The inventions show the sublime intelligence of Leonardo da Vinci

He invented robots, self-propelled cars and airplanes. Where to find another genius like da Vinci?

Leonardo da Vinci is a typical Renaissance man, with a passion that spans a wide range of fields such as geology, geography, astronomy, chemistry, botany, explosives, optics and animals. learn. The illustrious achievement of the genius ahead of its time can be summed up in two facts that you may not have known:

- In 1509, da Vinci made his first judgments about why the sky was blue. He said roughly, that blue is a combination of white light from the Sun and dark colors of the Universe. We see him as a curious man, noting every detail of the surrounding life.

- About 200 years before Newton was born, da Vinci wrote: ' *for every action, there will be an equivalent opposition reaction* '. We see a man figuring out the basic physical factors through his ability to observe.

But da Vinci's talent and knowledge were nothing compared to his inventions, because that was when all the best qualities of the Renaissance genius showed themselves through machines beyond his knowledge. time.

Wings show humanity's dream of flying in general and da Vinci in particular.

Many people mistakenly think da Vinci is the father of scissors, but little is known about the strange ideas of the talented man: from shoes to walk on water, planes have the mechanism of flapping wings like bats to one robotic system based on human characteristics; da Vinci's design is strange, magical and equally attractive. After the city of Milan was devastated by the epidemic in 1484, Leonardo da Vinci painted a dream city, perfectly planned.

For hundreds of years, his 'coming from the future' design lay dusty in a neighborhood where no one noticed it. In the late 19th century, 700 pages of documents and drawings of Leonardo da Vinci were discovered, and nobody was interested in them until Italian fascist leader Benito Mussolini commissioned several da Vinci designs, to arouse the national pride of the Italians.

On the 500th anniversary of the birth of da Vinci, 39 more models were built in Milan, using materials that da Vinci could use in the 15th century.

' *At that time, engineering was based on practice, so Leonardo became a stranger to his drawings. In fact, he invented a new method of invention, by combining the talent of the artist with the skill of an engineer* ', Claudio Giorgione, co-curator of Museo Nazionale della Scienza e della Tecnologia, museum Italy's largest science and technology, said.

Here are some examples showing the genius of Leonardo da Vinci.

Leonardo da Vinci.

Tank

If many da Vinci's inventions came out of a dream, then this destructive machine was born of a nightmare. Shaped like a turtle and a flying saucer, this device 'runs on rice', with eight people inside using cranks to operate the whole machine.

The tank has a slow movement speed, despite possessing up to 8 "manpower".

Although da Vinci did not make this device himself, he imagined an iron-clad wooden frame on the wheel, surrounded by cracks for the gun to stick out, allowing the machine to glide on the battlefield. .

' *This is a beautiful example of creativity in Leonardo drawings. This design is much stronger than the inventions of contemporaries. He represents the idea of ??tanks gliding on the ground, blinding dust at high speed* , 'Giorgione said.

It is worth noting that the original design of the da Vinci had a serious error: the front and rear wheels of this tank turned in opposite directions. If the production unit followed the correct model, the vehicle could not run. Considering the idea of ??loving peace and the ability to clearly understand the mechanism of operation of the machine, some historians believe that this was the deliberate act of sabotage of da Vinci.

Metal people

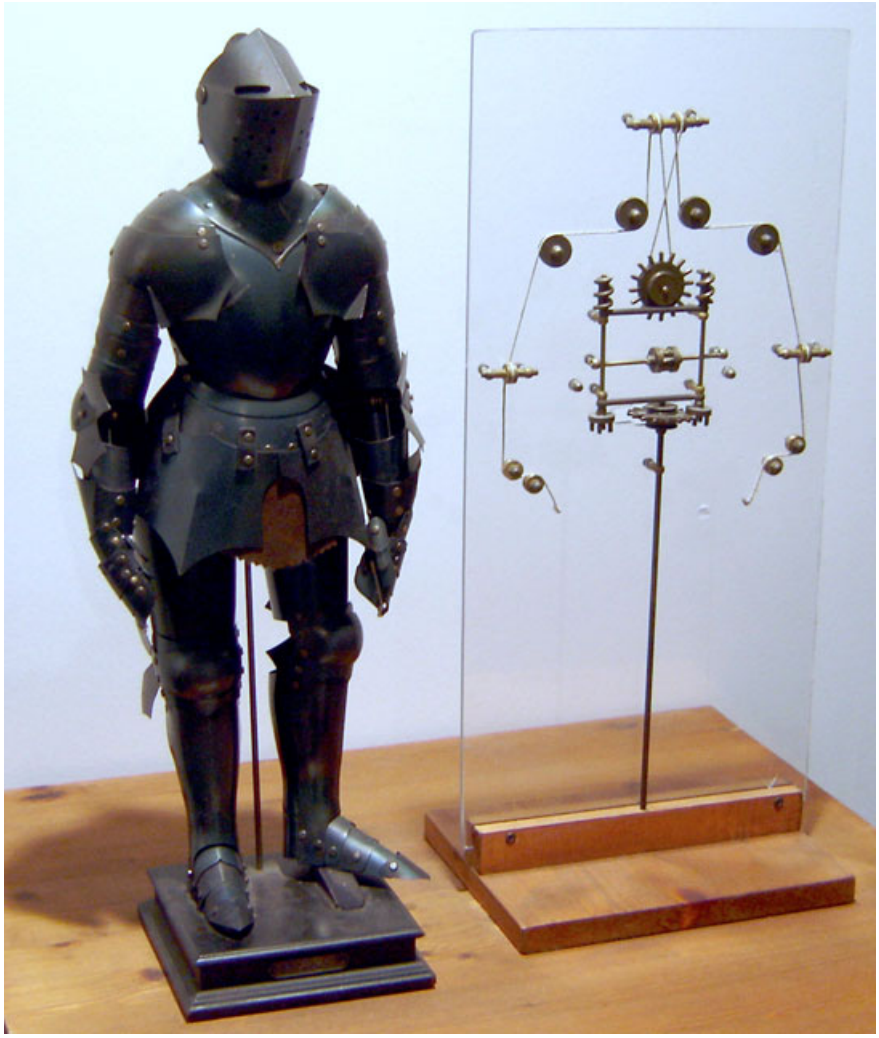
Half a millennium before humans became familiar with the concept of robots, computers or artificial intelligence, da Vinci dreamed of creating 'robotic knights', a humanoid robot capable of waving, standing up and sitting. down and move his mouth.

Through human anatomy, da Vinci discovered by himself how muscles and joints work together, in order to create movement for the bones. His mechanical doll mimics these movements through a system of pulleys, gears and cables, which transmit power from a crank.

da Vinci dissected about 30 corpses and proceeded to paint detailed body structures under candlelight. He used a cloth covering his nose and mouth when doing this job.

However, da Vinci's robot was just for entertainment, a way of entertaining the people who financed him, such as the automatic lion he created for the king of France. The iron knight was just a tool to entertain the Sforza family in power in Milan.

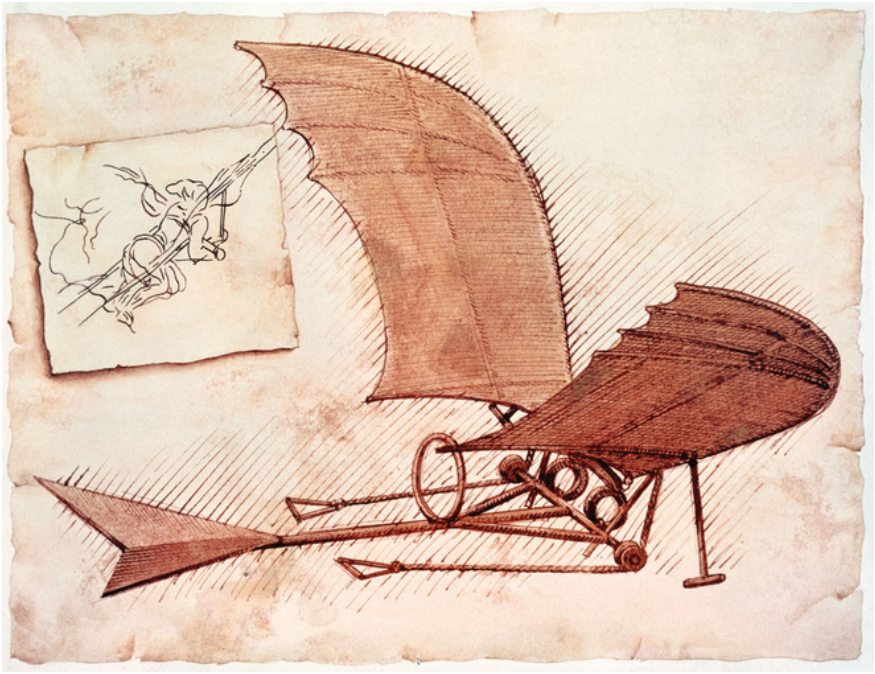
According to Giorgione, these products are the few times contemporaries have known da Vinci's talent in engineering. Most of the drawings that make these machines are in da Vinci's personal journals.



Analyzing how muscles, joints and bones work, da Vinci built robots.

One more example of da Vinci's timeless mind: NASA applied the design of the brilliant inventor to the robot Anthrobot, a robotic arm capable of performing complex tasks.

Attempts to realize human's dream of flying



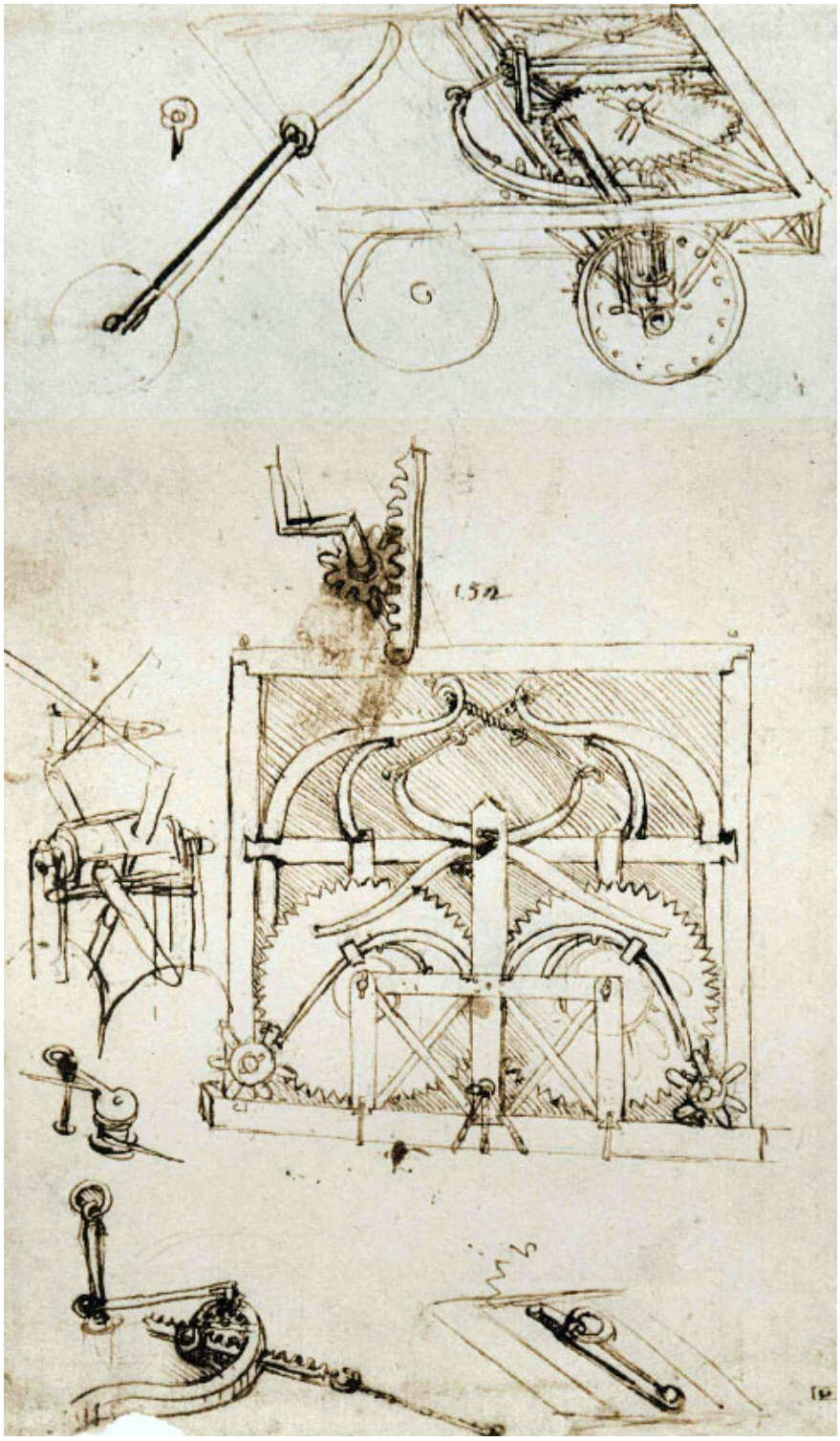
The "ornithopter" device was designed by da Vinci.

da Vinci dreamed of flying from an early age, while still looking for fun in the kite. The autograph shows that da Vinci wrote hundreds of lines of research about flight mechanisms, and he also bought birds from the market to learn about how they work. When he was finished, he released the bird to the wild; Da Vinci is a vegetarian.

Having collected enough knowledge, da Vinci created 'ornithopter', a wing flapping based on the principle of birds and bats, with a wingspan of up to 10 meters, made from pine and silk. Knowing that humans are too heavy and weak to be able to flap their wings with their hands, his 'ornithopter' allows wingers to use their feet to drive. But he still gave up when further studies showed that the human legs were not strong enough to operate the 'ornithopter'.

Perhaps da Vinci had never fulfilled his dream of going to space, but at least his 'descendants' did it: people named a moth in Sudan as Leonardo davincii.

Automation means



Drawings of a "car" by da Vinci.

Although cars didn't appear until a few centuries after the da Vinci era, this brain was ahead of its time when it was just 26 years old. Basically, da Vinci's three-wheeler gear was a motor car. , with some springs turning the wheel. More specifically, this is also a driverless car. Changing some of the gear housing, da Vinci can 'program'

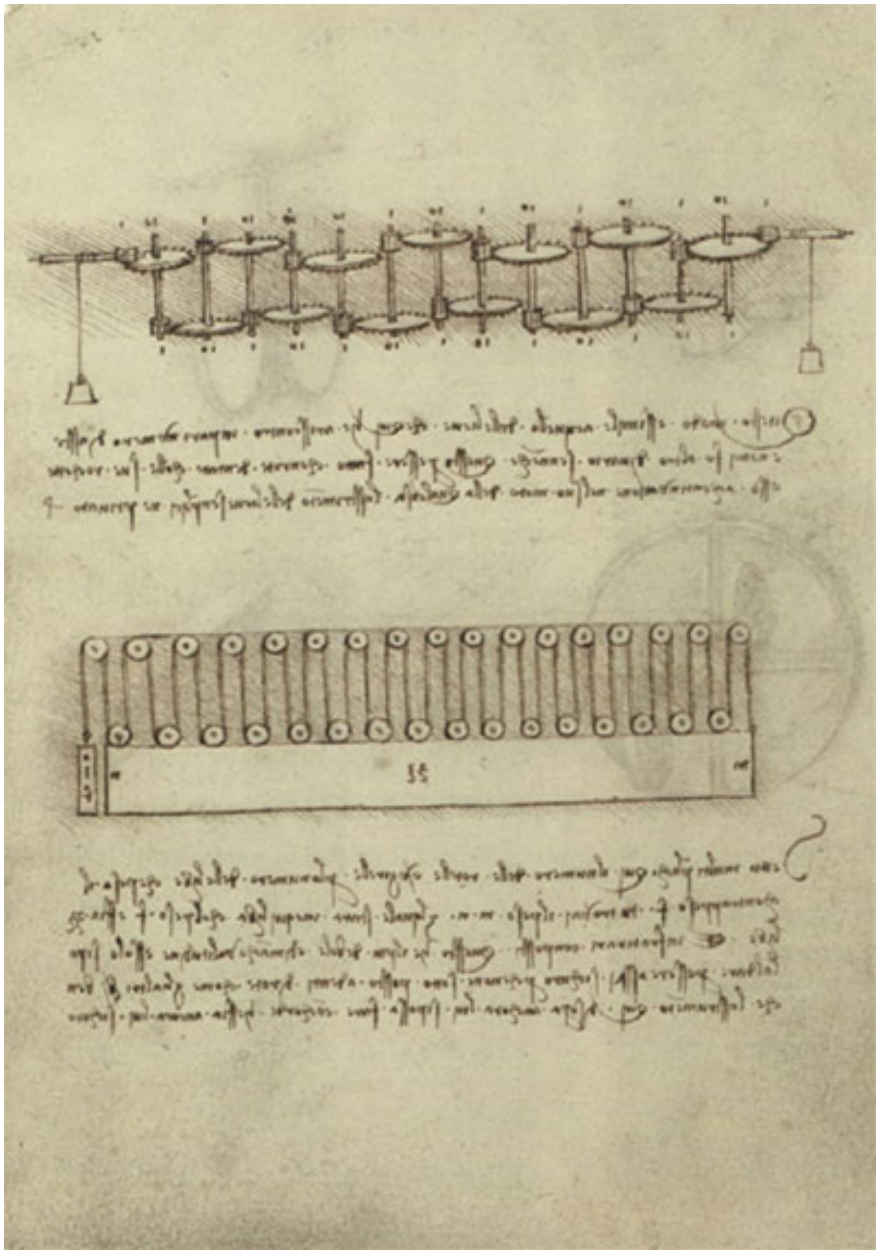
the car to move itself when it is winding.

In 2006, people modeled "self-driving cars" of da Vinci.

However, da Vinci did not design a road car, most likely this was another recreational toy, when it only traveled 40 meters.

Computer?

It was not until 1965 that people discovered drawings of this strange device. A linguistic professor at the time working at the Spanish National Library found a series of autographs by Leonardo da Vinci in a parchment scroll from Morocco.

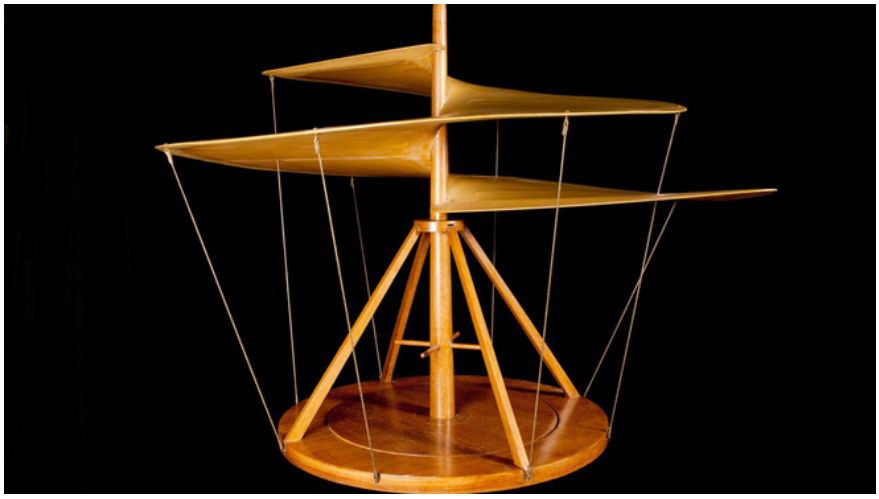


The first analog computer of mankind?

More than 700 pages describe da Vinci's thoughts on architecture, geometry, music, mechanics, directions and maps. In between them is a drawing of a machine with 13 gears, 10 numbers from 0 to 9. It's unclear how this machine will work, but many people think this is the first analog computer of humanity .

' *These are not really projects [that da Vinci] will perform; His drawings are confusing and often lack details. They are just his dreams. He did not have the time or money to recognize their [size]* , 'Giorgione said.

"Helicopter



da Vinci describes a device that "flies up to 4 people.

Using the word 'ahead of time' is also boring, but there is no other word to describe this vertically capable takeoff device. It was made from wooden poles with cloth stretched into sails. It looked more like a standing boat than a helicopter, but this was a good example of Leonardo da Vinci's understanding of physical mechanisms. He realized the laws of physics centuries before we really knew the laws of the Universe.

' *This is a more special painting than any other work. In it, Leonardo carefully described how he created a paper prototype* , " Giorgione said.

It is thought that this device was inspired by the way the maple tree seeds fall; da Vinci thought that with enough rotation, his device would fly into the air. In an attempt to create an unsuccessful flying device, da Vinci inadvertently created the premise for a rotating rotor.

' *He knows it is impossible to make this device - with the current design - spin. His intuition indicated how a rotor would work, but he could not perfect that idea,* 'Giorgione said.

There is no denying the sublime level of Leonardo da Vinci's mind. By 1966, we still found drawings that humanity did not know, and then we discovered the painting of Salvator Mundi painted by da Vinci in 1500, not knowing if there were still sketches of genius ideas. that his humanity has not.

Perhaps Leonardo da Vinci had an idea for something that had not yet been invented by modern people.