

# SUNDAY FEATURES

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## Behind the lunar landings, flights of fantasy

Long before Neil Armstrong set foot on the moon, that great leap had fired myriad imaginations, some silly, others downright ludicrous

BY JOHN STRAUSBAUGH  
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**F**orty years ago today, Neil Armstrong became the first human to set foot on the moon. But for millennia before him people had been imagining that giant leap in fiction, fables and film. They flew to the moon in rocket ships, winged chariots and projectiles fired from huge guns. There they met giants, insect-men, Nazis and topless women.

Although pre-1969 stories of lunar voyages were often silly or satirical, Frederick I. Ordway III, a former NASA researcher, argues that they played a critical role in inspiring the scientists who actually put men on the moon.

"They all read H.G. Wells and Jules Verne," Ordway said recently. "Science fiction got us all started in the early days, I think without exception."

Growing up on the Upper East Side of Manhattan in the 1930s, Ordway devoured science-fiction pulp magazines like *Amazing Stories* and *Thrilling Wonder Stories*, some 900 of which he would later donate to the Harvard College Library. In the 1940s he was a student member of the American Rocket Society, a space enthusiasts' organization that built and test-fired small rockets in New York and New Jersey.

After graduating from Harvard in 1949 with a degree in geosciences, Ordway went to work for Reaction Motors, which built engines for the X-1 and X-15 experimental rocket planes. From the mid-1950s to the mid-1960s he worked in Huntsville, Ala., with the rocket scientist Wernher von Braun at the Army Ballistic Missile Agency and then at the NASA George C. Marshall Space Flight Center.

In 1965, at the author Arthur C. Clarke's suggestion, the filmmaker Stanley Kubrick hired Ordway as the scientific consultant on *2001: A Space Odyssey*. Ordway has also written and edited more than two dozen books about spaceflight real and imagined.

He said the earliest known moon voyage in written history was by the satirist Lucian of Samosata of the second century A.D. Lucian begins his *True History* with a disclaimer that it's all lies. He goes on to describe sailing on a ship that's carried to the moon by a giant waterspout. He finds the moon inhabited by men who ride three-headed vultures and giant fleas, and are at war with the inhabitants of the sun.

In the 16th century Ariosto's epic poem *Orlando Furioso* depicts the moon as the repository of all things misplaced on Earth. The knight Astolfo ventures there in a chariot pulled by four magical horses, to look for mad Orlando's lost wits.

The development of the telescope in the 17th century spurred much speculation about the moon and its possible inhabitants. There was even an early space race, on paper at least, as English patriots exhorted their countrymen to colonize the moon before other nations could.

The astronomer Johannes Kepler wrote his lunar speculations as fiction. In *Somnium* (Dream), published posthumously in 1634, a young man is carried away by moon demons. Kepler's descriptions of a harsh lunar surface are quite accurate, even if he does inhabit it with giant snakes and other creatures.

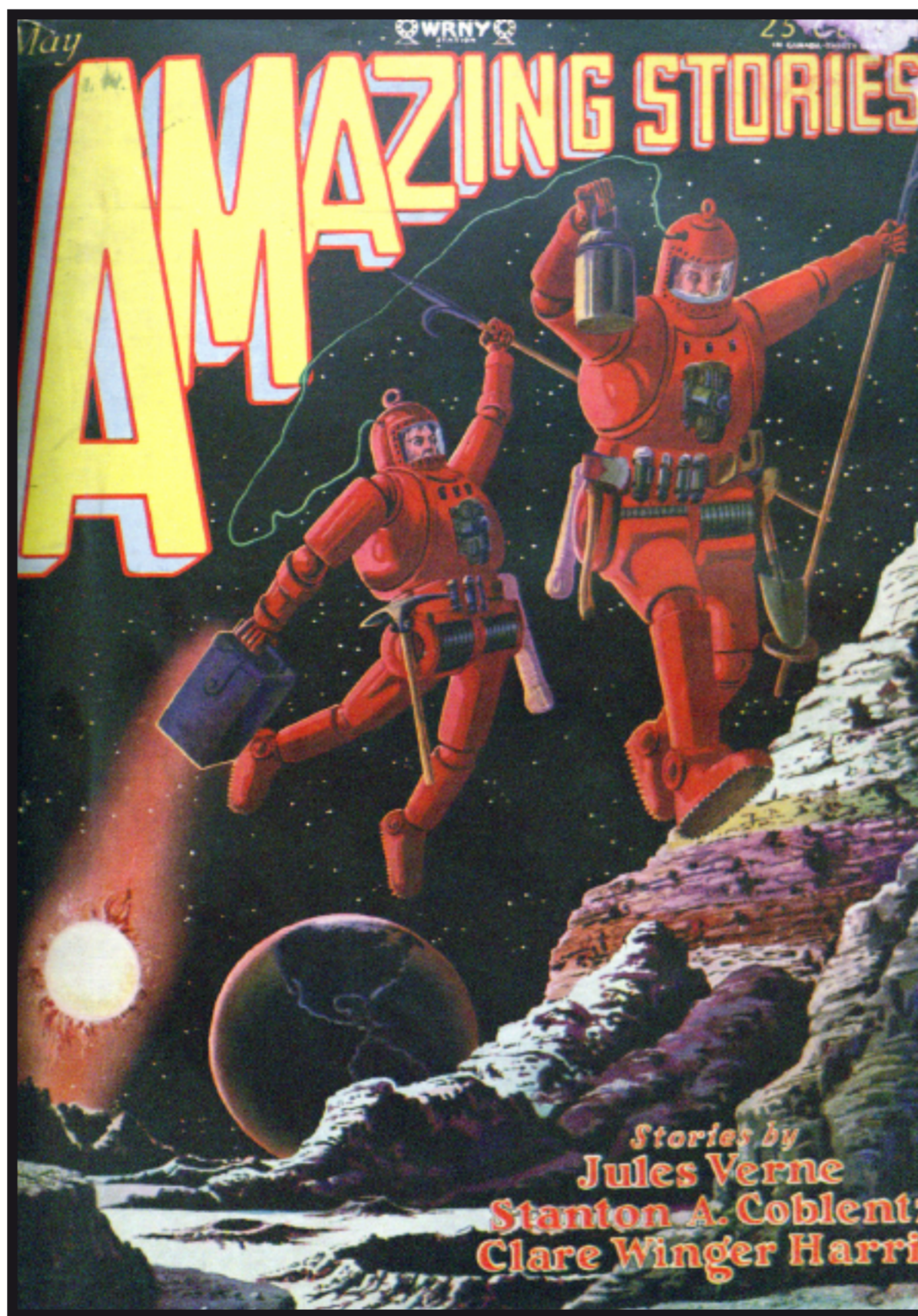
Domingo Gonsales (actually Francis Godwin, the bishop of Hereford) flies to the moon in a chair pulled by geese in his 17th-century best seller, *The Man in the Moone*. He finds it to be "another Earth," peopled by giants.

In his satirical *Voyages to the Moon and the Sun*, the poet and wit Cyrano de Bergerac first attempts a lunar flight carried by vials of rising dew, but only makes it as far as Canada. He later succeeds, propelled part of the way by rockets, a conveyance that seems to have occurred to very few writers before the 20th century.

In the 18th century Baron Hieronymus Karl Friedrich von Munchausen told such tall tales about himself that others joined in, fictionalizing him in his own lifetime. They had him traveling to the moon once by a giant beanstalk and once in a sailing ship carried, like Lucian's, by a storm. There he meets the king with a detachable head — depicted by Robin Williams in Terry Gilliam's film *The Adventures of Baron Munchausen* (1988).

Armstrong had barely set foot on the moon when a conspiracy theory spread that the lunar landing was a hoax. In *The Sun and the Moon* (Basic Books, 2008), Matthew Goodman describes an earlier moon hoax perpetrated in the summer of 1835 by the *New York Sun*.

It was a series of articles purported to be the lunar observations of an actual British astronomer,



The cover of a 1929 issue of *Amazing Stories*.

PHOTO: NY TIMES NEWS SERVICE



Above: Cyrano de Bergerac in an illustration for *Voyages to the Moon and the Sun*.

PHOTO: NY TIMES NEWS SERVICE

John Herschel, whose giant telescope allegedly brought him images of shaggy bison, one-horned goats and the "Vespertilio-homo, or man-bat." The anonymous author, a journalist named Richard Adams Locke, so skillfully blended the scientific and the fantastic that many readers were taken in. Herschel, whose observatory was in South Africa, was not party to the hoax.

"There was tremendous interest in astronomy that year because Halley's Comet, last seen in 1759, was on its way that fall," Goodman said.

One disgruntled reader of Locke's jest, Goodman added, was Edgar Allan Poe. That same summer *The Southern Literary Messenger* published Poe's own moon hoax, *The Unparalleled Adventure of One Hans Pfaall*, to little notice.

By 1844 moon hoaxes were so common that *The Messenger* ran a parody, *Recollections of Six Days' Journey in the Moon. By an Aerial-Nautical Man*. The narrator tells of floating to the moon using "a new and hitherto unknown science, called Aerialism, or the faculty of self-suspension in the air."

In Jules Verne's novel *From the Earth to the Moon* (1865) three adventurers hurtle toward the moon in a projectile fired from a giant cannon. In the sequel, *Around the Moon*, the travelers orbit the moon and return to Earth.



Movies were still in their infancy when the first celluloid moon voyages took place. Georges Méliès' 1902 short *Voyage to the Moon*, a comical adaptation of Verne's novels, shows the projectile poking the Man in the Moon in the eye, and the travelers meeting a devilish race of moon-men. The feature film *From the Earth to the Moon* (1958), starring Joseph Cotten, is a more faithful adaptation of Verne's works.

The heroes of H.G. Wells' *First Men in the Moon* (1901) are propelled there by an anti-gravity substance. They encounter giant "mooncalves" and meet a race of lunar insect-men, the Selenites. A film adaptation, featuring special effects by the renowned stop-motion animator Ray Harryhausen, came out in 1964.

Wells wrote the screenplay for the 1936 film *Things to Come*, a sweeping epic of mankind's future in which the first spacemen to circle the moon, in 2036, are shot skyward by a giant "space gun" reminiscent of Verne's.

In the 20th century, as pioneers like von Braun and Robert Goddard developed rocketry, spaceships also became the dominant means of lunar travel in fiction and film. The rocket designer Hermann Oberth's technical advice helped the director Fritz Lang make a trip to the moon look convincing in the 1929 silent film *Frau im Mond*. (Oberth attempted but failed to build an actual rocket to launch when the film had its premiere.)

Rockets to the moon proliferated in books for young readers in the postwar years. In Robert A. Heinlein's young-adult novel *Rocket Ship Galileo* (1947), a team of American teenagers flies a rocket to the moon ("You be a good boy on the moon," one mom instructs), only to find that the Nazis beat them there. In Marcia Martin's children's book *Tom Corbett: A Trip to the Moon* (1953), little Johnny and Janie ride there in Corbett's spaceship *Polaris*. "Look out for the big holes," Corbett cautions the kids as they make their own giant leaps for mankind.

The film *Destination Moon* (1950), may be the most scientifically sound space movie of the decade, features a script written in part by Heinlein, beautiful art by the science and sci-fi illustrator Chesley Bonestell, and even a cartoon in which Woody Woodpecker explains the physics of spaceflight. (Heinlein also wrote a treatment for a never-produced film called *Abbott and Costello Move to the Moon*.)

In the mid-1950s the *Disneyland* television program showed a series of hourlong *Tomorrowland* episodes about space flight. Combining lectures by von Braun and other rocket scientists, live-action drama and ingenious animation, the shows, available on DVD, are still marvelous feats of education and entertainment.

Pre-1969 moon movies weren't all intended as family fare. The lunar inhabitants in the low-budget *Cat-Women of the Moon* (1953) are young women in black tights (billed as the Hollywood Cover Girls) with designs on Earth's men. The very low-budget *Nude on the Moon* (1961) peoples the satellite (actually the tourist attraction Coral Castle in Florida) with topless women.

Ordway helped make *2001: A Space Odyssey* one of the most convincing spaceflight films ever. Released in the spring of 1968, a year and a few months before Armstrong's epochal footstep, it may have been all too accurate in one sense. In depicting lunar travel as routine and even humdrum, it anticipated how worldwide excitement over the Apollo 11 trip turned to global disinterest in later lunar missions. Maybe after 2,000 years of three-headed vultures, man-bats and topless ladies, the real moon couldn't help but seem a little dull once we got there.

Today NASA is planning to return men to the moon by around 2020, then venture on to Mars. Ordway, who remembered when NASA planned to put men on Mars by 1987, wholeheartedly approves.

"The next step has to be taken," he said. "If we don't take it, someone else will."



Above: A scene from the 1902 short film *A Trip to the Moon*.

PHOTO: NY TIMES NEWS SERVICE

Left: Astronauts in the film *Destination Moon* (1950), written in part by Robert A. Heinlein.

PHOTO: NY TIMES NEWS SERVICE