

HUMANITIES INSTITUTE
Burak Sevingen, MA

Woman in the Moon 1929

Fritz Lang (1890-1976)

Contents (Overview – Story – Themes – Characters)

OVERVIEW

In our original version of *Metropolis*, I wanted the son of the Master [of Metropolis] to leave at the end and fly to the stars. This didn't work out in the script, but it was the first idea for *Woman in the Moon*.

—Fritz Lang in *America*.¹

Metropolis ends with the young Freder reconciling the oppressed workers with their authoritarian employer—a simplistic resolution that makes the ending difficult to embrace. In his interview with Peter Bogdanovich, Fritz Lang mentioned that he had in fact envisioned a fantastic closure to the story, with Freder leaving the earth in a spacecraft—instead of fixing its complicated social issues. It is fascinating to imagine how such an ending would change *Metropolis* and its prominent position in film history. Then again, we thankfully need not look far—released three years later in 1929, *Woman in the Moon* is a spectacular realization of Lang's vision of space travel.

Scientific Realism. As opposed to the futuristic fantasy of *Metropolis*, the director's second science fiction film aims for a 'serious' and accurate depiction of science. *Woman in the Moon* rests on the premise that a space expedition could be made by utilizing current scientific knowledge and tweaking available technology.

The Science Consultant. The credits include the physicist Hermann Oberth as the science consultant. Many of the technical details would prove to be true to life—e.g. multi-stage rockets that get discarded on the way, use of liquid fuel, and precise mathematical calculations for trajectory. Considering that the first real moon landing was made with the Apollo 11 spaceflight in 1969, some of these ideas were decades ahead of their time. Lang even held that he was the originator of the dramatic countdown to zero² which later became a staple of such missions.

Scientists' Public Relations Campaign. As one of the leading proponents of space navigation, Oberth was a member of a group of amateur enthusiasts who wanted to get the public's attention for rocketry. *Woman in the Moon* was part of a campaign that included a journal and rocket stunts.³ The film was intended to demonstrate the viability of orbital spaceflight and impress key individuals—such as Albert Einstein, who was among the attendees of the gala.⁴

Legacy. The science consultant Hermann Oberth was a role model for young scientists such as Wernher von Braun⁵—who was in his late teens at the time of the film's release. Von Braun became the architect of Nazi Germany's rocket program in the following decade. The research would culminate in Nazi Germany's terror weapons, the V-2 long-range ballistic missiles. After the war, von Braun continued working for the American Space Program.

Postscript. *Woman in the Moon's* claim to be scientific was taken seriously by the Nazis. The Gestapo destroyed all spacecraft models and copies of the film as they considered that it jeopardized industrial secrets.⁶

Moon Missions in Fiction. *Woman in the Moon* had important literary precedents—Jules Verne’s *From the Earth to the Moon* (1865) and H.G. Wells’ *First Man on the Moon* (1901). In cinema, the first science fiction film *A Trip to the Moon* (1902) directed by George Méliès shared a similar aspiration.

Special Effects. *Woman in the Moon* features the innovative special effects of Oskar Fischinger. Fischinger was a pioneer of animation who experimented with abstract imagery to create a “visual equivalent”⁷ to music. As a “cartoon effects animator”⁸ he worked for Disney on *Fantasia* (1940) but his work was revised and uncredited.

No War of the Worlds. The plot involves some violence but in contrast to many films of the genre, the space mission is a peaceful one. The spaceship *Friede* (Peace) encounters no extraterrestrial beings and the possibility is never even brought up. It is merely suggested that the moon may host forms of life such as vegetation. Moon may have no hostile aliens but it contains abundant quantities of gold—which triggers the violence.

Last Silent and Monumental Fritz Lang Film. *Woman in the Moon* would be Lang’s final silent film and the last of what he would call “monumental films”⁹—i.e. “the spectacles with huge mass scenes” such as his *Dr. Mabuse the Gambler*, *Die Niebelungen*, *Metropolis* and *Spies*. The space exploration theme runs parallel to a love story and *Woman in the Moon* is also a melodrama.

The Spacefarers. The entrepreneurial whiz Wolf Helius is played by Willy Fritsch who was the leading man in Lang’s *Spies* from the previous year. Helius is the visionary who engineers the spaceship but the driving force of the mission (and the story) is the female astronaut. The actress Gerda Maurus was the other star of *Spies*. Her Friede Velten is both an astronomer with a degree and an aviator.

Female Pioneers. Velten recalls female pioneers of aviation and science—Amelia Erhart had become the first woman to complete a transatlantic flight as a passenger in 1928 and would become the first female pilot to do so in 1932. Cecilia Payne-Gaposchkin and Elsie MacGill respectively became the first women to earn a Phd degree in astronomy (1925) and an aeronautical engineering degree (1927).

Precursor of SpaceX. Helius and his aviation corporation is a forerunner of today’s spaceflight companies—Richard Branson’s Virgin Galactic and Elon Musk’s SpaceX—which make plans to take space tourists to the orbit and beyond. In 2020, it was reported that SpaceX’s spaceflight is scheduled for 2023—and according to the news story, a billionaire passenger was looking for a woman to join him on the journey to the moon.¹⁰ Back then, almost a century ago, *Woman in the Moon*’s Wolf Helius had Friede Velten by his side.

STORY

The Entrepreneur and the Astronomer. The head of Helius Aviation Plants Wolf Helius visits his dear friend Georg Manfeldt, a professor of astronomy. Just as he arrives, Manfeldt kicks out a nosy individual who had introduced himself as Walter Turner from Chicago. Manfeldt is delighted to see the young entrepreneur. He explains that the unwanted guest was trying to acquire his old manuscript—an astrophysics treatise written by Manfeldt more than thirty years ago. His unorthodox views about space exploration had resulted in his purge from the academia.

A Flashback. Helius’s eye catches sight of the newspaper clippings from 1896. These are about the eventful conference where Manfeldt made his moon hypothesis public. A title reads “fool or swindler?” In the next scene, a flashback shows the professor in his prime, making a presentation in an auditorium packed with scientists. He passionately argues that a trip to the moon is not only possible; it would be viable thanks to the moon’s abundant gold reserves. With apparent disbelief, the senior academics roar in

laughter. Manfeldt is annoyed by the scornful reception and accuses the audience of ignorance. The scientists are enraged and we gather that the event had triggered Manfeldt's expulsion from the academic establishment.

Rekindling an old Fire. Helius tells the professor that he has finally decided to make the journey to the moon. Manfeldt gets ecstatic and vows to join the expedition. He asks whether Helius' chief engineer and friend Hans Windegger is on board. To his surprise, Helius acknowledges that he has not yet informed his closest associate. This is apparently a delicate issue for the entrepreneur because he fosters a crush for the woman who is getting engaged to his friend.

Helius' Friends. Windegger's bride-to-be Friede Velten is a trained astronomer and is also a close friend of Helius. The trio makes a tight knit group and shares a common passion for space exploration. Their relationship is also a complicated one because of Helius' affection for Friede and her ambivalence.

Security Concerns. As Helius is leaving, Manfeldt mentions a break-in attempt that occurred a few nights ago. The intruder had failed to steal the manuscript but the incident was enough to alarm the professor. He mentions that the obnoxious conman Walter Turner must have been behind the intrusion. Manfeldt entrusts the treatise to Helius who assures him that he will secure it in his safe where he keeps the flight plans.

The Project is Compromised. As Helius drives home, Walter Turner orchestrates well-coordinated larcenies. He visits Helius' apartment while the entrepreneur is en route. As he keeps the maid busy, his minions sneak inside and crack the massive safe in the study. They grab all the research material and leave quietly. Concurrently, a female agent of Turner hops on to Helius' limousine at a traffic stop and snatches away Manfeldt's manuscript.

The Prying Quintet. The shady Walter Turner is a representative of a cartel referred to as "the five with brains and checkbooks". These corporate elites make up a diverse lot and control the earth's gold market. While Helius tries to figure out what happened at his apartment, the group gathers to study the manuscript and the documents stolen from him. Among these is a film of the moon's surface shot by Helius' unmanned reconnaissance spacecraft. They get wildly excited by the reports about moon's gold deposits.

An Ultimatum. Turner is awaiting Helius in his apartment and tells him that either he will welcome cooperation with the quintet or he will have no space project at all. He lets him know that all of his documents, the company's infrastructure, and even the lives of his team are at stake. Helius asks for some time to assess the situation with his friends.

Assesment. Helius calls his associate Hans Windegger just when he and Friede Velten happen to be hosting their engagement party. They immediately rush to their friend's help. Once they get together, the two men realize that they have been stripped of their precious research findings and there is no way that they can go ahead with the launch. Friede's calmness and her resolution for the space mission gently steers them towards carrying out the expedition no matter what.

Preparations for Take-off. Turner stages an arson attack on one of Helius Co.'s plants in order to coerce the already startled entrepreneur. Helius finally bows to pressure and accepts Turner's bosses' partnership. The henchman himself becomes the fifth member of the crew comprised of Helius, Windegger, Friede Velten and Professor Manfeldt.

The Launch of Friede. The launch of spaceship *Friede* takes place in Helius Co.'s huge hangar and is staged as a grand spectacle. Countless people fill the terraces to watch the event which is also live broadcast to the world. *Friede* is meticulously moved to the launch pad via rail tracks and following the countdown, Helius pulls the lever that ignites the rocket.

The Stowaway. The crew has to put up with immense pressure during the early stages of the launch and Turner is particularly distressed. Otherwise, things go as planned, with the spaceship discarding supplementary rockets at predetermined stages of the flight. The crew enjoys the journey and experiencing weightlessness in space amuses them. Soon, Friede discovers that they have an unexpected passenger—a little boy had hidden in the storage chamber. Gustav is a fan of science fiction comics and the adults have a few laughs at his magazines. Not before long, the cheerful mood gives way to a longing for planet earth.

Love Triangle. Helius' interest in his fiancée annoys Windegger who also becomes pessimistic about the fate of the mission. In contrast to the two men getting increasingly emotional, Friede Velten is the level-headed member of the crew and systematically makes entries in the log book.

Explorers Disembark. *Friede* lands intact on the moon after a rough landing that leaves its water containers damaged. In panic, Windegger sets out to prepare the rocket for the return trip. Seeing that his dream has come true, Professor Manfeldt dons his spacesuit and happily steps foot on the surface. He finds out that the air is breathable and leaves to look for water. When he doesn't come back after a couple of hours, Turner volunteers to go after him.

Death on the Moon. Inside a cave, Manfeldt not only finds water but gold as well. Turner suddenly appears before him, mesmerized and exhilarated by the sight of the chunky gold nuggets. The professor trips and dies after falling in a pit. Turner heads back to the camp, anxious to report to his superiors his discovery of gold. He attempts to hijack the rocket and make the return journey by himself. He overpowers Windegger but Friede prevents him from entering the spaceship. When Helius comes to her aid, Turner draws his pistol and shoots. Windegger returns fire and fatally wounds the villain.

A Tough Decision. Friede comforts Turner in his last moments. They soon find out that the stray bullet from Turner's gun had damaged the oxygen tanks. It becomes apparent that the remaining oxygen is not sufficient for all three adults' return flight. Helius maintains that either he or Windegger would have to stay behind and wait for the others to save him. They draw straws and Windegger loses. Seeing that her fiancé is devastated, Friede Verten suggests staying with him on the moon. He refuses, saying that he doesn't care about anything but the earth.

The Nation of Two. Seeing Friede's love for Windegger, Helius selflessly decides to send both of them back to earth and stay on the moon himself. He carefully instructs little Gustav about launching the rocket and spikes the two adults' drinks with a drug to get them to sleep. The perceptive Friede sees through his scheme and pretends to drink the liquor. Helius hops off and Gustav successfully launches the spacecraft. Moments later, Helius finds Friede standing before him and they embrace.

THEMES

Technological Progress. "For the human spirit, there is no 'never', only a 'not yet'" reads the opening intertitle card. *Woman in the Moon* is clearly optimistic about technological progress. The rocket launch is a cause for jubilation: "the sirens resound in all the factories, in all the trains and all the ships of the world in honor of the pioneers of the spaceship". Even though the pioneers are portrayed as heroes, the film's focus is on technology. According to Tom Gunning, this is Lang's "most abstract film" in which he chooses to bypass character in favor of a pure spectacle of technology.¹¹

Representing Scientists. "The progress won't stop by the fault of a few ignorant scientists" the professor lashes at his colleagues after they boo him in the auditorium. He is denied institutional support for his research and lives in poverty for decades. This may well be a caricatured depiction of Hermann Oberth's own experience when his Phd thesis was initially rejected.¹²

Scientific film about Science. The melodrama and spectacles aside, particularly certain sequences in *Woman in the Moon* are constructed like parts of a scientific argument. References are made to the work of prominent real life astronomers Peter Andreas Hansen and William Henry Pickering, precise calculations are provided and details are laid out with a view to persuade the viewer.

Elites. Wolf Heliuss owns the aviation plants and is evidently a rich industrialist but he is portrayed to be more of an adventurer. When the mysterious elites learn of his plans for a space mission, one of them remarks that the moon's gold should be owned by "businessmen and not idealists". The film's credits refer to them as the five brains and checkbooks. The group includes an Asian man and a woman—there is also a man with a wheelchair, recalling the supervillain Haghi from Lang's *Spies* (1928). They are said to be not just the wealthiest but also "the most erudite". The five are clearly technically proficient as they can easily grasp details of Heliuss' rocketry research. On the other hand, they are immoral—their agent Walter Turner is an enforcer who oversees a group of criminals. The group of five obtains Heliuss' research material by theft. Subsequently, Walter Turner lets Heliuss know that unless he accepts their partnership, his research, manufacturing plants, and the lives of people close to him would be targeted.

Modern Propaganda. "All the eyes of the world are staring at us... all the ears of the world are listening to us..." Friede Velten remarks. The global scope of the project is underscored by the radio broadcast. During the rocket launch, a master of ceremony takes to the stage and excitedly narrates the stages of the take-off. Numerous people watching in nearby terraces are only a fraction of the millions listening. The presenter gestures like the best of propagandists and recalls Joseph Goebbels. Not only the idea of using radio as a propaganda tool, the entire sequence with the presenter and the electrified audience would soon be used by Nazi propaganda. Leni Riefenstahl's *Triumph of the Will* (1935) and its mass choreography of Hitler's Nurnberg rally would be a striking example.¹³

Pulp Fiction. *Woman in the Moon* aims to portray 'serious science' but it does not disregard or mock representations of science in popular imagination—Fritz Lang himself was an avid collector of science fiction magazines.¹⁴ The scientific advisor for the film belonged to a circle of rocketry enthusiasts who wanted to kindle the public's interest in space research. The Gustav character suggests that popular fiction can help accomplish that. The boy joins the spaceflight as a stowaway because of his love of science fiction. Gustav's German magazines are about the adventures of a character named Mingo—"created by the author of Nick Carter". We catch glimpses of the cover art and titles such as "The Secret of the Exterminator Moon Rays", "Fighting with the Mad Cows from Space" and "Mingo Returns to Earth". The crew is amused by them except for the last one, which makes them ponder if they themselves would ever return to earth. The kid represents the next generation and is delighted by space exploration—thanks to pulp fiction.

Female role Model. The men of *Woman in the Moon* have obvious flaws: Heliuss is rather erratic and easily bows to pressure from the enigmatic financiers; Professor Manfeldt is an eccentric; Windegger is neither competent nor reliable; Walter Turner is malicious. If young viewers of the film looked for a role model in this film in 1929, it would most likely have been Friede Velten.

Feminism. "Do you want to shame me as a woman?" protests Friede Velten when Heliuss tries to persuade her not to undertake the space flight. Her fiancé also talks discouragingly but she is adamant. She is not simply a passenger who joins the flight but the most determined and indispensable crew member. She soon emerges as the one that is closest to the role of leader of the expedition. While Heliuss and Windegger have fits of jealousy over her, she carries out routine tasks such as keeping the logbook and filming the moon. When things take a turn for the worse, she calms others. At a critical moment, she saves the expedition by successfully resisting Walter Turner's hijack attempt of the spacecraft. At the end, when it becomes clear that one her two suitors would have to be left behind on the moon, she appears as a mediator—recalling Freder in *Metropolis*—and oversees Heliuss and Windegger drawing straws.

Parallels Gerda Maurus' character is a pioneer of space travel in cinema. Among contemporary actresses who have played astronauts are Florinda Bolkan—in dream sequences—in *Footprints on the Moon* (1975), Sigourney Weaver in *Alien* (1979), Sandra Bullock in *Gravity* (2013), Anna Hathaway in *Interstellar* (2014) and Natalie Portman in *Lucy in the Sky* (2019).

CHARACTERS

FRIEDE VELTEN Velten is a trained astronomer who is passionate about space exploration. Helius and Windegger are both in love with her. Velten is one of the five astronauts to make the journey to the moon aboard the spacecraft named after her—*Friede*. She is as enthusiastic as Professor Manfeldt and as determined as Helius. She is less certain about her feelings for the two men in her life, Helius and her fiancé Windegger.

Idealist. Velten urges Helius that she should be on board the rocket and reminds Helius of the hours they spent in the laboratory as “comrades”.

Competent Leader. Even before the space journey began, Velten was regarded as an asset of Helius Co. The foreman of the corporation praised her work by suggesting that she would soon “become the foreman of us all”.

Sentimental. Velten cries while she dresses Helius’ hand injury and she gets melancholic thinking about the earth.

Methodological. Moments of strong emotion do not hinder her valuable contribution to the flight; she keeps a journal, films the moon, and acts as a voice of reason.

Sensual and Athletic. Velten initially appears wearing a feminine evening gown. During the moon landing, she sports a blazer with a tie and baggy golf pants—similar to the young Freder’s outfit in *Metropolis*.

Robust. Velten easily climbs the rope ladder to hop in to the spacecraft. When Walter Turner tries to enter the spacecraft to hijack it, Velten inserts her forearm through the handle and uses it as a bar—obviously with great pain—to jam the door.

Compassionate. She gently comforts the dying Walter Turner moments after he recklessly attempts to leave them stranded on the moon.

Wolf Helius. The head of Helius Aviation Plants believes that a trip to the moon can and must be made. Everyone except for Wolf Helius ignores Professor Manfeldt’s unorthodox astrophysics theories and it is thanks to Helius’ resolve that the moon expedition is realized.

Professor Georg Manfeld. About thirty years ago, the professor had stirred the academic circles with his theories about the feasibility of space flight and the incentive of moon’s gold. He was banished from the university and lived in poverty. When Helius informed him about his space mission, he was overjoyed and joined the crew.

Hans Windegger. Windegger is the chief engineer of Helius Co., a close friend of Wolf Helius, and Friede Velten’s fiancé. He gets increasingly annoyed with her attachment to Helius. During the moon expedition, he emerges as the fearful and hesitant member of the crew. First he fails to do his part during the launch—pulling the lever to discard the take-off rocket. Then, he panics after the hard landing and cares only about the return flight.

“The Man who Calls Himself Walter Turner”. Turner is a shady operative acting on behalf of the elites that are referred to as “the five brains and checkbooks”. Helius has to accept him as the fifth crew member. The actor Fritz Rasp had played “the Thin Man” in *Metropolis*.

Gustav. Gustav is the boy who secretly joins the expedition as a stowaway. He is a fan of popular science fiction magazines. He is entrusted with responsibilities during the mission—most significantly when Helius decides to stay behind on the moon, he instructs the boy about launching the rocket by himself.

The Five Brains and Checkbooks (“Fünf Gehirne und Scheckbücher”). These powerful individuals control the world’s gold market (most likely among other things). The group takes an interest in the space expedition because of the theory about moon’s gold reserves. They employ crooks led by Walter Turner.

Josephine the Mouse. The professor’s pet mouse gets to join him on the space flight and receives proper credit in an intertitle.

Discussion questions

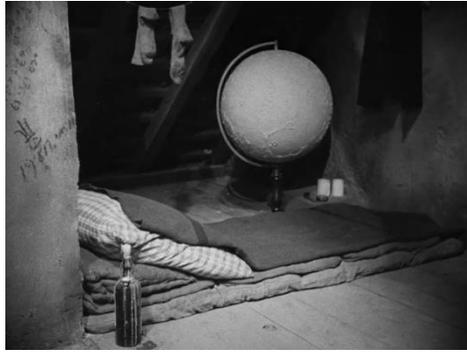
“The battleground over scientific ideas is not limited to scientific meetings and publications”¹⁵. “Fictional films are now representations of science that science consultants can utilize ... to disseminate their concepts among the general public”.¹⁶

Woman in the Moon was conceived as part of a campaign to enlighten the public about space research. Examples of contemporary films dealing with various scientific subjects would be: comets in *Deep Impact* (1998); search for extra-terrestrial intelligence in *Contact*; paleontology in *Jurassic Park* (1993); virus epidemics in *Outbreak* (1995). How do these or similar films promote certain scientific viewpoints? Are they effective in securing public’s support for the specific research programs?

What are ideas and scenes in Leni Riefenstahl’s *Triumph of the Will* (1935) that are inspired by *Woman in the Moon*?



(Velten is a scientist passionate about space research. She views herself as a “comrade” of Helius and encourages him to go ahead with the expedition. While Helius is the visionary entrepreneur, Velten is the driving force behind the flight; She is visually portrayed as the person destined to be in space (similar to *Metropolis’* young Freder who emerges as the long awaited mediator); She doesn’t seem to be too excited about marrying Windegger—perhaps marriage in general; On the day of the launch, she gets the spotlight—workers cheer for her and she shakes their hands just before climbing the rope ladder. Windegger looks on—he clearly isn’t happy about his fiancée’s popularity)



(Two dreamers: Professor Manfeldt sleeps under the skylight and by a moon globe; Gustav devours his science fiction magazine collection which includes titles such as “Mingo, Saturn Pirates by the author of Nick Carter”)





(Two Art Deco style posters of the film; similarly designed doorbell push button of Friede Velten. She is the only character to get such a 'formal' introduction in the film. Another Lang character, Dr. Mabuse had a comparable doorbell in *Dr. Mabuse the Gambler*)





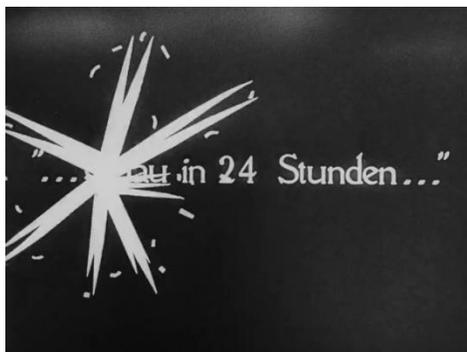
(The turning point in Professor Manfeldt's career some thirty years ago. Fellow scientists burst out laughing at his theories. When he calls them "ignoramuses", their derisive mockery turns into violent anger and they hush him)



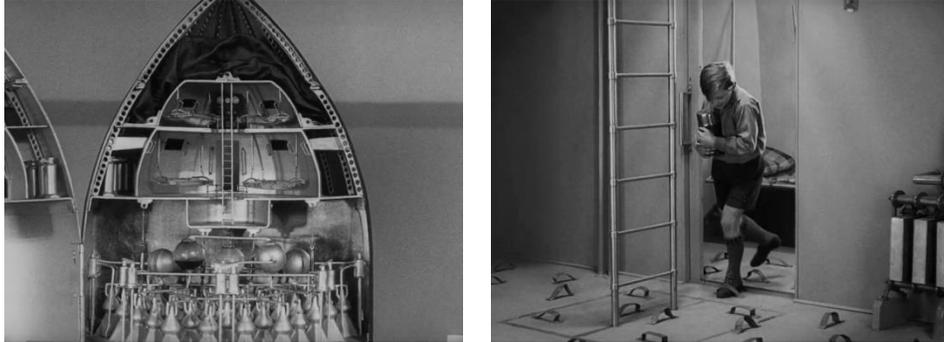
(The crew of *Friede*: Professor Manfeldt, Walter Turner, Friede Velten, Windegger, Gustav, Wolf Helius)



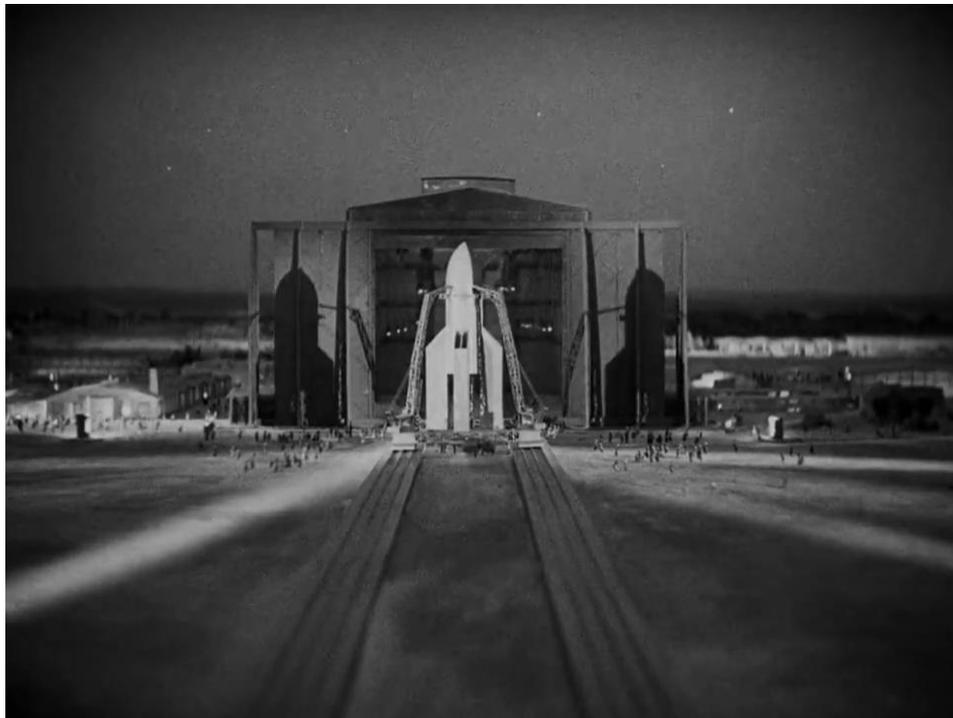
(The enigmatic group of financiers “the five brains and checkbooks” review Heliuss’ research findings. Walter Turner is their dangerous agent and the group is prepared to steal, sabotage and murder. They force themselves as partners into the space venture)



(Examples of Oskar Fischinger's brilliant special effects: Exploding text in inter-title card signifies Walter Turner's threat materializing as the sabotage of Heliuss's factory; Champagne floats in the air in the weightless environment of space; 'Call of gold' emanates from caves in the moon, luring the explorers; Heliuss' projection of the rocket's trajectory is demonstrated with an animation)

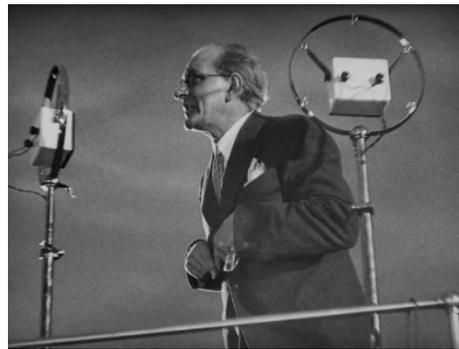


(Examples of scientific realism—detailed model of the rocket; multiple straps on the cabin floor keep the spacefarers grounded in the weightless atmosphere)





(The lengthy launch scene with aerial views of the hangar predates real launches that would take place decades later)



(The launch is organized as a mass spectacle; it is broadcast and narrated by a presenter / propagandist whose gestures remind one of Joseph Goebbels; Lang visualizes the millions listening to the broadcast with one image)



(The detail oriented depiction of space travel can at times be discomfoting: Walter Turner suffers terribly with the increasing pressure during the first minutes of the take-off and eventually faints; French language poster of the film focuses on this claustrophobic scene)



(*Women in the Moon* is also a melodrama; According to Tom Gunning, it is “a film about space in both senses of the word”. The explorers negotiate the vast emptiness which is overbearing)



(Because of damaged oxygen tanks, only one of the men can make the trip back. They draw straws and Windegger becomes devastated after he loses. Friede Velten mediates in a composition recalling *Metropolis* and Freder's reconciliation of the workers with their boss; the compassionate Friede comforts fatally wounded Walter Turner—moments after they had a fierce struggle to control the spaceship; Friede chooses to forsake the earth and stay on the moon with Helius, recalling "the nation of two" of Kurt Vonnegut's *Mother Night*)

- ¹ Bogdanovich, Peter. *Fritz Lang in America*. NY: Praeger. 1967, 125
- ² Ibid, 20
- ³ Neufeld, Michael J. "Weimar Culture and Futuristic Technology: The Rocketry and Spaceflight Fad in Germany: 1923-1933". *Technology and Culture*. 31 (Oct 1990), 725
- ⁴ Kirby, David A. "Science Consultants, Fictional Films, and Scientific Practice". *Social Studies of Science*, Vol. 33, No. 2. (Apr., 2003), 245. *Jstor*. www.jstor.org/stable/3183078. Accessed 8 Jan. 2020.
- ⁵ Hughes, Jon. "From Fritz Lang to Frank Schätzing: A Century of Moon Fantasies in German Popular Culture". Unpublished paper delivered to 'Moonshot' – a cross-faculty symposium at Royal Holloway, 16 December 2009 https://www.academia.edu/39853701/From_Fritz_Lang_to_Frank_Schätzing_A_Century_of_Moon_Fantasies_in_German_Popular_Culture. *Academia*. Accessed 6 Jan, 2020.
- ⁶ Kirby, 251
- ⁷ Searle, Adrian. Oskar Fischinger: the animation wizard who angered Walt Disney and the Nazis <https://www.theguardian.com/artanddesign/2013/jan/09/oskar-fischinger-animation-disney-nazis>. January 9, 2013. Guardian News & Media Limited. Accessed 3 Jan. 2020
- ⁸ Moritz, William. Fischinger at Disney, or Oskar in the Mousetrap (1977, Excerpt) <http://www.centerforvisualmusic.org/OFMousetrap.htm>. *Center for Visual Music*. www.centerforvisualmusic.org. 2018. Accessed 5 Jan. 2020
- ⁹ Ibid, 20
- ¹⁰ O'Callaghan, Jonathan. "A Japanese Billionaire Wants A 'Single Woman' To Go To The Moon With Him On A SpaceX Rocket In 2023". *Forbes*. <https://www.forbes.com/sites/jonathanocallaghan/2020/01/12/a-japanese-billionaire-wants-single-women-to-go-to-the-moon-with-him-on-a-spacex-rocket/#4a8bc16415f7> Uploaded 12 Jan 2020. *Forbes Media LLC*. Accessed 12 Jan, 2020
- ¹¹ Gunning, Tom. *The Films of Fritz Lang: Allegories of Vision and Modernity*. London: British Film Institute. 2000, 173-174
- ¹² Neufeld, 729
- ¹³ Gunning, 174
- ¹⁴ Gold, H.L. "Of All Things". *Galaxy*. December 1959. (Vol. 18, No.2). Accessed 15 Dec. 2020.
- ¹⁵ Kirby, 259
- ¹⁶ Ibid, 242