

Outer Space in Pre-history, Culture, Art and Literature

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Abstract: We have seen humans infatuated with the phenomenon of the cosmos and its workings for thousands of years, there have been many advancements in the cultural and scientific aspects of space. In history, we see extraordinary developments from all areas of the earth such as in circa 4000 BCE Mesopotamian astronomers making observations from tops of pyramid-like towers called Ziggurats all the way to the early 17th century where Galileo used a telescope to view the phases of Venus and discovered the four largest satellites of Jupiter. In 1957, Sputnik was launched everyone was infatuated with space technology and the exploration of beyond planet earth. It can also be seen that man's captivation with space travel began much earlier, through the science fiction genre in art, films and literature.

History & the Mayan Culture

Cave of Lascaux: It is a Paleolithic cave situated on the Valley of the River Vézère in Southwestern France and was discovered in 1940. It houses some of the most famous examples of prehistoric cave paintings, primarily of animals. It has been dated between 17,000 BCE-15,000 BCE. It has been said to have astronomical associations as it shows the changing of the seasons as well as showing archaic cosmography, showing the sky's panorama.

Antikythera mechanism(right):

An ancient analogue computer which was thought to be used to predict astronomical positions and eclipses for calendrical and astrological purposes. One of which was to calculate the 4 year cycles of the Olympiad. It dates to around the 2nd Century BCE and was recovered in August 1901 (in accordance to the Gregorian calendar used today). It is currently held in the National Archaeological Museum in Athens.



Nebra Disk(below): A bronze disk dated around 1600 BCE which is believed to be the oldest concrete depiction of the cosmos. The disk has symbols of the sun, lunar crescent, stars (including a cluster which is interpreted as the Pleiades) and arcs on the side marking angle between the solstices. It confirms that the Bronze age Europeans in the yearly course of the sun as well as angles between rising and setting points.



Galileo Galilei(1564-1642) (above):

Italian Astronomer famous for using a space telescope for observations.

His famous observations included:

- Observing the moon had valleys, plains and mountains
- Sunspots
- Observed phases of Venus (new to full)
- Discovered four largest satellites of Jupiter

Mayan Culture: To the Maya in Mesoamerica astronomy was incredibly important and was a big part of everyday life. The ancient science reflected order in their universe and the Gods' place in it. To them, space and time were intertwined as can be seen in their complex calendar system where they used the sky to measure the passage of time.

They also used outer space for many other aspects. For example:

- The appearance of certain constellations or planets in the sky heralded the planting season – can be argued that this promoted the success of the Mayan civilisation.
- Priest-astronomers (known as *ilhuica tlamatilizmatini* – 'man who studies heaven') used their knowledge of the patterns of the sky to accurately calculate the rising and setting times of the sun, as well as the time between successive full moons, the orbit of venus etc.
- Also built buildings and cities to work as observatories with special viewing windows where each window corresponded to a celestial event

Shows the intense relationship the Mayans had with the sky.

The Arts

Fine Art

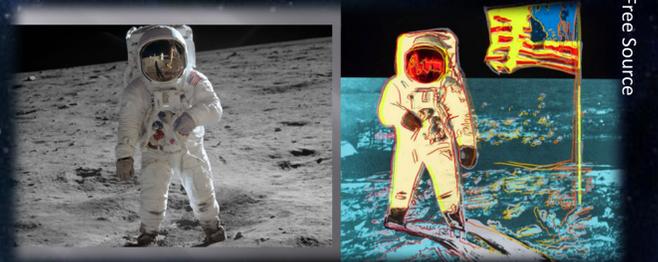
The NASA Art Program

began in 1962 and enlisted some of the era's greatest visual artists, e.g. Warhol and Rauschenberg,

in conveying to the public the Space Agency's cutting-edge research in ways more vibrant and less sterile than research reports. NASA gave the participating artists unprecedented access to the agency's facilities and even lent them prized equipment to ensure true-to-life portrayal.

Moon Museum: Conceived by artist Forrest Myers in 1969, was established on the lunar surface after works by six contemporary artists arrived with the Apollo 12 mission. Drawings were inscribed onto a 3/4-by-1/2-inch ceramic chip, which then hitched a ride to the moon, covertly affixed to the leg of the *Intrepid* lunar lander.

ARTSAT was an experimental performance by Richard Kriesche and official part of AUSTROMIR, the first Austrian space-project. On Oct 6th 1991 in Graz, Kriesche transmitted the image of his hand into space where it was received by cosmonaut Franz Viehböck on board of the MIR space station who responded by sending a radio message. This code manipulated and changed the sound of the Blue Danube Waltz which formed the musical background of the live event "as if by the hand of an invisible conductor".



Left: Buzz Aldrin on the moon, 1969. Right: Andy Warhol - Moonwalk, 1987

Film

- The silent film **Le voyage dans la lune** by **George Melies (Journey to the moon)** (left) from 1902 - one of the most iconic and frequently referenced images in the history of cinema - is widely regarded as the earliest example of the science fiction genre.
- **Frau im Mond** by **Fritz Lang (Woman in the moon)**, 1929 - one of the first "serious" sci-fi films. The basics of rocket travel were presented to a mass audience for the first time, including the use of a multi-stage rocket.
- In TV, the first space sci-fi series was **Captain Video** in 1949, the most successful being **Star Trek** (ongoing since 1966!)
- In the 1970s, big-budget sci-fi films filled with special effects became popular with audiences after the success of **Star Wars** and paved the way for blockbuster hits until this day.



Literature

- **Johannes Kepler's Somnium – A Dream** was released in 1634. For his lifetime Kepler's lunar exploration is a truly remarkable and revolutionary work, and must be appreciated for the audacity of the concept as well as for its intrinsic merit as a pioneering work of science fiction.
- The earliest known pure science fiction writing has been traced to **Jules Verne** and **H.G. Wells** novels of fantastic exploration and encounters with unknown realms.
- At their peak of popularity in the 1920s and 1930s, the most successful illustrated sci-fi pulp magazines sold up to one million copies per issue (right)
- The Golden Age of Science Fiction (1940s) was an era during which the genre gained wide public attention and many classic sci-fi stories were published, e.g. by **Isaac Asimov**, **Ray Bradbury**; even influencing science and military!



Conclusion: As we can see, space has become a part of everyday life through cultural developments influenced by history and scientific progression. There is no doubt that space has been on everyone's mind for centuries, whether that is from a scientific or cultural perspective and will continue to be.

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