by al-Jazari



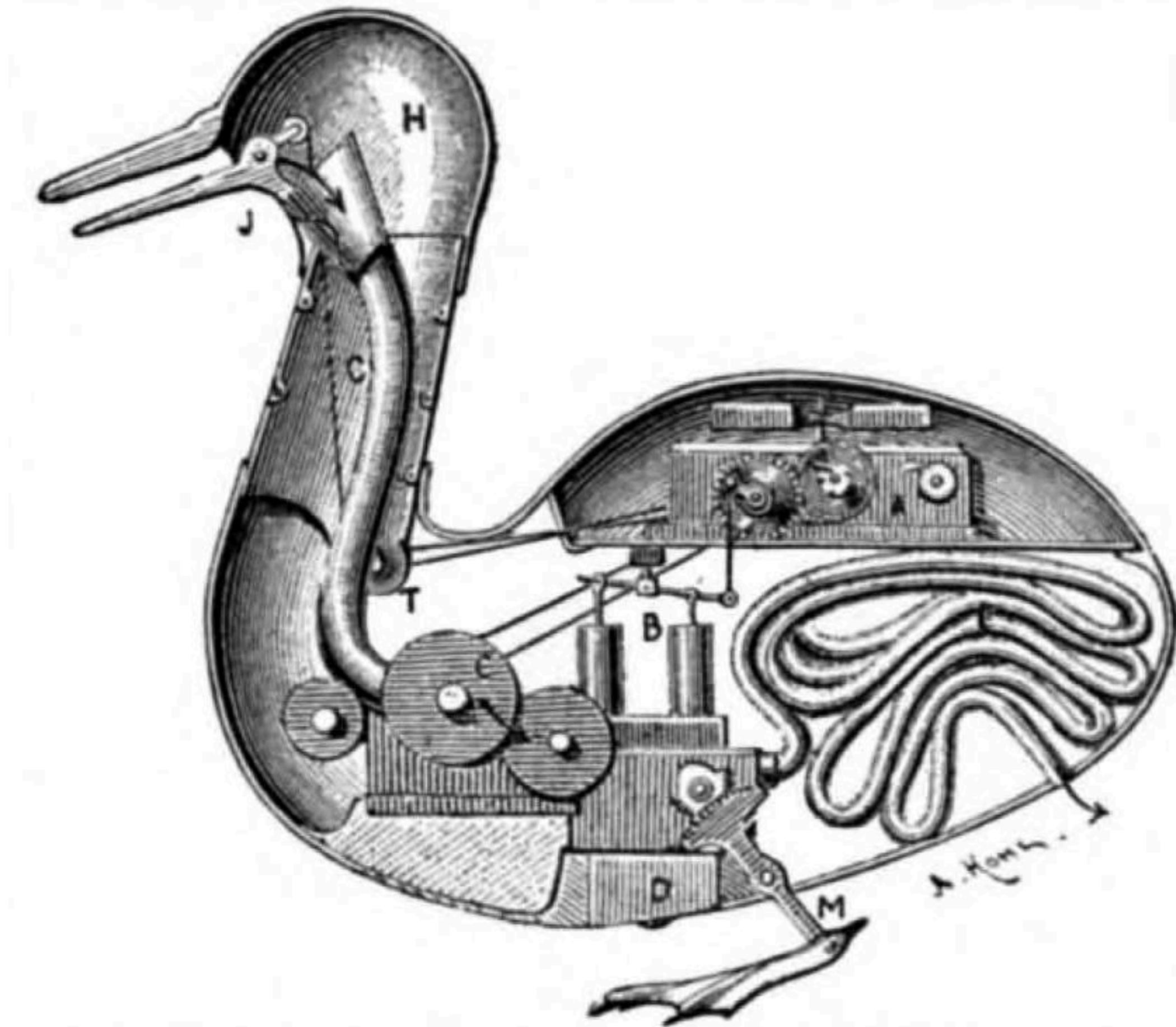
Automata through the Renaissance period

In religious settings, robotic monks were popular for display, alongside bleeding models of Jesus and roaring depictions of Satan. A surviving example of the Renaissance robotic monk, commissioned by King Philip II of Spain, used a clockwork mechanism to pray, walk, move its lips, lift objects, and beat its chest. The Catholic Church widely commissioned clocks that featured advanced automata playing out Biblical scenes.



Automata through the the Age of the Enlightenment

Around this time, the Frenchman Jacques de Vaucanson created "The Digesting Duck" (below) among other famous historical Automata. The Duck was particularly ingenious and complex, this copper mechanical beast being able to eat and then fully digest & excrete its food, as well as flap its wings and quack. Indeed each of its wings featured over four hundred moving parts. The machine was so complex that, aside from all the tubing and pipes, de Vaucanson had to implement a "chemical laboratory" for the purposes of food decomposition!



INTERIOR OF VAUCANSON'S AUTOMATIC DUCK.

A, clockwork; **B**, pump; **C**, mill for grinding grain; **F**, intestinal tube;
J, bill; **H**, head; **M**, feet.

Automata through the the Age of the Enlightenment

Three of the most famous pieces of Automata arising from this time came from Pierre Jaquet-Droz. A Swiss-born watchmaker of the late eighteenth century, Jacquet-Droz was a brilliant mathematician, and with the help of his son and partner, created three mechanical dolls that still exist and amaze people to this day- "The Musician", "The Draughtsman" and "The Writer". The latter (left) dips its pen in ink and can write up to forty different letters, and is considered to be the most complex of the collection. The letters can be changed according to the user's wishes and the machine features more than 6,000 parts in total.

"The Draughtsman", depicting a child, can draw four different pictures, including a portrait of King Louis XV, whilst "The Musician" plays the organ, pressing the keys of the instrument while her head moves and her chest can be seen to rise and fall with her breath. She even bows at the end of each performance.



Useless machines

Bruno Munari

The Italian artist Bruno Munari began building "useless machines" (macchine inutili) in the 1930s. He was a "third generation" Futurist and did not share the first generation's boundless enthusiasm for technology but sought to counter the threats of a world under machine rule by building machines that were artistic and unproductive.



Useless machine

Marvin Minsky

Invented by MIT professor and artificial intelligence pioneer Marvin Minsky, while he was a graduate student at Bell Labs in 1952.

The version of the useless machine that became famous in information theory (basically a box with a simple switch which, when turned "on", causes a hand or lever to appear from inside the box that switches the machine "off" before disappearing inside the box again).



Once upon a time there was an entity named Aaron'

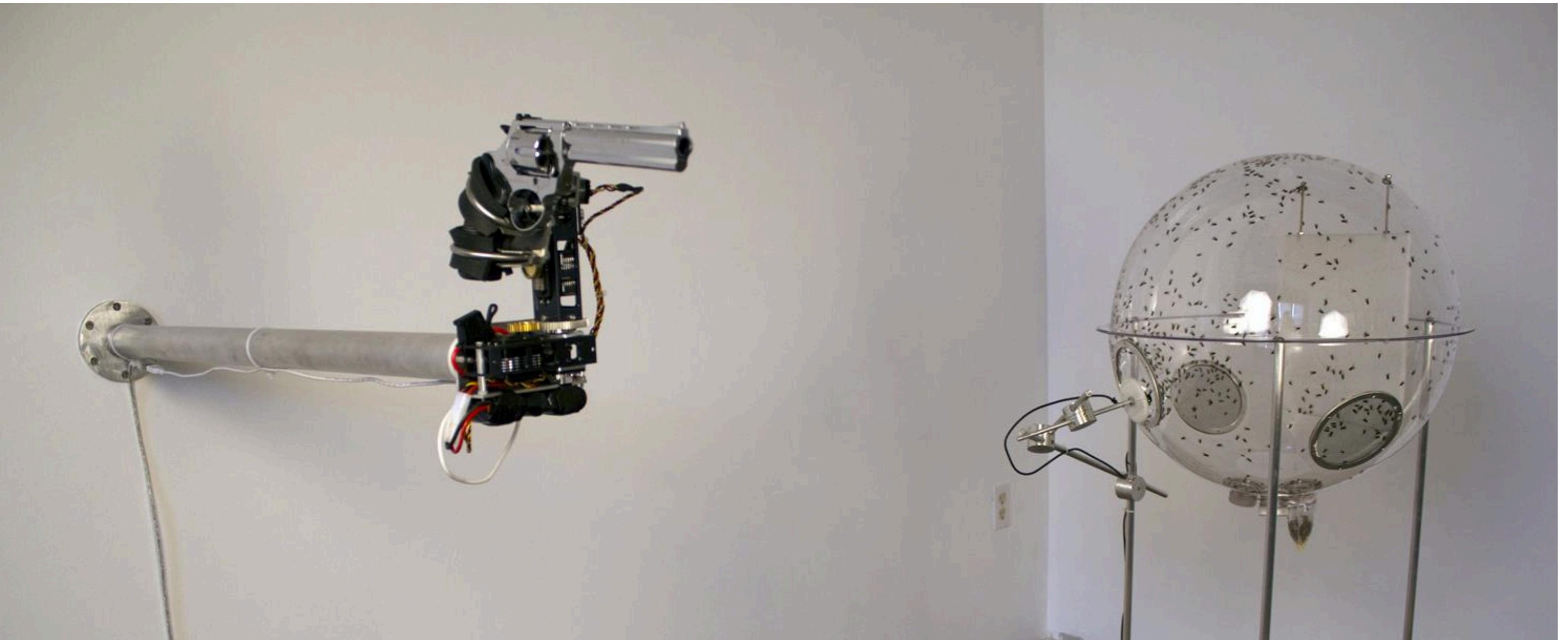
Harold Cohen

Harold Cohen (1928 – 2016) explored AI and art for nearly 50 years before we saw the rising popularity of these new machine learning tools. In those five decades, Cohen worked on a single program called Aaron that involved teaching a robot to create drawings. Aaron's education took a similar path to that of humans, evolving from simple pictographic shapes and symbols to more figurative imagery, and finally into full-colour images



Fly revolver

David Bowen



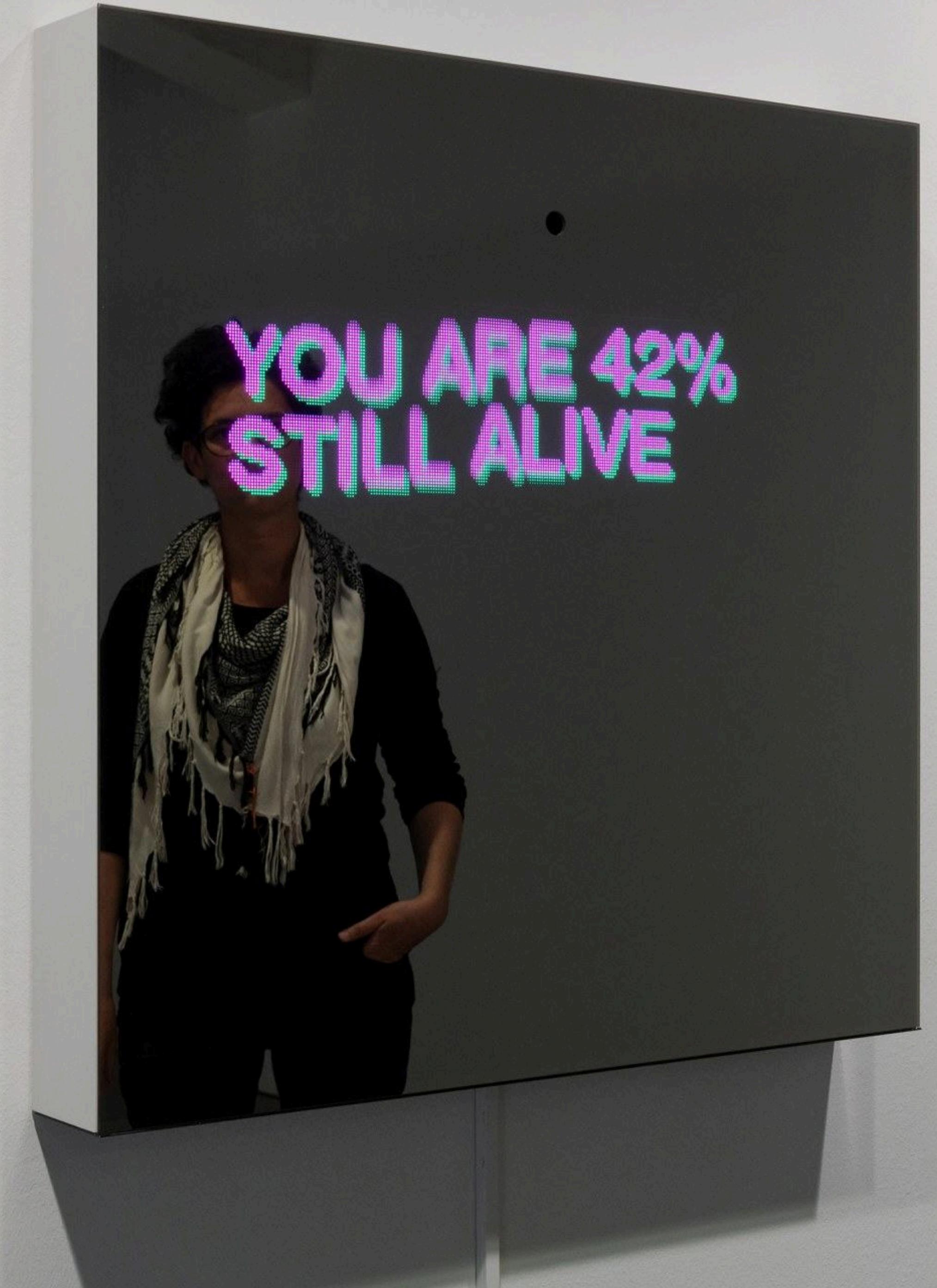
Based on the activities of a collection of houseflies, this device controls a revolver. The flies live inside an acrylic sphere with a target backdrop. As the flies move and interact inside their home they fly in front of and land on the target. These movements are collected via video. The movements are processed with custom software and output to a robotic device that aims the revolver in real-time based on the flies' relative location on the target. When a single fly is detected the revolver simply follows the movement of that fly. If several flies are in the field of view the software moves the revolver based on the activities of the collective. If a fly is detected in the center of the target the trigger of the revolver is pulled. In this way, the flies are essentially the brain of the device controlling the revolver by determining where it is aimed and when it is fired.

Decisive Mirror

Sebastian Schmieg

Emotion recognition, psychometric profiling, and sentiment analysis are increasingly being used by companies, social media platforms, and others to draw conclusions about us. But algorithms don't always come to the right conclusions about you. An algorithm after all, is only as accurate as the data set it trained on.

Sebastian Schmieg has designed his own algorithm behind Decisive Mirror, which analyzes you based on less conventional traits, such as your "aliveness" or "imaginariness". Decisive Mirror uses machine vision to assess you, but it might not yield the results you expect. This mirror might remind you that your face, words, actions, and even emotions are being profiled every day based on categories that are arbitrary, random, or inaccurate.



Anti-Selfie Club

Interactive reflection on the Black Square
Studio Moniker

The Beyeler Foundation invited us to develop the digital campaign for the exhibition Black Sun. The group exhibition focuses on the lasting influence of Kazimir Malevich and his Black Square upon art right up to our own day. Malevich was one of the very first abstract artists. He created art that did not attempt to represent an accurate depiction of reality. Instead he focused on basic geometric forms, such as circles, squares, lines, and rectangles.

When Malevich unveiled the Black Square in 1915, it was placed high up on the wall across the corner of the exhibition space. Though this position might mean nothing to the average non-Russian viewer today, it was the same sacred spot that a Russian Orthodox icon of a saint would sit in a traditional Russian home.

To bring this juxtaposition to the current day, we created the antiselfie.club → an online webcam tool, which covers peoples faces with abstract shapes derived from the works of Malevich.



Click Click Click

Browser-event based game
Studio Moniker

Click Click Click is a browser event based game developed by Moniker & VPRO.

The visitor of the website clickclickclick.click will find itself on a flat white website with one single green button in the centre of the screen.

Confronted with this empty screen the user (called 'the subject') most likely will be triggered to act with his mouse. Then the story starts. Everything, even the most tiny movement that we assume not worthy mentioning gets measured, recorded and valued. A feedback of written observations scroll in the screen, the user gets aware that he has entered an environment where his actions are transparent.

On top of these 'objective' measurements a narrating voice starts to judge the user upon its behavior and draws his conclusions - boring, exceptional, probably female, oh nooo - yes! Far reaching diagnosis and conclusions. Since all other visitors of clickclickclick.click before him or her had been observed as well, his actions are compared to others'... 'This subject is pretty mediocre'..

Addressing the idea that all of our online behavior is possibly captured and monetized, the VPRO generously commissioned and co-produced this project.

|
(please click the button)

Button

[Achievements »](#)

19%

Random sandwich suggestions:

A site that recommends to you a random sandwich from Wikipedia's list of notable sandwiches.

Source: [Wikipedia's list of sandwiches](#)

Zapiekanka

Origin: Poland

A halved baguette or other bread usually topped with mushrooms and cheese, ham or other meats, and vegetables

I want another...

"I make things that make people feel weird things at weird times."

Darius Kazemi / Tiny Subversions