CLASSIC SPACE STORIES

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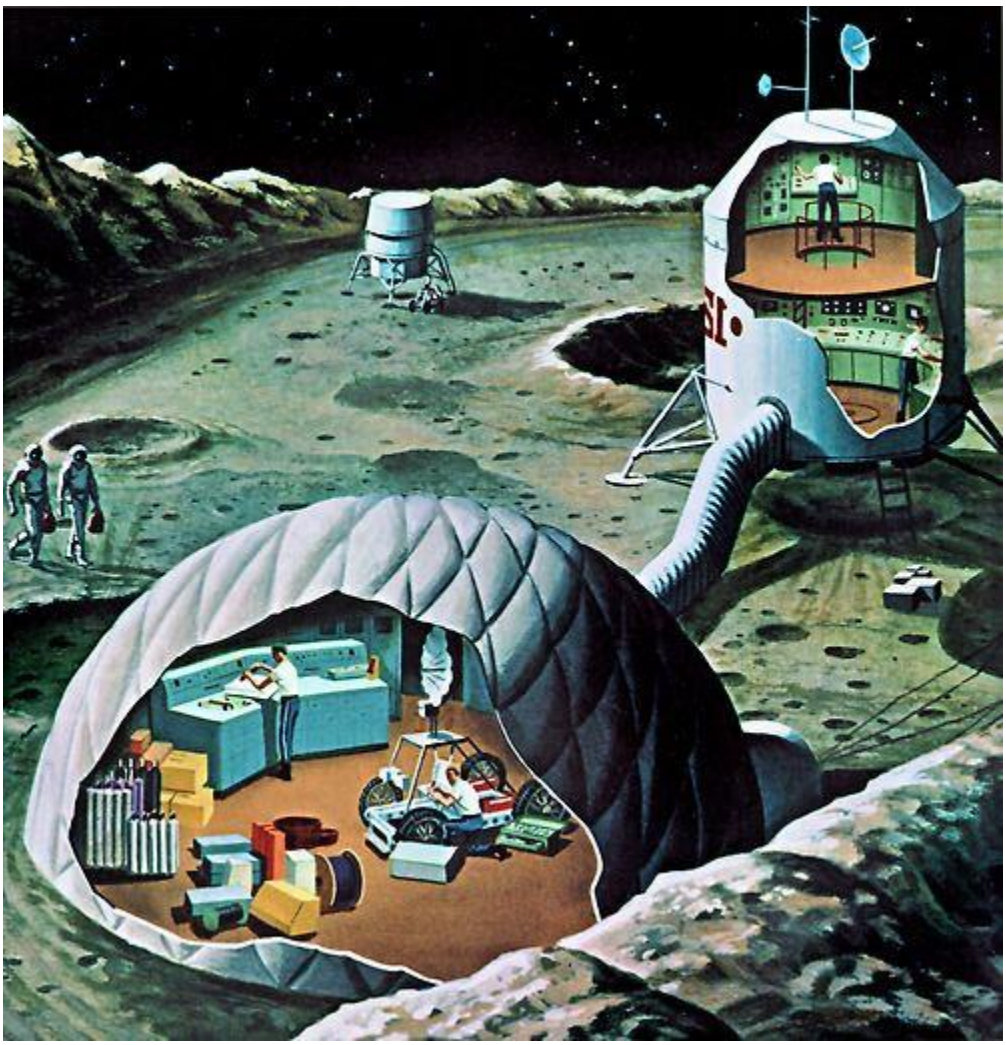

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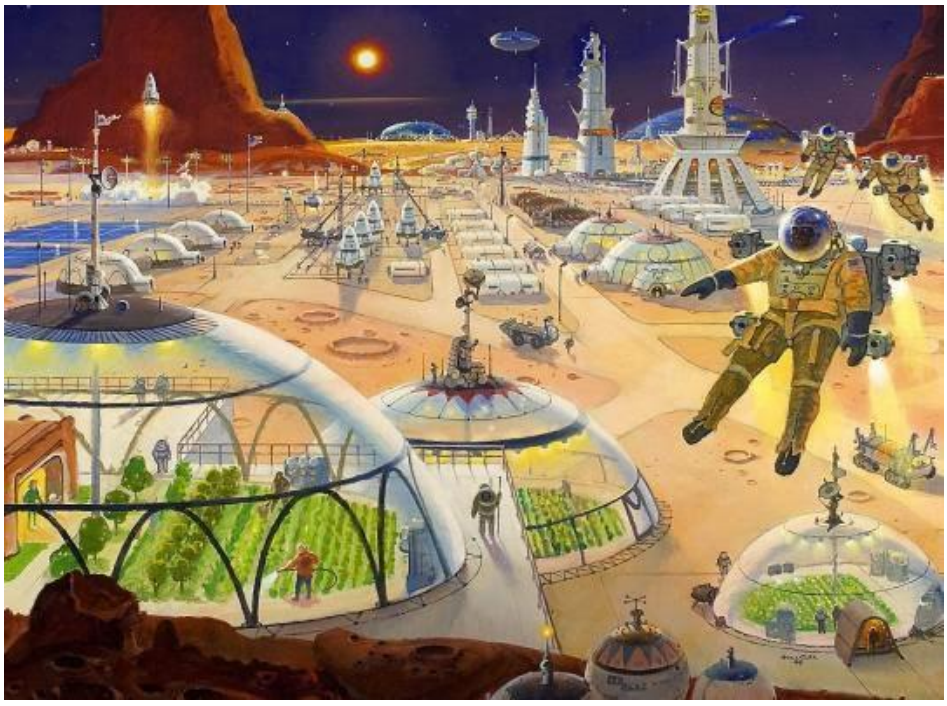
For each of the six sessions
you will find:

- **Class Discussion Questions**
- **Photos**
- **Links to articles, reviews, biographies, and relevant YouTube videos**



SESSION ONE:

FORBIDDEN PLANET

CLASS DISCUSSION:

1. In what ways does this 1956 film, especially the first half, promote stereotypical ideas about women and men? Or, put another way, in what ways is this film's presentation of men and women typical of 1950's American media.

2. In a related question: The 50s gave us such hits as ***LEAVE IT TO BEAVER, THE ADVENTURES OF OZZIE AND HARRIET, FATHER KNOWS BEST, THE HONEYMOONERS, THE DONNA REED SHOW, MAKE ROOM FOR DADDY***, among others. How does this film fall into that tradition?

3. Do we ever see the Krell? How does that add to the impact of the film?

4. In Shakespeare's TEMPEST, when Miranda first sees humans--specifically men--other than her father Prospero, she exclaims:

> O, wonder!
> How many goodly creatures are there here!
> How beauteous mankind is! O brave new world,
> That has such people in't!

When Alta first sees the Captain and two of his companions, she declares:

> I've always so terribly wanted to meet a young man, and now three at once...You're lovely, Doctor. Of course, the two end ones are unbelievable.

Just as Miranda develops and matures over the course of Shakespeare's play, so does Alta. In what ways does Alta "grow up" in ***FORBIDDEN PLANET***?

5. Discuss the importance of Robby the Robot to the overall drama. How is he connected to the Krell? What is the film's attitude towards such technology?

6. Though we are now used to spectacular special effects in films, in what ways are the art direction and special effects of ***FORBIDDEN PLANET*** still impressive?

7. Describe and discuss what you feel is the main "message" of the film? Is there more than one message? What are they?

Cast

Walter Pidgeon as Dr. Edward Morbius
Anne Francis as Altaira "Alta" Morbius
Leslie Nielsen as Commander John J. Adams
Robby the Robot as Himself
Warren Stevens as Lt. "Doc" Ostrow
Jack Kelly as Lt. Jerry Farman
Richard Anderson as Chief Quinn
Earl Holliman as Cook
George Wallace as Bosun
Robert Dix as Grey
Jimmy Thompson as Youngerford

James Drury as Strong
Harry Harvey, Jr. as Randall
Roger McGee as Lindstrom
Peter Miller as Moran
Morgan Jones as Nichols
Richard Grant as Silvers
Frankie Darro, stuntman inside Robby the Robot (uncredited)
Marvin Miller, voice of Robby the Robot (uncredited)
Les Tremayne as the Narrator (uncredited)
James Best as a C-57D crewman (uncredited)
William Boyett as a C-57D crewman (uncredited)

Forbidden Planet

by Ian Olney [edited by Dr. Bill Thierfelder]

Visually stunning and thematically rich, Fred M. Wilcox's "Forbidden Planet" is a landmark film in science-fiction cinema. Set in the twenty-third century, it tells the story of a United Planets space cruiser sent to the distant world of Altair IV to investigate the fate of a group of colonists with whom Earth has lost contact. Upon landing, the ship's commander, J.J. Adams (Leslie Nielsen), and his crew learn that most of the colonists are dead, the victims of a mysterious planetary force. The sole survivors are a scientist, Dr. Edward Morbius (Walter Pidgeon), and his teenage daughter Altaira (Anne Francis), who live comfortably in a fortified home, their needs tended to by a mechanical servant, Robby the Robot. Morbius insists that he and Altaira are perfectly safe and demands that their would-be rescuers leave them in peace. That night, however, the space cruiser is sabotaged, temporarily stranding the commander and his crew on Altair IV. Adams eventually discovers that Morbius is responsible. Shortly after the colonists' arrival, the scientist discovered ancient technology left behind by the Krell, an advanced alien race that once ruled the planet but destroyed themselves with a machine that gave form to their thoughts, including their sub-conscious fears and desires. Activating the machine, he unwittingly unleashed his own "monsters from the Id," killing the other colonists, who, unlike him, wanted to return to Earth. Since Adams is again attempting to remove Morbius from Altair IV, the scientist's "evil self"—a gigantic, invisible beast—has targeted the commander and his crew. Ultimately, confronted with his guilt and fearful of the Krells' technology falling into the wrong hands, a stricken Morbius sends Altaira back to Earth with Adams and programs the machine to self-destruct, blowing himself up along with the rest of the planet.

"Forbidden Planet" was not the first science-fiction film to emerge from Hollywood in the 1950s, a decade that saw an explosion in the genre's popularity. It was preceded by a number of key pictures, including monster movies like Gordon Douglas's "Them!" (1954) and alien invasion films like "The Thing from Another World" (1951), ghost-directed by Howard Hawks. Its release, however, represented a water-shed moment in the history of sci-fi cinema. At the time, science fiction was generally considered "B" movie fare, matinee fodder for juvenile audiences. "Forbidden Planet" changed that. Produced by Hollywood's most glamorous studio,

MGM, on a then-extravagant budget of almost two million dollars, it catapulted the genre to mainstream respectability, paving the way for the blockbuster sci-fi films of today.

That "Forbidden Planet" aspires to be something more than a "B" movie is evident, in the first place, from its writing. The script, which evolved over several years and two separate drafts—the first by Irving Block and Allen Adler, and the second by Cyril Hume—is modelled after a classic work of dramatic literature: William Shakespeare's "The Tempest," the tale of a shipwreck that maroons a party of Italian aristocrats on an island inhabited by a sorcerer, his daughter, and his enchanted servants. Shakespeare's characters have clear analogues in the film. The sorcerer Prospero is Morbius, who has harnessed the magic of advanced technology; the daughter Miranda is Altaira; the loyal sprite Ariel is Robby the Robot; and the mutinous native Caliban is Morbius's "evil self." The movie broadly follows the play's plot, too. Commander Adams and his crew are stranded in a remote location, just like Shakespeare's sailors; a romance develops between Adams and Altaira, as it does between Shakespeare's lovers, Ferdinand and Miranda; and Morbius finally overcomes his demons and destroys the Krells' machine, a climax that recalls Shakespeare's own, in which Prospero defeats the rebellious Caliban and renounces his magical powers.

This literary pedigree sets the film apart from other, less narratively-sophisticated sci-fi movies of the period. The script is also unique in its generally liberal outlook and serious treatment of adult themes. Among other things, the film can be read as a cautionary tale about the dangers posed by technological advancements during the Cold War: the Krells' machine (which is powered by a giant thermo-nuclear reactor) works as a potent metaphor for the hydrogen bomb, a marvel of modern scientific engineering that nevertheless, because of the darker impulses of human nature, threatened the future of the entire planet in the fifties.

"Forbidden Planet" also distinguishes itself from its "B" movie predecessors [because of] its lavish production values. Shot in *CinemaScope* and *Eastman-color*, it is arguably the first science-fiction spectacular, pulling out all the stops to wow its audience with visual excess. Cedric Gibbons's imaginative art direction makes the most of the film's novel setting (it was the first movie of its genre to take place entirely in interstellar space, on another world), conjuring an utterly alien landscape with a combination of finely-detailed sets, evocative matte paintings, and inventive props. The movie's special effects, cutting-edge in the 1950s, are still impressive today: stop-motion animation and optical printing, among other techniques, are used to create convincing images of flying saucers and laser battles. For the film's most famous effects sequence, when the monster from Morbius's subconscious attacks Adams's ship and is rendered visible by the crew's electrical defenses, Walt Disney (in a rare instance of artistic collaboration) loaned MGM a team of animators headed by Joshua Meador to bring the creature to life on screen. The picture's soundtrack is groundbreaking as well, boasting the first totally electronic score. Its eerie tonalities, composed by avant-garde musicians Bebe and Louis Barron, contribute immeasurably to the film's otherworldly atmosphere. In all these ways, "Forbidden Planet" elevated science fiction as a Hollywood genre, effectively reintroducing it to audiences as a brand of cinema capable of stimulating the intellect as well as the imagination. Its influence did not end there.

The film's central concept—the idea of a space navy tasked by an inter-planetary federation with exploring the distant reach-es of the galaxy and helping out alien worlds in need—was a major source of inspiration for Gene Roddenberry's classic sci-fi television series "Star Trek" (1966-1969), which also drew on the movie's production design and effects for the look of its phasers and transporters. And the film's most memorable prop, the glass-domed,

bubble-limbed Robby the Robot, which later appeared in Herman Hoffman's "The Invisible Boy" (1957) and on a number of television shows from "The Twilight Zone" (1959-1964) to "Lost in Space" (1965-1968), clearly shaped George Lucas's vision for the android servants C-3PO and R2-D2 in "Star Wars" (1977) and its sequels.

But the most important contribution the picture made to science-fiction cinema was rescuing the genre from the "B" movie ghetto. It is difficult to imagine recent sci-fi blockbusters like James Cameron's "Avatar" (2009) and Ridley Scott's "Prometheus" (2012)—indeed, it is difficult to imagine science fiction as a cornerstone of contemporary Hollywood cinema—without "Forbidden Planet."

The views expressed in this essay are those of the author and do not necessarily represent the views of the Library of Congress.

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Forbidden Planet is Still Essential and Subversive Sci-Fi

Jim Knipfel [edited by Dr. Bill Thierfelder]
Mar 15, 2019

Despite the sudden and unexpected explosion in the popularity of science fiction films in the early 1950s, [several] major studios were resistant to the trend, considering the genre to be B-film fodder at best, and at worst childish gutter trash that was beneath them. When it became apparent just how much money could be made with sci-fi, however, most eventually relented. One neat trick that was used to justify taking the dive while preserving a bit of pride and self-respect was to produce lavish, big budget Technicolor adaptations of established sci-fi literary classics. As a result we ended up with George Pal's versions of ***War of the Worlds***, ***The Time Machine***, and Philip Wylie's ***When Worlds Collide***. [And when] George Pal [tossed in] his trademark heavy-handed Christian subtext, everyone was happy: kids, parents, the studio, the censors... everybody.

An even neater trick, it turned out, was to slip the audience a literary mickey, disguising a classic play [...] as a wild, colorful, and imaginative sci-fi film with [flying saucers, alien planets,] and robots [...] That way, [...] you can sucker the kids into the theater without them even noticing they were being cultured. The studio can cash in [...] on some of that dumb sci-fi nonsense, make oodles of money, and pat themselves on the back at the same time for performing their responsible civic duty by enlightening and enriching the masses. See?

Okay, I don't know if that was exactly the thinking at MGM around 1955, but that's pretty much how it boiled down. MGM hadn't made a science fiction film [in decades], and studio chief Dore Schary seemed intent on keeping it that way. MGM was a prestige studio after all, best known for making lavish epics and musicals. Leave that spaceship and alien monster [nonsense] to Universal [Studios].

That's why almost everyone at [MGM] was a little shocked when Schary greenlit a script entitled ***Fatal Planet***. He'd only agreed to a B-film budget, but it was still the last thing anyone expected. Maybe it was that classy Shakespeare angle that hooked him.

Shakespeare's ***The Tempest*** concerns a handful of shipwrecked survivors who find themselves cast ashore on a desolate island, the unwelcome guests of an ornery but powerful wizard and his lovely but sheltered young daughter. It didn't require much imagination to take that premise and set it in a sci-fi context. Change the wizard to a mad scientist, the island to a small and distant planet, and the shipwrecked crew to a group of astronauts on a rescue mission, and you're good to go.

So that's essentially what screenwriters Irving Block and Allen Adler did. Set on Mercury in that mystical and futuristic year 1977, ***Fatal Planet*** concerned a mission to check on a scientist and his daughter, who'd crash-landed on the planet some 20 years earlier. Fearing it was all a little too deadly serious [...], Schary brought in screenwriter Cyril Hume to punch up the humor and generally liven things up a bit.

Block and Adler's basic storyline remained intact more or less, but along with changing that title to the more crowd-wowing ***Forbidden Planet***, Hume's rewrite moved the action from a mere two decades in the future to the 23rd century, and from boring old Mercury to the much more distant and exotic Altair IV. He revamped [several of] the character names as well, most significantly changing the reclusive mad scientist from "Dr. Adams" to "Dr. Morbius" (a variation on German mathematician Moebius...). Most important of all, he staffed the United Planets C-57D with a crew of horny wiseacres and a drunken cook, as well as giving a central role to a comically helpful robot with a dry sense of humor.

With a solid script in hand, Schary tapped Fred M. Wilcox, best known at that point for his ***Lassie*** films, to direct. Walter Pidgeon grew a goatee to play the accidentally sinister Dr. Morbius, the young and beautiful Anne Francis, who'd just had her first leading role in the previous year's ***Blackboard Jungle***, was signed to play his lovely but naive daughter Altaira, and Leslie Nielsen came aboard as the stalwart and square-jawed Commander Adams. All three were under the impression at the time they'd just be making a cheap B-quickie.

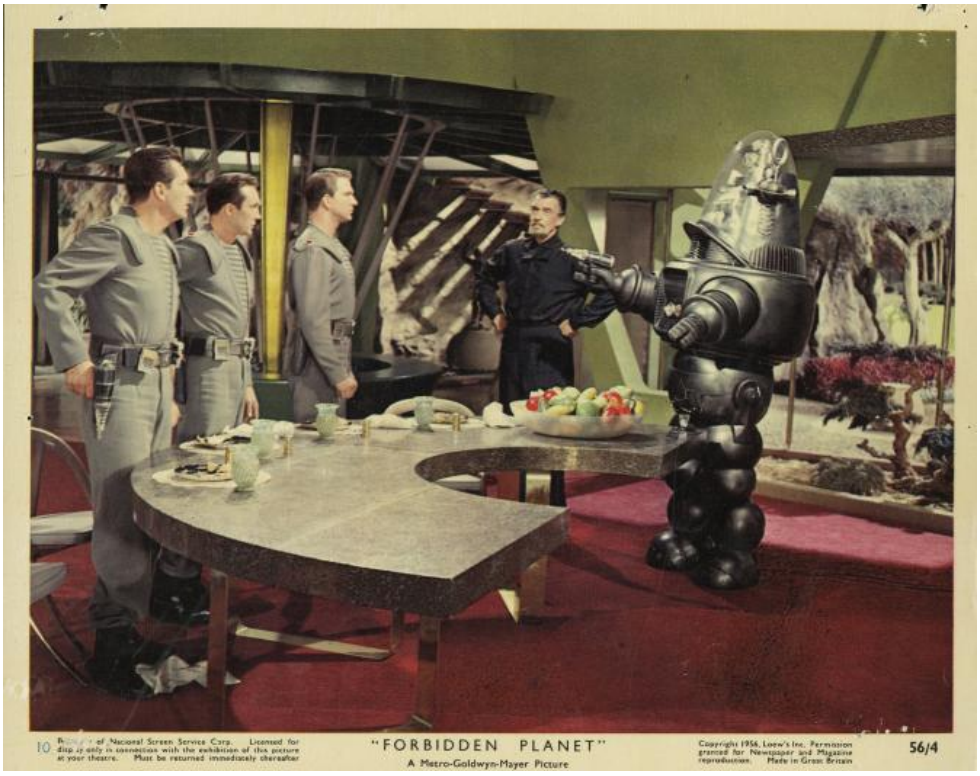
Although ***Forbidden Planet*** began production with a B-film budget, the art department, which had apparently been waiting years for an opportunity like this, went a little nuts, building massive sets and intricate props which quickly ballooned the budget up to near $2 million, unheard of at the time for a [non-George Pal] science-fiction film. The C-57D, Robby the Robot, and Robby's transport sled alone cost nearly $200,000 to design and build. But they knew what they were after, and they got it. Even Schary eventually caved, agreeing to shoot the film in glorious Technicolor and CinemaScope

[...] While most sci-fi of the era focused on alien invasions of one kind or another, or visitations from well-meaning but misunderstood communist extraterrestrials, or trips through outer space that go somehow terribly wrong for a while, ***Forbidden Planet*** was among the first to try, in

wildly imaginative terms, to describe a spectacularly advanced but extinct alien civilization, and all without a single alien in sight.

We [never see] what the Krell looked like or how they lived. [We learn] precious little about them at all, save for the handful of tools and machines (and what machines they are) they left behind. The only threat here, the only monsters, are recognizably human. It was a very different approach that forced audiences to use their own imaginations to stretch far beyond what they were shown on the screen. But what they were shown on the screen was a pretty good starting point.

Visually, the finished film, with its blend of massive and elaborately detailed sets, matte paintings, rear projection, animation, and assorted other tricks is still dazzling, a clear and deliberate attempt to not only ape the look and feel of George Pal's earlier sci-fi extravaganzas (particularly ***When Worlds Collide***), but to outdo them. There was one major difference between Pal's films and ***Forbidden Planet***, however: while Pal always found a way to insert that ham-fisted Christian subtext into whatever he touched, Hume's script traded out God for Sigmund Freud, nestling him in there neatly beside the Shakespeare. It was a move that not only made it unique among its contemporaries, but still quietly subversive today.



Freud had been a major celebrity in Europe in the '20s and '30s, especially among intellectuals and the upper classes, but his ideas didn't really begin filtering down to the American mainstream until the mid-'40s, thanks in no small part to Alfred Hitchcock. Hitchcock was more than a little obsessed with psychoanalysis, and began working it into his films whenever possible, starting with ***Spellbound***. By the mid-'50s psychoanalysis had become the new suburban religion in America. Working Freud into an adult murder mystery is one thing, but

working it into a science fiction film at the time (even one based on Shakespeare) is another animal completely. I mean, sci-fi films with robots and spaceships were aimed at kids, but Freud is all about sex, right? More than that, he's all about *WEIRD* sex! So what the hell?

But it's all up there on the screen, ranging from obvious shtick like Altaira's skimpy outfits and the mild mid-'50s innuendo bandied about by the [sex-starved] space cadets to subtle literary references (Altaira's changing relationship with her pet tiger hinting she's no longer a virgin), to the whopper: Dr. Morbius' invisible and unstoppable Monster of the Id, which only reawakens when Commander Adams suggests they bring Altaira back to Earth with them, revealing Morbius' affection for his daughter runs a bit deeper than what might be considered seemly back in civilization.

All that wild sex aside, it remains a film that boasts a number of firsts. It was the first film in which a robot was given his own onscreen credit. It was also the first film to be released with a purely electronic score. Five years earlier, Bernard Herrman's score for Robert Wise's ***The Day the Earth Stood Still*** was recognized as the first film score to feature a Theremin front and center, though it was still accentuated by a small but standard ensemble of piano, strings, brass, and woodwinds.

The tweeks and twonks, and blorps composed by experimental beatnik musicians Bebe and Louis Barron (and their homemade Moog) were so unusual at the time they weren't even called "music" in the credits, but rather "Electronic Tonalities." Although, a more traditional score had been written for the film, in the end the producers decided to go with the Barrons and threw the original score away. It was a wise choice. Without that strange and bubbling alien music, the picture likely wouldn't have had the impact it did.

The film was released [in] March in 1956, [and] audiences loved the film, critics loved it just as much, and on the surface anyway, it seemed to be a big hit worldwide. But considering it started out with that whopping $2 million budget, in hard, cold economic terms, ***Forbidden Planet*** only cleared a little over $210,000 [once the budget had been paid off], and so in the studio's eyes it

was a meager success at best, a failed experiment at worst. Rumor has it that Schary was forced to step down shortly afterward for backing this folly.

Director Fred Wilcox only made one other film, then died. That fast and bulbous Robby the Robot and the C-57D had long and busy careers afterward, however, both appearing in several episodes of ***The Twilight Zone***, ***The Outer Limits***, and several other shows. And Gene Roddenberry cites ***Forbidden Planet*** as the most fundamental of inspirations for ***Star Trek***, and in fact countless direct nods to the film can be spotted not only throughout the original series, but most of the spin-offs as well.

Six decades on, its influence can be seen in everything from Disney's ***The Black Hole*** to ***Prometheus***, but [arguably] there's yet to [have been] another onscreen android as cool as Robby.

'Forbidden Planet' Review: Classic Science-Fiction Movie

© Dan Schneider [edited Dr. Bill Thierfelder]
https://www.altfg.com/film/forbidden-planet/ Retrieved April 2019

When one thinks of 1950s science-fiction films, one thinks of the sort of schlocky black-and-white B movies that were parodied on the old *Mystery Science Theater 3000* television show. Yet, while there were a whole lot of films like *Plan 9 from Outer Space* and *Robot Monster*, the 1950s did have some truly good sci-fi movies, among them *The Day the Earth Stood Still*, *The Incredible Shrinking Man*, *Invasion of the Body Snatchers*, *The War of the Worlds*, and *The Thing from Another World*.

For its literacy and production values, the best of the bunch was undoubtedly MGM's first big foray into A-level science-fiction, *Forbidden Planet*, released in 1956. The 98-minute color film directed by Fred M. Wilcox features state-of-the-art special effects and is endowed with Cyril Hume's solid screenplay from Irving Block and Allen Adler's screen treatment "Fatal Planet," which adapted sections of William Shakespeare's *The Tempest*.

Upon its release, *Forbidden Planet* drew raves for its Oscar-nominated special effects, its electronic music score by Louis and Bebe Barron (though credited as Electronic Tonalities, to avoid music guild fees), vivid matte paintings inspired by Chesley Bonestell, and the famed Monster of the Id (MOTI), which was animated by Joshua Meador, on loan from the Walt Disney studios.

Even more famous was the appearance of Robby the Robot, who would be featured in *The Invisible Boy* as well as in several 1960s sci-fi TV shows such as *The Twilight Zone, Night Gallery*, and *Lost in Space*. A couple of decades later, Robby had a cameo in *Gremlins* (1984).

As for its plot, *Forbidden Planet* offers a simple but elegantly constructed tale filled with humorous asides that leaven the forced "love story" aspect in the film.

In the 23rd Century, the United Planets Cruiser C-57D – a flying saucer led by Commander J.J. Adams (Leslie Nielsen, long before his *Police Squad* days) – is en route to the planet Altair IV to investigate what happened to the crew of the Bellerophon, sent to that planet twenty years earlier. After a year's journey, they encounter the lone survivor of the party, Doctor Edward Morbius (Walter Pidgeon), a philologist and Prospero stand-in; his gorgeous blonde daughter Altaira (Anne Francis), or Alta, the Miranda character in a pre-1960s miniskirt; [the MOTI, {a variation on Caliban},] and Robby the Robot, the domestic servant who is the [Ariel] counterpart.

Morbius warns the crew of a mysterious force that killed the Bellerophon party in their first year, even though he was immune to it. After a midnight attack that kills one of the ship's men, Adams confronts Dr. Morbius, who explains that below his home is a machine – 7,800 levels high and powered by 9,200 nuclear reactors – the only remnant of the extinct Krell race, which perished 200,000 years earlier in a single night after a million years of high culture.

In the meantime, Adams and his number two, Lt. Farman (Jack Kelly), vie for Alta's affections. And MOTI attacks again.

Forbidden Planet, as literate and well-acted as it is, would not be such an iconic film without Robby the Robot, who can speak 188 languages, including dialects and sub-tongues. Robby steals every scene he's in, whether telling Adams, who comments on the planet's high oxygen content, that "I rarely use it myself, sir. It promotes rust," or zapping a little monkey who tries to steal fruit from a bowl.

There are also some interesting claims regarding technology. [...] Many of the [...] devices found in *Forbidden Planet* seem [quite] plausible [to a 21st century audience]. Unlike the large industrial technology in later sci-fi films, the sleek, minimalist designs of much of the ship's equipment mirror technology getting smaller and better. The film also follows Isaac Asimov's *Three Laws of Robotics*, a bonus for sci-fi fans as it has had an obvious influence on the *Star Trek* and *Star Wars* franchises.

Leslie Nielsen, Anne Francis, Robby the Robot, *Forbidden Planet*.

[...] It's worth pointing out that despite ***Forbidden Planet***'s 'happy ending,' there is the possibility that the MOTI is still dormant inside Alta. After all, she is her father's daughter, and had an even more vivid nightmare than her father did when the MOTI attacked the ship a second time. Also, the film wisely only 'shows' the MOTI once, and *never* shows the Krell, for the imagination can [often] conjure greater scares than the best special effects [department can]. Additionally, ***Forbidden Planet*** makes good use of narrative ellipses to condense the tale, something that far more realistic art films often fail to do.

Unlike other sci-fi films that are rather obvious Cold War allegories, ***Forbidden Planet*** is one of those rare productions that both define and transcend their era. Watch it and you'll agree – though you'll sleep a little less easily afterwards.

SESSION TWO:

THE WAR OF THE WORLDS

1906 illustration for Belgian edition

CLASS DISCUSSION:

1. The social commentary in ***The War of the Worlds*** is thick, but it continues to attract a multitude of readers, and the depiction of civilization collapsing in gallant resistance against an implacable enemy is grand, even moving. Science fiction writers ever since have used their fantasies as vehicles for commenting on society, but few fire the imagination the way Wells does. Approach the novel from the angle of its social commentary. What does this book say about human society in general and perhaps British Imperial culture specifically.

2. Approach this novel as an apocalyptic vision; it portrays our civilization collapsing into ruins, with good and bad equally destroyed. What makes this vision stirring?

3. How well is the climax of the novel developed? Do you think the highly evolved Martians would forget something like disease? Is the climax forced too much to fit Wells' social commentary (when something is gained, something is lost) at the expense of a coherent plot?

4. What are the parallels between the events in ***The War of the Worlds*** and the history of colonial empires? Don't stop with Western civilization's expansion; note the parallels in the history of Eastern empires, as well as the violent invasions of the Middle East and Europe by Huns, Mongols, and others. What generalizations about humanity is Wells making with his tale of conquest and utter defeat?

5. Some characters have names that represent their professions. Catalogue these and see whether Wells is making any comments about the kinds of people they represent.

6. Some readers are particularly annoyed by the Curate. Is Wells using him as an allegorical figure to say that religion is irrelevant?

7. ***The War of the Worlds*** draws on some of the popular, as well as serious, science of its era. For instance, some scientists really thought that there were canals on Mars, although such an idea is no longer taken seriously. Indeed, scientific views have changed greatly since the time Wells wrote ***The War of the Worlds***. Using this novel as an example, how dependent are science fiction writers on the science of their times? What does ever-changing scientific knowledge do to how audiences respond to a science fiction novel?

8. Why, with all of Earth to choose from, would Martians target England? Try approaching this topic from the view of the 1890s.

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Summary

During the astronomical opposition of 1894, when Mars is closest to earth, a number of observatories spot a flash of light emanating from the red planet's surface. Night after night, the planet seems to ignite for a moment. The narrator himself witnesses this through a telescope owned by his friend, an astronomer named Ogilvy. Although both men are excited, Ogilvy assures the narrator that it's quite unlikely there are living beings on Mars. The local newspapers, for their part, are slow to report on the anomaly, and when they do, they don't ascribe much significance to it.

In the small hours of morning after many consecutive nights of the strange Martian flashes, a greenish flame sweeps across the sky and crashes into a sandpit near Ogilvy's house in Horsell, England. Thinking he's seen a meteor, he rushes outside to find the object. When he arrives, he finds a large cylindrical mass embedded deep in a crater caused by its own impact. As he watches, the end of the projectile begins to unscrew, and he sees what he thinks are men, half burnt to death, trying to escape from inside. Scrambling out of the pit, Ogilvy runs toward Woking, where he meets a wagoner who ignores him because he looks and sounds insane.

Finally, Ogilvy finds Henderson, a journalist from London who quickly follows him back to the pit before sending a telegraph to London.

1906 illustration

Slowly but surely, the cylinder from Mars attracts large crowds, which stand around the edge of the pit waiting for something to happen. It seems the cylinder is about to open when the heavy lid finally falls to the ground, causing the panicking crowd to go quiet. From the dark cavity emerges a dark, greyish creature, about the size of a bear, with "luminous discs" for eyes and snake-like tentacles. Just as this creature emerges into the pit, a new one appears in the opening of the cylinder, at which point the narrator sprints toward the trees for cover. Looking back, he sees the head of a man who had fallen into the pit try to escape before suddenly falling backward with a scream.

While the narrator slinks through the woods—too afraid to go near the pit—a group of men (including Ogilvy and Henderson) approach the cylinder with a white flag. As they near the Martians, a blinding light jumps forth and incinerates them. The crowd breaks into terror as the Martians start wreaking fiery havoc on Horsell Common, burning people and trees and everything in the vicinity. The narrator goes home, where he finds his wife and tells her everything he's seen. He and his wife sit down to dinner and eat a calm meal while he assures

her that the aliens won't harm them because the force of gravity on earth is too strong to allow Martians to roam freely across its surface. This seems to quell both his and her nerves, despite the fact that the narrator obtained this information from Ogilvy, who has just been killed by Martians.

Scene from 2019 BBC adaptation

The next day, with the memory of the Martians fresh in their minds, the narrator's fellow Englishmen surprisingly go about their everyday duties. Some people talk about the disaster excitedly, as if discussing entertaining current events. Meanwhile, a group of soldiers approaches Horsell Common and establishes a perimeter around the pit. Late that night, another cylinder falls from the sky, landing not far from the first. The next day, fighting breaks out between the humans and the Martians, and it quickly becomes clear that human weapons are no match for the Martians' Heat-Ray. The narrator and his wife decide to escape to the house of some relatives in Leatherhead, a short trip from their home in Woking. The narrator goes to a nearby inn and borrows a horse and a cart, which he uses to transport his wife to Leatherhead before turning back to Woking to give back the horse, having promised the innkeeper to have it back by midnight. By the time he makes it back to Woking, however, a third cylinder has arrived, and he looks up from the road to catch sight of a terrifying image: a large machine with three legs towering in the distance. The machine goes about smashing everything in its way while firing a Heat-Ray, and the narrator abandons the horse. Not long after, he finds the innkeeper's dead body, and then makes his way to his own house, where he takes refuge for the night.

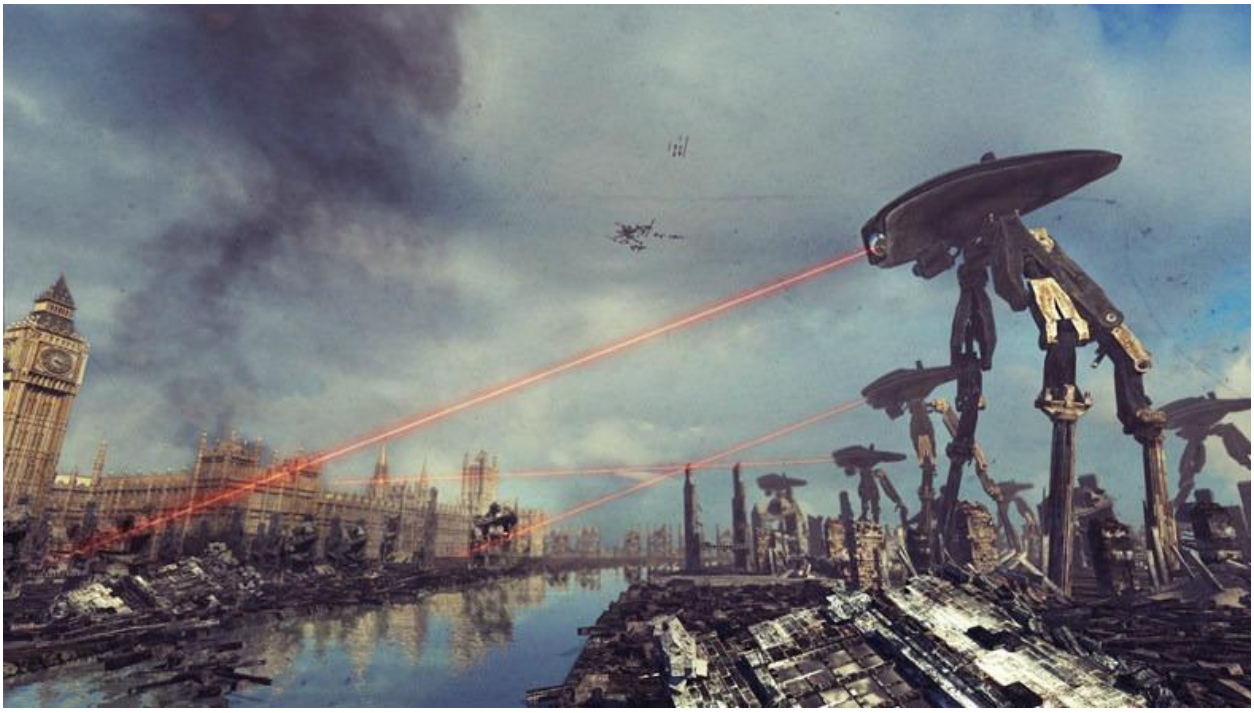
While hiding in his house, the narrator meets an artilleryman who has fled the pit and stumbled onto his property. The artilleryman tells him about the destruction wrought by the Martians and their fighting machines. The two men decide to set out together, the narrator wanting to meet up with his wife in Leatherhead, the artilleryman hoping to meet up again with his battery. On their way, they encounter scores of people running madly from five fighting machines, which discharge their Heat-Rays, torching everything around them. Realizing that water will protect him from the Heat-Ray's blasts, the narrator jumps into a stream, and others

around him follow suit. At the same time, a large gun hidden by military fighters fires a shot that explodes in the face of one of the fighting machines. This shot takes down the machine, and the other machines flock to their fallen comrade before unleashing total fury onto the landscape with the Heat-Rays. The narrator passes out on the riverbank, narrowly avoiding getting stepped on by a machine before he's left alone.

Scene from 2005 Stephen Spielberg film version

The fighting machines return to their pit in Horsell Common, pulling their dead friend along with them. Meanwhile, the narrator notes that a new cylinder arrives every day, and the Martians grow increasingly powerful as they build their machines, which apparently can also discharge a deadly black smoke. During this time, the narrator wanders through the woods and eventually comes upon a frightened, hysterical curate, who asks the narrator what sins they could have committed to deserve such a punishment. The narrator responds by telling the curate to be a man, and asks what religion is good for if it "collapses under calamity." Although he dislikes the curate, the narrator agrees to travel with him, and they set off so as to avoid encountering the Martians again.

At this point, the narrator tells the story of his brother's experience during the Martian invasion. A medical student in London, his brother doesn't hear about the Martians' arrival for several days. When he finally does, he decides to visit his brother in Woking, hoping to see the aliens before they're killed by military forces. When he goes to the train station, however, he learns that no trains are running in that direction due to an accident. Throughout the next day, he buys multiple newspapers in an attempt to gather more information about the invasion. When all at once Londoners are told to evacuate the city, he steals a bike from a ransacked cycle shop and rides out of town, eventually coming upon two women getting robbed. After he fends off the criminals, the brother joins these women in their carriage, and the three of them decide to combine their money in order to buy tickets out of the country on a boat. The brother's story concludes as he sails into the distance while watching an extravagant battle between a warship called the Thunder Child and three Martian fighting machines.



Scene from 2019 BBC adaptation

As the narrator's brother escapes England, the narrator and the curate continue their travels, eventually finding a well-stocked kitchen in an abandoned home. As they sit in this dark place, the sky lights up green and a huge crash sounds, ruining the house and knocking the narrator onto the floor, where he lies unconscious for several hours. When he comes to, the curate tells him to be quiet because the Martians are right outside. Apparently, a new cylinder has arrived, landing almost on top of the house in which they're hiding and disabling them from leaving.

Over the course of fourteen days, the narrator lives in hiding, afraid to even speak in full volume to the curate. They periodically sneak from the pantry to the kitchen and peer through a hole in the wall. This is how the narrator learns that the Martians feed by extracting the blood of living humans, emitting a strange howl all the while. Although the kitchen contains some provisions, the narrator realizes that they'll soon run out of food. The scarcity of rations is exacerbated by the gluttonous curate, who is constantly stuffing his face. Hoping to increase their chances of survival, the narrator implements a rationing scheme, cutting the curate off when he's had too much. This deeply upsets the curate, who grows more and more unhinged until, finally, he has lost his mind. When the curate begins making too much noise, the narrator knocks him unconscious, but it's already too late; a Martian appears at the hole in the wall. Quickly, the narrator retreats to the coal-cellar, where he shuts the door and covers himself with coal. The Martian eventually creeps toward him and opens the door but doesn't notice him. It isn't until several days later that he dares to venture out of the cellar, only to find that the curate is dead, and the Martians have moved on.

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Out in the open again, the narrator once more encounters the artilleryman, who tells him what has happened in the past couple of weeks. "We're beat!" he insists, going on to explain to the narrator that the Martians seem to be developing flying machines. Under these circumstances, the artilleryman has resolved to live the life of a "rat," admonishing fellow humans who don't have what it takes to survive. He tells the narrator of his plan to tunnel his way into the sewers of London, where he'll live with a community of like-minded people—including the narrator—until perhaps one day he can learn how to hijack one of the Martians' fighting machines. Impressed by how well-thought out this plan seems, the narrator accompanies the artilleryman back to a house, where the two men work for hours digging in the basement in order to intersect the sewer system. However, the narrator slowly realizes the artilleryman's plan is doomed to fail, and he leaves the next morning, setting off for London.

When the narrator arrives in the city, he finds it desolate. The Martians have taken over all of London and their machines now stand tall and powerful throughout the city. A ghostly howl echoes through the streets as the narrator makes his way toward a fighting machine. To his surprise, it does nothing, simply standing still as he approaches. Finally, he comes upon a huge mound at the top of a hill where the Martians seem to have made their largest dwelling area yet. As he looks up at one of the enormous stationary machines, he sees red weed and decay seeping out of the cockpit and realizes that the Martians must have died of a bacterial infection. In the weeks, months, and years that follow, the world learns that the immune systems of these otherworldly creatures weren't prepared to defend against earthly bacteria, so their bodies couldn't handle the infection. In the wake of the Martians' short stay, humanity rebuilds itself, but the narrator warns against relaxing into a state of comfort, reminding readers that the invaders could come again. Next time, he hopes humans will be more prepared. ***© LitCharts. Retrieved April 2019.***

THEME: Order, Subordination, and Hierarchy Theme Analysis

The Martians hold dominion over England during their short stay in ***The War of the Worlds***. If not for the bacteria that eventually kills them, it seems certain that they would go on to rule the animal kingdom, replacing humans at the top of the world's pecking order. As a result of this reshuffling of the hierarchy, the Martians' presence brings about significant changes amongst humans. Amidst the chaos of the Martian attack, many characters lose all sense of order and, in some cases, decency. Conversely, others seem to commit themselves even more devoutly to the hierarchies and forms of order to which they've always adhered. By highlighting this range of reactions—in addition to examining the temporary demotion of humankind to the status of a subordinate species—Wells reveals that humanity's sense of order and control is perhaps more fragile than people would like to think.

When the Martians first arrive, many Englanders are slow to recognize the danger the creatures represent. Even after the aliens have already killed a handful of men—men waving a peace flag and trying to communicate—people continue to act as if the rules of their small, protected world still apply. Unable to reckon with the horror of the Martian invasion, Englanders instead try to preserve the social structures they've relied upon for their entire lives. The narrator remarks upon this, saying, "The most extraordinary thing to my mind, of all the strange and wonderful things that happened upon that Friday, was the dovetailing of the commonplace habits of our social order with the first beginnings of the series of events that was to topple that social order headlong." This "dovetailing" of the everyday with the catastrophic is reflective of a more general effort, on the part of the public in Orwell's novel, to keep at bay the emotional terror that comes with the toppling of their social order. Similarly, people foolishly cling to markers of social class in a way that prevents them from acknowledging the full danger of the situation. For example, when Ogilvy runs to inform others about the cylinder, he comes upon a wagoner who ignores him because of his disheveled appearance. The wagoner, it seems, can only focus on the fact that Ogilvy isn't wearing a hat (and thus not adhering to the social norms of British society), and therefore doesn't heed Ogilvy's warning. That the wagoner is blinded by such a trivial matter just suggests that society's focus on the insignificant details of its social order has eclipsed common sense and decency.

Unlike those who refuse to admit that the invasion has disrupted the world order, some people try to capitalize on the collective loss of a sense of order. These characters see chaos as an opportunity, realizing that powerful people are no longer safely protected or separated from the masses. Although this is arguably an immoral and opportunistic way of behaving in a time of crisis, it's true that the appearance of the Martians effectively upturns many of society's hierarchies, ultimately putting everybody on the same level and rendering wealthy people vulnerable in ways they may never have experienced before. This is evident when the narrator's brother comes upon two women getting mugged and robbed by three men. After he saves the women from the three criminals, he learns that they set out in their carriage alone after one of their husbands armed them with a pistol and urged them to flee the town. Moreover, the narrator notes that these women are alone in their travels because their servant left them two days before. Abandoned by the lower class, these wealthy women suddenly must fend for themselves, contending with bandits and anybody else who wants to take advantage of them. As such, readers come to understand that these characters have undergone a total reordering of their world. While the Martians go about destroying the physical structures of society—churches and

houses and entire towns—humans, in the chaos, dismantle the hierarchies that have defined their society for centuries.

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In addition to prompting a reshuffling of power amongst humans, the Martians' attack gives the narrator a new perspective on the hierarchies of the natural world. Upon reemerging after two weeks of hiding underground, he finds himself dizzied by the realization that humans have fallen from their position as the earth's dominant species. He writes, "I felt as a rabbit might feel returning to his burrow and suddenly confronted by the work of a dozen busy navvies digging the foundations of a house. I felt […] a sense of dethronement, a persuasion that I was no longer a master, but an animal among the animals, under the Martian heel." The narrator characterizes this realization as being "beyond the common range of men," suggesting that humans rarely ponder the nature of their existence on earth. Rather, they take their high position in the natural order for granted, hardly ever pausing to consider their good fortune. His words suggest that part of what it means to be human is to be dominant and powerful—a notion which becomes all the more apparent when the narrator defines what has happened to humans as a "dethronement." When the Martians reduce the empire of man to rubble, suddenly humans not only find themselves equal to one another, but also equal to lowly creatures like rabbits and rats. Consequently, people like the narrator are forced to come to terms with the idea that human dominion isn't a fact of life, but rather a delicate reality that is just waiting to be thrown off balance. **© *LitCharts. Retrieved April 2019.***

THEME: The Other and The Unknown

With its lush descriptions of otherworldly creatures and unfathomable machines, ***The War of the Worlds*** underscores that all alien stories are, at their root, stories about discomfort with—and fear of—the unknown. Wells' story falls under the broad category of "invasion literature," a genre of fiction made famous by Colonel George Chesney's "The Battle of Dorking" (1871) which details a hypothetical invasion of England by German forces. Englanders were perhaps especially anxious about the prospect of invasion, perhaps in part because a history

of colonialism meant, among other things, that their country had always been the conqueror, never the conquered. As Brian Aldiss writes in his introduction to The War of the Worlds, Chesney's use of "the device of future war and sudden invasion, which exposes the unprepared nation to inevitable defeat, aroused fears and imitations everywhere." The War of the Worlds was one such imitation, but Wells' choice to have the invaders hail from Mars took the genre one step further, emphasizing his countrymen's hysterical fear of the foreigner—or the "other"—making their way into England. The Martians, for their part, embody the mysteriousness and inscrutability that characterize the other in the imaginations of the people. As such, these creatures are the ultimate manifestation of otherness. In turn, the public's uncontrollable fear of the invaders mirrors the xenophobia that was rampant throughout England in the late 19th century.

The narrator's overwhelming fear of the Martians (and the mystery surrounding them) throws him into a state of confusion about even his own familiar surroundings. "The fear I felt was no rational fear," he writes, "but a panic terror not only of the Martians but of the dusk and stillness all about me." Suddenly, with the introduction of an unknown species, he sees his world anew. He finds himself disoriented by simple things like "the dusk and stillness" of the surrounding landscape. This is perhaps because he's seeing the world through new eyes, imagining what earth must look like to these foreigners. It's worth noting that he admits his fear is irrational, since it suggests that Wells understands that it's necessary to levelheadedly come to terms with the presence of an outsider, even when doing so may bring on a state of "panic terror." While the narrator's countrymen respond to this terror by frantically and pointlessly firing guns at the enormous fighting machines, the narrator merely takes in the new landscape around him in an attempt to reconcile himself to the presence of the other.

The narrator's willingness to step outside his limited viewpoint and reexamine his immediate reality shows that the Martians have a strong effect on human psychology. Their arrival prompts self-reflection and evaluation. For instance, their presence causes the narrator to observe the following about himself: "At times I suffer from the strangest sense of detachment from myself and the world about me." Not only does the narrator find himself scrutinizing his surroundings (the "dusk and stillness") with new eyes, but he also finds himself assessing the way he—as a human—processes the world, realizing that he often tends to detach himself from reality, as he tries to do in this moment while wandering home after witnessing the Martians' first violent act. "I seem to watch it all from the outside," he realizes, "out of time, out of space, out of the stress and tragedy of it all." That the narrator's realization about himself is spurred by the Martian invasion suggests that the arrival of outsiders presents people with an opportunity for self-reflection and growth. Although the Martians are dangerous and pose a great challenge to humanity, their arrival causes the narrator to develop a greater understanding of himself and the world around him. Forced into a situation in which he can't detach from "the stress and tragedy" around him, he instead reckons with his own emotional escapism.

Although religion doesn't play a major role in ***The War of the Worlds***, it's worth examining Wells' treatment of religion in relation to the theme of the unknown in the novel. Unlike the narrator, the curate is unable to come to terms with the presence of the mysterious Martians because he has devoted his entire life to God, and the existence of aliens doesn't fit into the religious framework through which he views the world. As a result, he feels pessimistic and defeated, simultaneously unwilling to renounce his religious views and unable to understand how his beliefs might account for this strange new reality. Simply put, the curate is no longer confident in his system of belief and is therefore suddenly thrust into a state of unknowing. At

Scene from the 1953 film version by George Pal

the same time, he also feels entitled to safety and justice as a reward for his past devotion. "Why are these things permitted?" he wails. "What sins have we done?" Later, he adds, "All the work—all the Sunday-schools—What have we done—What has Weybridge done?" By asking what he has "done," he bitterly implies that he doesn't deserve to experience the horror of the Martian invasion but should be protected because of his piety. A man of philosophy and reason, the narrator finds this line of thinking pathetic, asking "What good is religion if it collapses under calamity?" In this moment, the narrator suggests that the ultimate end of religion is to comfort people in times of difficulty. However, the curate's religious views don't help him to cope with the Martian invasion—they only serve to prevent him from accepting the objective nature of his new reality. In this way, Wells calls attention to the psychological acrobatics humans put themselves through in order to avoid reconciling themselves to otherness and the threat of the unknown—a phenomenon Wells no doubt witnessed at the end of the 19th century as his fellow citizens fretted over the prospect of foreign invasion. ***© LitCharts. Retrieved April 2019.***

THEME: News and The Dissemination of Information

Information is a vital resource during the Martians' attack on England in ***The War of the Worlds***, and how information is disseminated becomes a key theme, as the narrator makes clear early in the novel that the newspapers are able to sway people's minds. As various bits of information work their way through England, it becomes evident that the dissemination of information doesn't always serve the end of protecting people. Instead, people often pass along facts and fragments of news to comfort one another, or even to make a profit. This, however, only puts humanity at a disadvantage, and Wells demonstrates that people often assuage unpleasant thoughts by whatever means possible, distracting themselves by telling soothing lies or by focusing on secondary concerns like financial gain.

In many cases throughout ***The War of the Worlds***, the newspapers fail to accurately report on the Martian invasion, especially during the first several days. Initial telegraphs about the incident (not including Ogilvy's) embody the cavalier attitude most people have at the beginning of the invasion. One even reads, "Formidable as they seem to be, the Martians have not moved from the pit into which they have fallen, and, indeed, seem incapable of doing so. Probably this is due to the relative strength of the earth's gravitational energy." The narrator adds to this account, writing, "On that last text the leader-writers expanded very comfortingly." His use of the word "comfortingly" is especially important here because it illustrates how eager people are to seek refuge in the reassuring words of supposed experts and "leader-writers" (i.e., senior journalists). Suddenly, any sense of urgency falls away when a specialist delivers information, regardless of how accurate this information is. It's not hard to see, then, that the news can have a very dangerous effect on the population, since an accurate understanding and a sense of urgency are absolutely critical in any emergency, let alone an alien invasion. If people believe there's no true cause for alarm, they won't adequately prepare for the very real danger they face.

At first, even the narrator indulges the fantasy that there is no cause for urgency or panic regarding the Martian invasion. He spreads this delusion to his wife on the first night of the attack, when the Martians have just landed but have not yet begun to fully wreak havoc. Both to calm his own nerves and to comfort his wife, he tells her an array of facts, delighting in the information as if knowledge itself can protect him. "In particular," he writes, "I laid stress on the gravitational difficulty. On the surface of the earth the force of gravity is three times what it is on the surface of Mars. A Martian, therefore, would weigh three times more than on Mars, albeit his muscular strength would be the same. His own body would be a cope of lead to him." The narrator tells his wife these bits of information as they sit at their dinner table only miles away from the Martians, who have already killed a handful of humans. The fact that he and his wife can eat a meal and calmly discuss these matters illustrates how much comfort they take in (supposedly) understanding the science behind what's happening. Moreover, it's strange that the narrator relies on what Ogilvy told him as a way of quieting his nerves, considering that Ogilvy himself was killed by the Martians—a clear indication that scientific knowledge will do nothing to protect humans against these alien invaders. Nonetheless, the possession of information—accurate or not—gives the narrator a sense of agency and control, allowing him to avoid feeling completely helpless.

In addition to being used to create a false sense of security, information about the invasion is also twisted and misused for financial benefit. For example, upon finally realizing that the Martians do in fact pose a great threat to humanity, one newspaper takes advantage of the situation, exploiting it to make money. "In Wellington Street my brother met a couple of sturdy roughs who had just rushed out of Fleet Street with still wet newspapers and staring placards," the narrator writes. "'Dreadful catastrophe!' they bawled one to the other down Wellington Street. 'Fighting at Weybridge! Full description! Repulse of the Martians! London in Danger!' He had to give threepence for a copy of that paper." In this scene, Wells emphasizes how quickly critical information can be sensationalized. Of course, this greedy exploitation of humankind's attraction to disaster and travesty is a complete misuse of the power of the media, which in this moment should focus not on writing papers that will fetch threepence per copy, but on responsibly conveying whatever information is necessary to help people survive the Martian invasion.

Furthermore, the papers seem to misunderstand the severity of the situation. In a world dominated by Martians—a world in which the only humans left alive must sneak through sewers to avoid detection—money will mean nothing. That the editors of such sensationalist papers so desperately try to capitalize on the invasion—penning catchy, dramatic headlines like "Dreadful catastrophe!"—shows that they mistakenly view capital gain as an end in and of itself, conspicuously ignoring the impending doom of the world as they know it. The narrator calls this a "grotesque mingling of profit and panic." Unfortunately, when the news is used to propagate terror in the name of money, humankind is deprived of one of its few real chances at survival: free access to accurate information.

When considering the role of newspapers and the dissemination of information in ***The War of the Worlds***, it's worth remembering that the novel itself was originally serialized in 1897 in ***Pearson's Magazine***, a British periodical that appeared each month. This method of publishing stories was quite common in the 19th century, when newspapers and magazines would print longer works of fiction in several installments. Often, an installment would end on a suspenseful note so that readers would be more likely to purchase the following issue. Of course, it's somewhat ironic that Wells' novel—which seems to criticize the use of sensationalist writing for capitalistic gain—appeared in this highly-commercialized format. Nonetheless, this style of publication actually fits the content of the novel quite well, as the medium lends a certain credibility to the text, as if Wells' narrator is recounting a true tale, framing it as a piece of nonfiction. In fact, Wells plays with this idea by having the narrator make frequent passing references to himself, insinuating that he—the narrator—is "a professed and recognized writer on philosophical themes." By casting his fiction as a true story written by a "recognized writer," Wells puts his readers in the same situation in which the narrator finds himself as he wanders from town to town trying desperately to ascertain new details about the invasion. ***© LitCharts. Retrieved April 2019.***

THEME: Evolution and Survival

In ***The War of the Worlds***, Wells explores the extremes of what is possible under evolution and natural selection. Compared to humans, the Martians are highly advanced in their technology, suggesting that their evolutionary history is also longer than that of humans. Although the narrator says they "may be descended from beings not unlike" humans, it's clear the Martians are much further along in their process of evolution than humans. Their advanced abilities make it easy for them to not only land on another planet, but also to swiftly destroy entire towns and cities. Despite their sophisticated development, however, they fall prey to the simplest of enemies: earthly bacteria. Indeed, it's ironic that their undoing comes in the form of a small and ordinary menace against which humans—regardless of their lesser powers—have developed a tolerance. In this way, Wells shows readers that evolutionary progress and development isn't magical, but rather a process that plays out according to a specific set of environmental circumstances. This is an important message, given that Darwin's theory of evolution wasn't yet widely accepted when ***The War of the Worlds*** first appeared in print, despite being almost forty years old. As such, Wells' novel is as much a demonstration of and argument for the truth of evolution as it is an entertaining tale of survival.

Although the Martians possess unstoppable intelligence along with seemingly supernatural powers, they have evolved these strengths in response to their own planet, rendering their bodies unfit for life on earth. Humans, on the other hand (like all animals on earth), have

developed immunities to earth's various threats and challenges, and this is their only advantage in the struggle against the Martians. Following this logic, the hero of The War of the Worlds is arguably not a person, a weapon, or an organization—but rather the very process of natural selection itself. Through natural selection, humans have built up an immunity to bacteria, giving them a resisting power against the organisms that eventually kill the Martians. Although the Martians have clearly met other challenges on their own planet, they haven't encountered the same bacteria that are found on earth, thus rendering them helpless against infection. By pitting such superior beings against such a simple enemy—everyday bacteria—Wells demystifies Darwin's ideas about evolution, demonstrating that natural selection is a very simple matter of adapting—or failing to adapt—to one's environment.

In addition to his consideration of literal survival, Wells illustrates how the adaptive process can also take place in the mind. In other words, he highlights how survival is both a physical and mental endeavor. Indeed, human survival in The War of the Worlds sometimes seems as much related to a certain outlook as to actual bodily safety. Faced with the Martians' threat, humans must react according to the circumstances unfolding before them. Unfortunately, most of the narrator's fellow humans respond to the Martian invasion inappropriately, failing to accurately understand the reality of the situation. The military, for example, exacerbates the Martians' fury by continuously firing weapons at them, a futile endeavor that only leads to further destruction. Furthermore, most citizens treat the invasion as if it's a natural disaster, openly fleeing from one town to the next with seemingly no understanding that—unlike a hurricane or flood—the Martians can easily follow them from town to town. The artilleryman, on the other hand, appears to better grasp the importance of adapting to danger in a manner that actually matches the nature of the threat. Having seen that military action and standard evacuation are both useless, he alters his personal survival plan, resolving to live like a "rat" in hiding by moving into the sewer system. This is perhaps an unglamorous course of action, but it shows his willingness to adapt mentally to changing external circumstances. Recognizing that the Martians will kill him no matter what he does to stop them, he attempts to remove himself from the situation entirely. Ultimately, this adaptive mindset saves his life.

The artilleryman's outlook also contains an implicit critique of the posh and complacent lifestyle of the bourgeoisie of the Victorian era. He speaks disparagingly about Englanders, criticizing the way they used to "skedaddle" from work to home and from home to church, fearing trivial things all the while and worrying about money or social status. It's no wonder, then, that very few people seem to respond appropriately to the threat of the Martians. The artilleryman portrays the people of England as a group accustomed to comfort, who take safety and survival for granted. To live like a "rat" is simply unfathomable to them because it is so far outside their conception of what it means to live. As a result, they run from town to town, hoping each time they'll recapture the life they led before the invasion. Simply put, they don't want to change, even though failure to adapt, in light of the Martians' arrival, spells certain death. By contrast, the artilleryman is perfectly willing to give up his old lifestyle in the name of survival. He suggests that humanity has strayed too far from the true nature of existence, which revolves around struggle and the will to survive. "Life is real again," he says, implying that the pre-Martian world of Victorian England wasn't "real," and that a decadent, bourgeois lifestyle is out of touch with the fact that living is, for many, a constant fight for survival.

Original Front Cover 1898

With the new challenges presented by the Martian invasion, the human race's evolutionary process is ultimately sped along, though not necessarily in a biological sense. The narrator touches upon this when he says, "It may be that in the larger design of the universe this invasion from Mars is not without its ultimate benefit for men; it has robbed us of that serene confidence in the future which is the most fruitful source of decadence, the gifts to human science it has brought are enormous, and it has done much to promote the conception of the commonweal of mankind." It's important to note that in this passage, the narrator lists primarily intellectual triumphs, not physical or biological advancements that have come as a result of the Martian invasion. He asserts that the invasion has contributed to humanity's scientific endeavors while also stripping away society's "serene confidence in the future," which renders the species unprepared for the challenges it must face. In turn, ***The War of the Worlds*** not only clarifies the basic truth of Darwin's evolutionary theory, but also advocates for advances in public thought and study, framing intellectual pursuit as a viable means of improving humankind's resilience, longevity, and ultimately its chances of survival. ***© LitCharts. Retrieved April 2019.***

Historical Context

Fear of Invasion

At the end of the nineteenth century, the nations of Europe were divided into strategic alliances that pitted them against each other in the event of a war. From 1882 onward, these military associations resulted in a greater military buildup than the world had ever known before. The proof that this trend created a dangerous political situation can be seen in the fact that it ended in the largest and bloodiest confrontation that had ever happened up to that time, the Great War.

The roots of this division of Europe came in 1871, when Prussia conquered France. Prussia, the kingdom state that included Germany, sought to prevent France from coming back at some future time to take back the land that had been taken from it by forming alliances with first Austria-Hungary and, later, Russia. By the 1880s, Germany had signed on to a Triple Alliance with Italy and Austria-Hungary. Britain, France, and Russia, in turn, signed on to a Triple Entente, promising to defend each other in case of attack. By the time Wells wrote ***The War of the Worlds*** in the late 1890s, all of the nations of Europe were aligned with one of these organizations. The balance of military power was strictly monitored and maintained: for instance, the German naval build-up in the 1890s spurred Great Britain to pour resources into their own navy, which caused Italy, France, the United States, and Japan to follow suit. The political scene in which Wells wrote about the Martian invasion was a stable one, then, but one that was expected to explode.

1906 illustration

The military melee that was expected throughout Europe did not actually occur until nearly twenty years later. When it did, though, it followed a course that by then seemed inevitable. When Archduke Ferdinand of Austria-Hungary was assassinated by Serbians in 1914, Austria-Hungary declared war on Serbia. Within a week, Germany, France, and Russia were involved, and days later Belgium, Great Britain, and Japan were drawn in. By the time of the war's end four years later, ten million had died, and twenty million were wounded.

Darwinism

One of the greatest influences on scientific thought at the end of the nineteenth century was the theory of biological evolution that had been put forward by the British naturalist Charles Darwin. Darwin's theory of natural selection, which posits that organisms evolve over the course of generations, is prominent in ***The War of the Worlds***, particularly in the way that the Martians are said to have lost any need for bodies or sexual reproduction, and in the way that the bleak fate of humanity is viewed as perhaps regrettable but nonetheless unavoidable.

In 1859, Darwin outlined his theories in his book ***On the Origin of the Species***. Based on observations made in previously unexplored regions of the South Pacific, he concluded that similar species were actually related to each other, and that those that had grown up under different circumstances had evolved in ways that best suited their individual environments. The book was a sensation after its publication, and the theory of evolution was applied to other fields as well, leading to such concepts as Herbert Spencer's competitive "social darwinism" to explain the survival of some social traits over others. One of Wells's teachers, T. H. Huxley, has been recognized as perhaps the single most influential writer to popularize Darwinism.

Setting

The War of the Worlds is set in the late 1890s in England. For Wells and his original audience, this was a modern setting, and the British weapons he describes were the very latest products of high technology. Although the iron-clad warships and batteries of cannons may seem old-fashioned to present-day readers, one should keep in mind that these weapons were once symbols of terrible destruction. That the Martian war-machines crush the well-armed and mighty British army confirms the Martians as technologically superior enemies of humanity. After the British artillery batteries are destroyed, no one doubts the Martians' ability to exterminate humanity.

All the locales in ***The War of the Worlds*** are real places in England, places where Wells lived or often visited. Readers familiar with England would have readily recognized the place names and the descriptions of the countryside. Thus Wells brings home the effects of the invasion on ordinary people.

It should also be noted that scientific theories of the 1890s suggested that Mars might be inhabited by intelligent beings. The "canals" of Mars, which today are regarded as merely optical illusions, were taken seriously at the time ***The War of the Worlds*** was written. Maps of the canals had been published, and some scientists openly speculated about how and why they might have been constructed.

Furthermore, a prominent scientific theory about the origins of the solar system suggested that the sun periodically spewed out matter into the solar system, creating a new inner planet and forcing the other planets to move outward into new orbits. Many people reasoned that if Mars were older than earth, perhaps it would have an older civilization. And if Mars once occupied

Earth's orbit, perhaps its civilization had arisen in a warmer climate than that which currently prevailed on the planet, making the Martians envious of Earth's gentler weather.

Literary Style

Narrative

In order to present this story as a first-person narrative, told by an "I" speaker who is a character in the book, Wells has to resort to some clever tricks. For one thing, the narrator is a scientist and a friend of an astronomer, Ogilvy: [This] gives him access to the world of astronomy when most of the news about the first projectile from Mars is not commonly talked about. Another method used is to have the narrator speaking from six years after the action has taken place, so that information that would not have been available during the Martian invasion, such as the details of their physiognomy, can be introduced into the book at appropriate times.

The most obvious narrative device, though, is in switching the action's point of view for several chapters into that of the narrator's brother. This is not a character whom readers come to know with any depth. The details of his experience are known without much insight into his personality. The function of these chapters is to show what the general reaction to the invasion was around London, and perhaps to introduce a dashing, romantic figure aiding damsels in distress without breaking away from the reality of the narrator's perspective.

Foreshadowing

Once readers reach the end of ***The War of the Worlds***, many realize that they should have seen the Martians' defeat clearly prepared in the course of the story. When an action in the story prepares readers for what is going to be done, it is called foreshadowing. Done well, readers will not even notice foreshadowing until after they have seen the event foreshadowed.

As early as Chapter 2 of Book 2, the narrator explains that "Micro-organisms, which cause so much disease and pain on earth, have either never appeared upon Mars or Martian sanitary science eliminated them ages ago. A hundred diseases, all the fevers and contagions of human life, consumption, cancers, tumours and such morbidities, never enter the scheme of their life."

Readers who do not see this as a clue to the Martians' eventual inability to survive on Earth are given further evidence when the narrator goes on to introduce the red weed that came with them from Mars, which grew prodigiously but was unable to survive local bacteria. The end is foreshadowed early on, but readers who are engrossed in the story might miss it.

Literary Techniques

In his autobiography, Wells declares that "I am journalist all the time and what I write goes now — and presently will die." He is mistaken about how long his work would live in the imaginations of readers, but his emphasis on topicality accounts in part for the success of his novels. When ***The War of the Worlds*** was written, Mars was the object of intense public interest. About twenty years before, astronomers had reported seeing "canals" on Mars. Canals implied canal-builders, which implied intelligent life. In addition, science had become the subject of much public debate, because the 1890s were in the middle of the period in which the natural sciences were becoming part of the everyday curriculum of schools. Journalists responded to the general interest in science and the particular interest in Mars with a multitude of speculations on

what life on Mars would be like. Wells chose a topic for his novel that was calculated to catch the public's imagination. In addition, he placed the action of the novel right in the midst of the homes of the largest part of his audience — middle-class readers. His care in presenting accurate details both in setting and of the everyday lives of his audience gives his narrative a powerful immediacy, as though the action could be in any reader's own yard.

Wells also avers, "I write as I walk because I want to get somewhere and I write as straight as I can, just as I walk as straight as I can, because that is the best way to get there." The War of the Worlds features a straightforward narrative, without artifice; it captures the imagination with its inventive ideas and its fast pace, which matches the headlong charge to London of the Martians. The Narrator is a journalist who was "busy upon a series of papers discussing the probable developments of moral ideas as civilization progressed." He tells the tale with a journalist's sensitivity to local color and with a journalist's concern for appealing to a broad general audience. Like Wells himself, the Narrator is interested in moral evolution and colors his observations with his thoughts on ethics. Nothing distracts; story and ideas charge from the sighting of "incandescent gas" on Mars to the emotional reunion of the Narrator and his wife, who falls into her husband's arms.

Literary Qualities

At the time Wells wrote ***The War of the Worlds***, science had become the subject of much public debate. During this period, the natural sciences were becoming part of the everyday curriculum of schools. Journalists responded to the general interest in science—and the particular interest in Mars and its possible inhabitants—with a multitude of speculations. Wells chose a topic for his novel that was calculated to catch the public's imagination. In addition, his care in presenting accurate details, both in setting and about the everyday lives of his characters, gives the narrative a powerful immediacy, as though the action could be taking place in any reader's own yard.

An interesting technique is Wells' use of symbolic names. The Narrator could be an Everyman figure—a character who is meant to symbolize all human beings. More pointedly symbolic are the Curate and the Artilleryman. They are not given individual names of their own, but instead stand as representatives of their kind. The Curate, representing a religious point of view, cannot cope with the invasion of Earth by creatures who do not fit into his theology. The Artilleryman represents the bravado and impotence of the military in the face of immensely superior weaponry. Usually, an author will try to interest readers in individual characters; in ***The War of the Worlds*** the great mass of humanity is more important than the characters because of what Wells wants to say about imperialism, technology, and social evolution. He therefore individualizes his characters only a little, preferring to emphasize what they have in common with the types of people they represent.

Social Concerns

[***The War of the Worlds***, like its predecessor ***The Time Machine*** (1895),] reflects some of Wells' social concerns. As Anthony West points out, the Martians "treat Europeans as Europeans had been treating native populations and animals in the hey-day of colonialism." Instead of being the conquerors, Europeans are the primitives. Confusion, fear, panic, and bravado are the typical reaction of the English to the invasion by a civilization with technology

beyond human comprehension. The Martians themselves are "minds that are to our minds as ours are to those of the beasts."

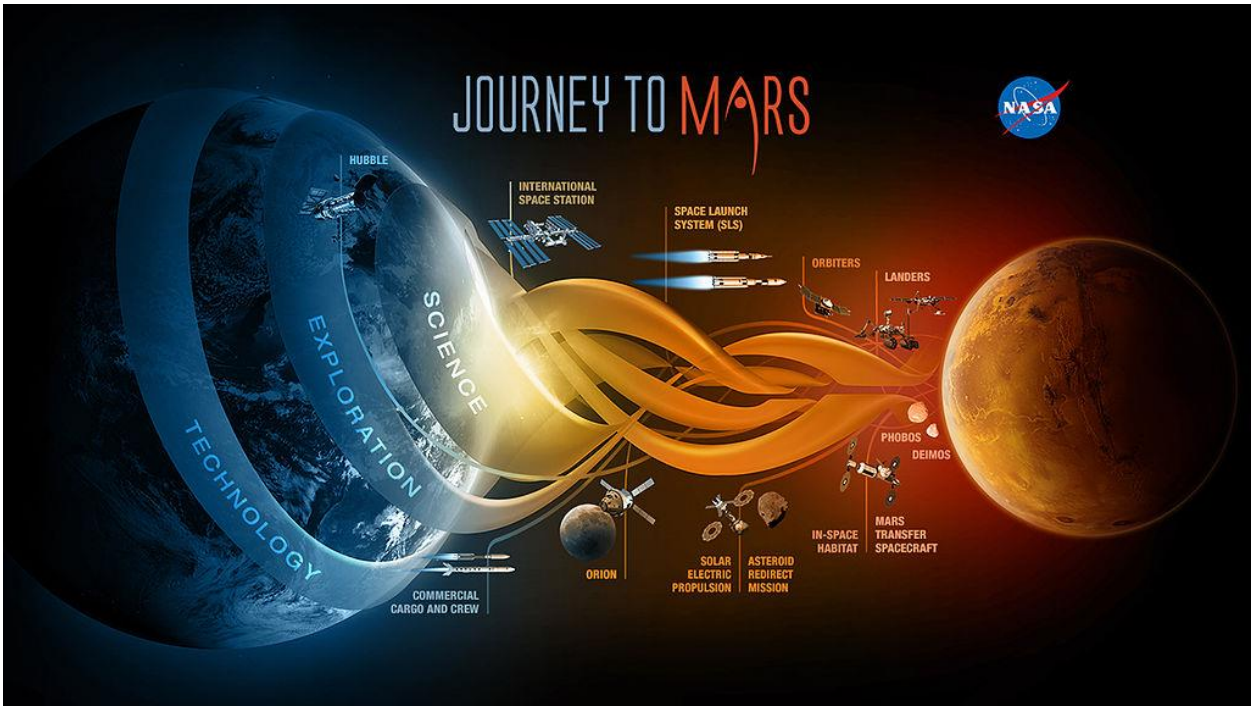
Additional Commentary

In many respects, ***The War of the Worlds*** is a tale told before. For instance, the Aztecs of Mexico first took Hernando Cortes and his men to be benevolent gods when the Spaniards arrived early in the sixteenth century. The Aztecs were puzzled by the Spaniards' mighty horses, which they had never seen before; but when they realized that the men of Cortes were not "gods" but instead conquerors, they fought and were slaughtered by weapons vastly superior to their own. Wells' tale of the tragedy wrought by the colonialist impulse is thus lent force by historical precedent.

Wells stresses the idea that technological sophistication and moral development do not necessarily go hand-in-hand. The idea that ethics must keep pace with humanity's ability to transform the natural world if cruelty and disaster are to be avoided is a point well worth making, even in the present day—and the idea that superior technological skills do not make one a moral person is a concept that young adults should come to understand.

SESSION THREE:

THE MARTIAN



By NASA - http://mars.jpl.nasa.gov/msl/images/NASA-Science-Exploration-Technology-Journey-To-Mars-full.jpg, Public Domain

Cast

Matt Damon as Mark Watney
Jessica Chastain as Commander Melissa Lewis
Jeff Daniels as Theodore "Teddy" Sanders, the Director of NASA
Kristen Wiig as Annie Montrose, the director of media relations for NASA
Chiwetel Ejiofor as Vincent Kapoor, NASA's Director of Mars
Sean Bean as Mitch Henderson, the Hermes flight director.
Michael Peña as Major Rick Martinez, the pilot of the Ares III mission.
Kate Mara as Beth Johanssen, the Ares III's system operator.
Sebastian Stan as Dr. Chris Beck, an astronaut and flight surgeon for the Ares III mission.
Aksel Hennie as Dr. Alex Vogel, a German national who is the navigator and chemist of Ares III.
Mackenzie Davis as Mindy Park, a satellite planner in Mission Control.
Donald Glover as Rich Purnell, a Jet Propulsion Laboratory (JPL) astrodynamicist
Benedict Wong as Bruce Ng, director of JPL

Eddy Ko as Guo Ming (Chinese: 郭明), chief scientist at CNSA.
Chen Shu as Zhu Tao (Chinese: 朱涛), deputy chief scientist at CNSA.
Nick Mohammed as Tim Grimes.

CLASS DISCUSSION:

Adapted from questions that pertain to Andy Weir's novel.
© https://www.readinggroupguides.com/reviews/the-martian/guide
[Edited by Dr. Bill Thierfelder]

1. What makes us root for a character to live in a survival story? In what ways do you identify with Mark? How does the author get you to care about him?

2. Do you believe the crew did the right thing in abandoning the search for Mark? Was there an alternative choice?

3. Did you find the science and technology behind Mark's problem-solving accessible? How did

4. Apparently potatoes, duct tape, and '70s reruns among other things can be a key to space survival. How does each of these items represent aspects of Mark's character that help him survive? (For those of you familiar with the character/TV show ***MacGyver***, there might be some resonances.)

5. How is Mark's sense of humor as much a survival skill as his knowledge of science? Do you have a favorite funny line of his?

6. To what extent does Mark's log serve as his companion? Do you think it's implicit that maintaining a log keeps him sane?

7. There is little back-story regarding Mark's life on Earth. What do you imagine Mark's past life was like? Does our lack of knowledge make him more of an "Everyman" character?

8. Were there points in the story when you became convinced Mark couldn't survive? What were they, and what made those situations seem so dire?

9. Did you believe the commitment of those on Earth to rescuing one astronaut? What convinced you most?

10. Unlike other castaways, Mark can approximately predict the timing of his potential rescue. How does that knowledge help him? How could it work against him?

11. When Mark leaves the Hab and ventures out in the rover, did you feel a loss of security for him? In addition to time, how does physical travel/distance build suspense.

12. Read the following statement about "The Hero's Journey" and discuss whether any of this applies to ***The Martian***:

> In comparative mythology, the hero's journey (also known as the monomyth) is the common template of a broad category of tales and lore that involves a hero who goes on an adventure, and in a decisive crisis wins a victory, and then comes home changed or transformed.
>
> [...] Hero myth studies were popularized by Joseph Campbell, who was influenced by Carl Jung's view of myth. In his 1949 work ***The Hero with a Thousand Faces***, Campbell described the basic narrative pattern as follows:
>
> *A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man.*
>
> Campbell and other scholars, such as Erich Neumann, describe narratives of Gautama Buddha, Moses, and Christ in terms of the monomyth. While others, such as Otto Rank and Lord Raglan, describe hero narrative patterns in terms of Freudian psychoanalysis and ritualistic senses. ***© adapted from Wikipedia.***

BEHIND THE SCIENCE OF ***THE MARTIAN***

by Eric Betz
© ASTRONOMY MAGAZINE.
October 2015.
Retrieved April 2019.

A small white sprinter van kicks up red dust as it slides across the "Martian" sand toward a yurt-like astronaut habitat. Its path winds past the scorched remains of a Mars Ascent Vehicle built to launch crew to orbit. Above this fictional Mars-scape, a ceiling vaults some six stories tall, placing the cavernous soundstage among the largest in the world. Small blimps bolster legions of lights. Green screen sheets line the stadium-sized walls. Eventually, images of blue Mars sunsets and butterscotch evening skies captured by NASA's rovers will become a backdrop, along with shots of Wadi Rum, Jordan — a red desert stand-in for Mars.

But for now, it's more like a surreal sandbox here at the last day of filming on set at *The Martian*. And a group of young Hungarian men are stepping out of the van to start the long disassembly process. Their present task, removing laboratory equipment from the astronaut habitat, or Hab, is easy in comparison to the one to come — someone has to remove all 1,200 tons of this carefully color-matched Mars dirt. For 12 weeks, this movie set, through suburbs and past Hungarian countryside homes on the outskirts of Budapest, has seen many of Hollywood's biggest stars and most celebrated filmmakers.

The scene is what every crazed Moon landing conspiracy theorist imagines Stanley Kubrick doing half a century earlier. Some of NASA's most senior scientists believe that when ***The Martian*** hits big screens October 2 [2015], the movie's obsessive adherence to science fact will be enough to make their nonfictional "Journey to Mars" real for millions of Americans. Because in contrast to the silver screen space agency of the same name, NASA's actual program is nowhere near ready for prime time.

If humanity is to put astronauts on Mars, NASA is going to need a surge in support to levels unseen in generations. That's an unlikely achievement for a Hollywood film, but *The Martian* is just one part of NASA's growing publicity machine.

A love letter to science

In the film, Matt Damon plays Mark Watney, one of the first astronauts to walk on Mars. He's what Jim Irwin was to the actual Apollo program — an "also went." That is, until a mishap leaves Watney alone on the Red Planet with only his considerable wit and scientific ingenuity to survive while NASA mounts a heroic rescue attempt.

Author Andy Weir's book *The Martian* is a stroke of sci-fi genius. The novel does for space adventure fans what the soft-core romance novel does for jilted lovers. It's a true love letter to science — space escapism at its best. But can filmmakers turn science-based fiction into a Hollywood hit? In February, I trekked halfway across the planet — at the invitation of Twentieth Century Fox — to find out.

To a large extent, *The Martian*'s success or failure sits on the shoulders of one man. For decades, legendary director Ridley Scott has simultaneously been hailed as a cinematic genius and languished with some of Hollywood's biggest flops. But he gave film lovers *Thelma and Louise*, winner of six Academy Awards, as well as *Blade Runner*, *Gladiator*, *Black Hawk Down*, and the entire *Alien* universe. Scott is known for epics with great attention to detail, and this movie lives up to that legacy. The rockets, modules, and space suits were built — and 3-D printed — with heavy guidance from NASA. The filmmakers even hired Rudi Schmidt, former project manager of the European Space Agency's Mars Express spacecraft, to test all the experiments done in the movie, including turning water into rocket fuel — which I'm told works, by the way. "We want to make the film as much science fact as science fiction," says executive producer Mark Huffam (*World War Z*, *Saving Private Ryan*).

Mars czar meets *Dark Side of the Moon*

As I shuffle into a nearby soundstage, a crowd gathers behind a horde of cameras pointed at a section of the Hermes spacecraft — an ion-powered ship that ferries astronauts back and forth to Mars. One crew member calls out a countdown, and I realize most everyone but me has orange earplugs buried deep in their ear canals.

Arthur Max, veteran set designer and frequent Scott collaborator, supplies a pair shortly before an explosive blast rings out and the spacecraft's airlock erupts in flames. Of all the characters on Scott's regular filmmaking crew, Max is the most captivating. He's a towering man with penetrating eyes and a face weather-lined from years of filming in desert climes and empty parking lots. He's a native New Yorker, but his accent betrays a career spent with Brits. Max's first big break came working stage lights at Woodstock in the summer of 1969. That landed him a gig designing Pink Floyd's *Dark Side of the Moon* shows. Then, 30 years ago, Scott asked him to help make a Coca-Cola commercial. They've since created some of Hollywood's greatest epics together.

Once the excitement clears from the airlock explosion, Max guides our small group of science writers around the rest of Hermes — or what hasn't been loaded into crates. "The challenge of this film, really, for myself and those people who work with me in the art department, has been to generate what NASA does with billions of dollars of funding over several decades, with millions of dollars over several months," Max says. For Max, that process began with trips to the Jet Propulsion Laboratory in Pasadena and the Johnson Space Center in Houston, where he tore apart prototype space suits and astronaut habitats with Jim Green, head of NASA's planetary science program. Green, the space agency's one-time "Mars czar" and current overseer of robotic solar system exploration, also served as a consultant on *The Martian*. NASA checked off on every aspect of the set and script. And that came as a relief to Max. He used real NASA blueprints of an ion-engined Mars crew carrier to make Hermes. Filmmakers turned a six-wheeled industrial crop sprayer into a massive Mars rover that looks like a beefed-up version of the one NASA's Desert RATS use to play space explorer on test missions in the Arizona desert. The filmmakers drove their rover in the studio and then flew it to Jordan, where they shot Damon romping across the desert. "I love restrictions because you play off the constraints," Max says. "If you have no constraints, it's just a big white canvas. Where do you start? But if they give you rules and limits, it's easier, and so within that you find your aesthetic."

Making Mars real

I get the sense that despite NASA's armada of real spacecraft across the solar system, Green enjoys working on this fake Mars mission too. The no-nonsense bureaucrat started at the space agency fresh out of grad school in 1980 and made his way up through the ranks, writing hundreds of scientific and technical articles along the way.

Green says he realized the Red Planet wasn't real for people after astronaut Stanley Love asked him to watch an online talk about traveling to Mars. At the end of the video, Love points to a Hubble image of that planet and says, "Let's go to Mars."

"It's like saying you're going to take a vacation on Earth," Green says. "It has mountains. It has valleys. It has an enormous diversity in its climate and its activity and seasons. It has polar caps. And then I realized: It's not real to him. That's what the book does, it makes it real by going there and saying, 'Here is what Mars is like.'"

Not long after that realization, Green met with NASA Johnson Space Center director and former astronaut Ellen Ochoa. The scientist told Ochoa she had to read *The Martian*. She did. And the book is now "required reading" at Johnson, home of NASA's human space exploration program. Ochoa even liked it so much that she invited the author out for lunch and a tour. Eventually, she made her astronauts available to the cast and crew. Actress Jessica Chastain, who plays NASA Commander Melissa Lewis, spent days at Johnson shadowing real-life astronaut and chemist Tracy Caldwell Dyson.

From geek to supergeek

In an ironic twist for a man who concocts NASA heroics, Weir, a self-proclaimed science geek, is scared of flying. So he reluctantly refused when Scott invited him to Budapest. Instead, I interviewed Weir via Skype in his rather ordinary-looking home where his cat, Jojo, jumped onto his desk as we chatted.

Weir says he only broke his no flying rule for the trip to Houston. And sitting at a cafeteria lunch with Ochoa, he heard the kind of stories that would make even a suddenly famous writer blush. NASA astronauts told him they love his book and called it "98 percent correct." He got the VIP treatment.

Instead of sitting in a cubicle working all day, Weir says he now gets to hang out with astronauts and celebrities. The son of a particle physicist, Weir worked for 25 years as a computer programmer, helping code everything from word processors to games like Warcraft II. He took three years off from programming in the late ’90s to chase writing full time but failed to land a contract or even an agent. However, the evolution of the Web allowed him a creative outlet to post his comics and serials.

But Weir’s life didn’t start to change until late September 2012. That’s when he posted *The Martian* on Amazon.com for the site’s minimum price — 99 cents. For years, he’d been writing the book and posting it to his website, galactanet.com, one chapter at a time. He also sent the novel out to 3,000 email subscribers who gave the computer programmer eager feedback. “It was cool because they egged me on, and then also they’re all science-minded geeks like me, so it was awesome because they’d point out anything that was wrong,” Weir says. “I called them beta readers.”

But Weir says he never expected his book to be publishable. Then, when the story was done, that core fan group asked for a reader-friendly version, and he self-published it to Amazon without a second thought.

That’s when things got crazy. The book quickly climbed through the top-seller ranks. An agent lured him in. The movie exclusivity rights sold to Twentieth Century Fox. And *The Martian* became a New York Times best-seller, where it’s remained for 42 weeks and counting. “It’s like people are contacting me through the Internet telling me my dreams are starting to come true,” Weir says. “I thought it might be a scam until they started sending checks.”
It wasn’t long before Weir was talking with writer and director Drew Goddard (*World War Z*, *The Cabin in the Woods*) as he crafted the screenplay. Damon agreed to star in the movie. Then, when Goddard dropped out to make the new Spider-Man spinoff, Scott signed on to direct.

The secret language of Ridley Scott

Back in Budapest, Damon enters a decidedly dingy VIP room wearing sweatpants and a T-shirt. His hair is ragged, grown out with extensions. “I think we’re on [sol] 547,” he says of his unkempt beard — a sol, or Mars day, is 39 minutes longer than an earthly one. “I’m living on Mars time.”

The movie is part *Apollo 13* and part *Castaway* — it’s also hard not to conjure up Damon in *Saving Private Ryan* — but unlike those films, Damon’s character has a well-developed sense of humor about the experience. And beyond the difficulties of a one-person dialogue, the actor says his biggest challenge was capturing the hilarious aspects of the book without making his character look glib or like he didn’t care if he survived or not.

“Ridley and I talked from the beginning about how we wanted to preserve all that humor, but also not lose all the stakes,” he says. “Especially when we got here and we saw the set that Arthur [Max] had built.”

Last December [2014], NASA launched *The Martian*’s screenplay cover into space on board Orion, which could someday carry actual astronauts to Mars. The title page features Ridley Scott’s hand-drawn sketch and an often-quoted line from the movie.

The pair put considerable effort into keeping the true terror for the character. "Or else it's just a popcorn kind of whiz-bang he's-never-really-in-danger type of experience," Damon says.

This devotion is what defines a Ridley Scott epic — even the unsuccessful ones. But Scott needs his sci-fi return to be a hit. His latest attempt, *Prometheus* — an *Alien* prequel — got a chilly response from fans. However, on this stage outside Budapest, it's clear his fellow filmmakers don't see any need for Red Planet redemption.

It's late on the final day of filming, and a stunt double for Damon is mounted in a space suit as cameras shoot and reshoot the film's final action sequence, titled "The Final Rescue." It's easy to lose track of someone amid the chaos of a movie set. Not Scott. He barks out commands to the crew, forcing them to repeat scenes ad nauseam until he sees what he's looking for. No one gets upset by the lashings.

"It's a Ridley Scott movie whether it's ancient world, present day, or future," Max says. "He always wants there to be a logic driving the story and great attention to detail. Once you learn the secret language of Ridley Scott, you can do any period with him."

Martian manifest destiny

Green, the former Mars czar, says NASA employees love *The Martian* not only for its devotion to realism, but also for the heroics Mark Watney embodies. For many Americans, NASA post-Apollo is an $18 billion bureaucracy stuck in low Earth orbit. That's not how its employees see themselves.

"NASA does miracles all the time," Green says. "It's unbelievable what we do. I'm always in awe, and I've lived it for 35 years of my career. I keep getting surprised by how resourceful our people are."

"It's one of those things that make this agency special and important for the nation," he adds. "We've got to be thinking about colonizing the solar system. A single-planet species is not going to survive — the dinosaurs didn't. They didn't have a space program."

And increasingly, NASA is using pop culture to make a play for American heart — and purse — strings. Bert Ulrich is NASA's guy in Hollywood. If a filmmaker wants to use a NASA logo, they go through him. Ulrich says a flood of recent mainstream movies and documentaries have planted the space agency in a new golden age.

"I haven't seen this upswing in interest in sort of a cultural way before, and I've been with NASA for a very long time," he says.

That rock-stardom for NASA science was on full display this summer as Green walked San Diego's Comic-Con International — the largest convention of its kind in the world. More than 2,000 people filled a hall for discussions with space agency scientists and *The Martian* filmmakers. Newly named astronaut Victor Glover speculated about the first humans to walk on Mars. And Space Launch System manager Todd May talked about what it will take to get there. Green tells me all this effort is to reach what he calls "the Mars generation" — millennials who've never seen humans leave low Earth orbit. Instead, they were raised on a robust robotic exploration of the Red Planet.

And Green's work on *The Martian* has had very real implications for the nonfictional NASA Mars program. He asked Ochoa, his human spaceflight counterpart, to detail him a Johnson Space Center employee for one year. She assigned Rick Davis, a NASA veteran who formerly served as the primary communicator between Mission Control and the International Space Station. Davis was tasked with spearheading a list of places to put humans on Mars. That

way, NASA can tell the public "here's what the real sites look like, and here's why we're looking at them," Green says.

In October [2015], NASA will host the First Landing Site/Exploration Zone Workshop for human missions to Mars at the Lunar and Planetary Institute in Texas. Green says it's very likely the places they choose will be where future Mark Watneys land and begin the next step in the evolution of humankind.

There will be no little green men. No robots with a taste for blood. But there will be the same NASA audacity that once took 12 Americans to the surface of the Moon and returned every last one of them safely.

"The solar system is ours. Let's take it," Green told me recently without a hint of hollowness. "And there's no question, the first place we should be going is Mars."
For now, we'll have to settle for watching the Red Planet through rose-colored 3-D glasses.
Eric Betz is an associate editor of *Astronomy*.

What *The Martian* Gets Right (and Wrong) About Science

Time Magazine. Updated: May 18, 2016 5:37 PM ET | Originally published: September 30, 2015

There are a few hard truths you can learn from both the book and soon-to-be-released film *The Martian*. The first is: Don't get stuck on Mars. The second: If you do get stuck on Mars, be really, really smart.

It's hard to argue with wisdom like that, but if you have any doubt, you won't after leaving the theater, fresh from a rousing, gripping and scientifically granular tutorial on what makes Mars tick—chemically, geologically, meteorologically—and why the planet is such an alluring and vexing place. Andy Weir artfully blended all of those seemingly unblendable elements in his 2011 novel and Ridley Scott hand-carried them to the screen without dropping and breaking a single one.

So: Go see *The Martian*. But still: Don't expect all of the science to be what it should be. The hard part about good science fiction has always been the fiction part. How many liberties can you take and how big should they be before you lose credibility? In the case of *The Martian*, the answer is mixed.

Some of the movie's errors are minor and even cosmetic. The Johnson Space Center in Houston and the Jet Propulsion Laboratory in Pasadena look nothing like the slick, futuristic places they appear to be on screen. Even in a relatively near future in which it's possible to travel to and from Mars, the laws of economics and politics still apply, and Washington would never spend the money on architectural glitz when the drearier but serviceable facilities are still in place.

Other errors are a bit more technical, as when an unmanned supply vehicle is docking with the Mars mother ship and an astronaut is sent outside in a spacesuit to wave it in like an airport worker on a tarmac. But there's no one in the cargo ship to see him waving and video cameras on both the arriving ship and the mother ship would make it possible to control the entire operation from an indoor console. One rule of thumb in space travel: never take the risk of a spacewalk unless it's absolutely necessary—and in this case it's not.

Still, those are quibbles. Much more disturbing is what is arguably the most important plot device in the movie: the massive windstorm that sweeps astronaut Mark Watney (Matt

Damon) away, causing his crew mates to abandon him on the planet, assuming he has been killed. That sets the entire castaway tale into motion, but on a false note, because while Mars does have winds, its atmosphere is barely 1% of the density of Earth's, meaning it could never whip up anything like the fury it does in the story.

"I needed a way to force the astronauts off the planet, so I allowed myself some leeway," Weir conceded in a statement accompanying the movie's release. "Plus, I thought the storm would be pretty cool."

It was exceedingly cool actually, and for that reason Weir's liberty could almost be forgiven, but then the story tries to have it both ways with the same bit of science. When a pressure leak causes an entire pod on Watney's habitat to blow up, he patches a yawning opening in what's left of the dwelling with plastic tarp and duct tape. That might actually be enough to do the job in the tenuous atmosphere that does exist on Mars. But in the violent one Weir invents for his story, the fix wouldn't last a day.

The problem of Martian radiation is another tricky issue. Astronauts would be exposed to two kinds of dangers as they traveled to and from Mars and worked on the surface: solar energetic particles and galactic cosmic rays. A one-way, 180-day trip alone would subject them to 15 times the annual permissible dosage for workers in nuclear power plants. Watney spends more than 500 sols (or Martian days, which are only 39 minutes longer than our days) stranded on Mars, not to mention the back and forth flights in the crew's mother ship.

There are all manner of ways spacecraft and dwellings could be shielded from radiation: artificial magnetic fields or insulating layers of aluminum or water or even food and stored human waste packed into the walls might provide the necessary protection. But *The Martian* never makes mention of any of these things. And even if we simply assume that the NASA of the unspecified future in which the movie takes place has figured the problem out, Watney still spends a lot of his time wandering about on the surface in nothing but a spacesuit. He may not glow in the dark after that kind of cosmic bath, but he'd sure get radiation detectors jumping.

Give *The Martian* props for getting the botany mostly right. Martian soil would, as in the story, be suitable for growing crops—and in at least one study it worked better than ordinary Earthly dirt. And Watney's use of stored human waste as fertilizer would indeed make the reaping richer—even if it made the sowing nastier.

Whether a Martian castaway would have all of the oxygen Watney did for his long stay is open to question. The six person crew was supposed to remain on the surface for 30 days, meaning that a single person would have at least enough air for 180 days. NASA typically builds in very comfortable cushions when it comes to consumables, but in this case they'd have to provide three times the oxygen the crew would need—which is what it would take to keep Watney going for his 500-plus sols—and that's doubtful.

There are credibility issues on Earth as well. In order for Watney to be rescued, the rest of the crew must cancel its homecoming and, the moment their spacecraft reaches Earth, simply whip around it and head back to Mars. That's entirely possible. Such a slingshot maneuver—or gravity assist—was what guaranteed the first few Apollo lunar crews a free ride home if their engine failed as they were approaching the moon, and it has regularly been used in interplanetary explorations, as unmanned probes swing close to, say, Jupiter, to pick up some extra gravitational speed on their way to, say, Saturn.

In *The Martian*, however, the use of a gravity assist is portrayed as a late-night brainstorm by a NASA technician, one that requires him to run his equations on a room-sized super-computer and then explain the wondrous idea to a skeptical Administrator of NASA. But a NASA Administrator who didn't know what a gravity assist was would be like a cardiac surgeon who couldn't find a heart inside a patient's chest. Either way, it'd really be time to look for a different line of work.

Here too, however, it's worth the wince that that scene causes, if only to get back inside that wonderfully elegant spacecraft. Yes, it's implausibly big and implausibly tidy, but its central, zero-g segment and its rotating torus where artificial gravity would be created was true to the physics—and the way the crew transitioned from one environment to the other was seamless and pretty.

That's one of the problems *The Martian* hands science scolds. The story is such a ripping good ride and so gorgeous to watch that you don't merely want to suspend your disbelief, you want to tie it to a parking meter outside the theater and order it not to disturb you with its barking. For the most part, that does the trick. There will be plenty of nonnegotiable problems real astronauts on a real mission to Mars will have to confront. In a movie mission, well, go break a few rules if it means this much fun.

How Accurate Is *The Martian*? 9 Things The Movie Got Right And Wrong

© by Jonathan O`Callaghan
https://www.iflscience.com
28 Sep 2015, 22:04

"The Martian" is hitting cinemas right about now [October 2015], and already it is being heralded as one of the most scientifically accurate sci-fi films of all time. We've seen the movie, and we've got to say, it's amazing how far we've come since "Armageddon" (shudder). NASA has been so impressed, they've been using the movie as a marketing campaign for their own, actual manned missions to Mars in the 2030s.

Based on the book of the same name by Andy Weir, itself praised for its accuracy, director Ridley Scott asked NASA to check the film and ensure everything in it was correct – or as correct as can be. But just how did they do? Here we pick through the science in the movie,

with the help of a few experts, to see if "The Martian" is deserving of its accolades. Be warned, though, there are some spoilers in this post. So if you haven't read the book or seen the movie yet, continue at your own peril.

The dust storm

Let's get the big one out of the way nice and early: The dust storm that sets everything in motion at the start of the movie is not accurate. Although Mars does get dust storms, the atmospheric pressure is so low that the wind is negligible, although the dust itself can be harmful.

"Dust storms certainly do occur on Mars, they get winds in excess of 100 mph (160 km/h)," Dave Lavery, Program Executive for Solar System Exploration at NASA headquarters and a consultant for the film, told IFLScience. "But a 100 mph wind on Mars, because the atmosphere is so thin, has the same inertia and dynamic pressure down at the surface as about an 11 mph (18 km/h) wind on Earth. It's not going to have the sort of energy to move large objects the way that is portrayed in the book and the film."

To be fair, Andy Weir readily admits the dust storm was used simply to move the plot along and leave Mark Watney stranded on Mars. But hey, we're not letting him get off scot-free.
Fact or fiction? Fiction

Orbital dynamics

Perhaps one of the best factual aspects of the film is the accuracy of the travel time between Earth and Mars. While some science fiction films have the characters whizzing from point to point, "The Martian" reveals the brutal reality of spaceflight: It would take about eight months to get to or from Mars with current technology.

"This is not just a story, the author has done real computations," Rudi Schmidt, ESA Project Manager for Mars Express and also a consultant on the film, told IFLScience.
Fact or fiction? Fact

Martian soil

In the movie, after becoming stranded on the surface, Watney resorts to using a combination of his own excrement, water, and Martian soil to grow potatoes. But would Martian soil actually be of any use? Isn't it sterile and dead?

"In terms of basic mineral content and chemical content, yes it would be possible to grow plants in Martian soil," said Lavery. "We actually have experiments going on right now using simulated Mars soil, and it indicates that's a very realistic idea."

Fact or fiction? Fact

Radiation

Spending any prolonged amount of time in space, we're talking months or years, runs an increased risk of developing a radiation-related sickness, such as cancer. Modern astronauts stay in the safe confines of Earth's magnetosphere, while the Apollo astronauts spent just a few days at the Moon.

But on Mars, each Ares crew was spending up to a month on the surface in the movie. It's likely that the habitat as depicted in the film might be a bit different on a real future Mars mission; it might be necessary to partly submerge it in the ground, providing natural protection from radiation.

"The reality is I think people will go underground, to protect against radiation from the Sun," said Schmidt. "The structures will be on the surface, but machines will be used to protect them with Martian sand."

And what about Watney, who spends more than a year on the surface, often with nothing more than his spacesuit for protection? Well, although the radiation levels on Mars are less than expected, it's possible he would have considerably increased his risk of cancer, although he was unlikely to have experienced any immediate effects during his stay. We'll call this one a tie.

Fact or fiction? Tie

Taking off from Mars

To leave the Red Planet, each Ares crew uses a Mars Ascent Vehicle (MAV). In the book, it's explained how this plucks methane out of the Martian atmosphere to create fuel. The rocket then accelerates to an orbital velocity that allows it to rendezvous and dock with the Hermes spacecraft, which then brings the astronauts back to Earth. Feasible?

At the moment, no. NASA readily admits this is one of the biggest obstacles to future Mars missions. They just simply don't know the logistics of taking off from Mars, and all the unknowns that brings with it. Just think of taking off from Earth; although there are hundreds of launches every year, a few now and then end in failure. Mars has 30% of Earth's gravity and a sizable atmosphere, so it's not going to be easy. "Taking off from Mars is one of the biggest problems we're working on right now," said Lavery.

To find out how it might be done, NASA is planning a sample return mission in the 2020s. The tentative plan at the moment is for the currently unnamed 2020 Mars rover to collect samples and leave them on the surface, which will be picked up by a later lander and launched back to Earth. "That would form our basis for the same technology and techniques for a human mission," said Lavery.

So this one is fiction for now – but only because we don't know how to do it yet.

Fact or fiction? Fiction

Tornadoes on Mars

In the movie, you might be surprised to see giant tornadoes seemingly tearing up from the surface into the sky. If the Martian atmosphere is so thin, can it really form these? Why yes. Yes it can. Sort of.

Mars has tornadoes in the form of dust devils, whirlwinds that whip up debris on the surface. They can be up to half a mile tall, although still relatively wispy, so they might not look quite as dramatic as in the movie. But they are impressive nonetheless, and in 2005 the Spirit rover actually managed to capture one in action on the surface.

Fact or fiction? Fact

Communicating with Earth

When the communications system at Watney's habitat is destroyed in the (questionable) storm, he has no way to communicate with Earth until he goes to pilfer Pathfinder and Sojourner, the lander and rover that touched down on Mars in 1997. They went silent on the surface after just a few months, but could Watney really have repurposed them to make contact with Earth again?

"Theoretically, it would absolutely be possible," said Lavery, and he should know, as he worked on the Pathfinder mission. "The spacecraft has been sitting up there since 1997, and it stopped operating because the batteries finally drained and gave out. But if you replaced them and repowered it, everything else should still be functioning."

Houston, we have a solution.

Fact or fiction? Fact

Gravity on Mars

Watney moves in an Earth-like manner on Mars, but in reality, the Red Planet has about 30% of the gravity our own planet has, meaning movement would be a little different. NASA envisages that the most efficient way to walk on Mars will be a gait somewhere between a shuffle and a hop. We can appreciate why it wasn't portrayed this way in the movie, but hey, a win's a win for fiction.

Fact or fiction? Fiction

The habitat

Pretty accurate. The idea of using an inflatable habitat, which is what is used in "The Martian," is one that is being seriously considered. Indeed, soon an inflatable Bigelow Aerospace module will be attached to the ISS, and a descendent of that could be used on Mars. Whether an inflatable habitat could cope with having a flat floor on Mars is another question, as inflatable things tend to want to form a ball, and in the thin Martian atmosphere, the pressure on a habitat with an Earth-like environment inside might be too much. But it's possible.

Fact or fiction? Fact

Conclusion

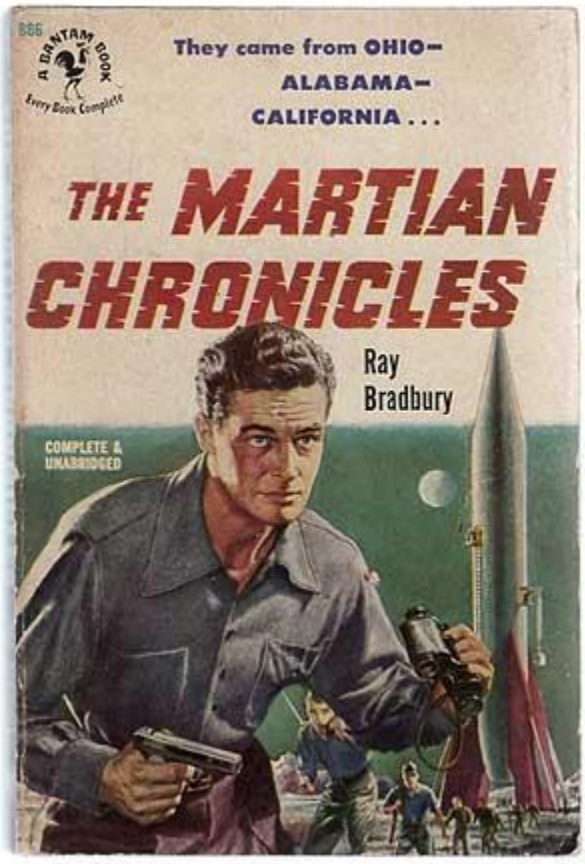
Overall, we score that at **five** for fact, **three** for fiction and **one** tie. And we've only brushed the surface – there were many other things the film got right, including the aesthetics on Mars, the spacesuits, the use of solar panels, the Hermes spacecraft (apart from maybe its rotation speed), the life support systems, and so on. On the other hand, there's not much else it

got wrong, aside from maybe the speed at which the astronauts go from the Hermes spacecraft into space without proper preparation.

Sure, we've picked out a few grievances, but they are minor quibbles. And compared to other movies (*cough* "Armageddon" *cough*), they are trivial. We'd have to say "The Martian" is deserving of its scientific plaudits.

SESSION FOUR:

THE MARTIAN CHRONICLES



A 1950 book jacket

CLASS DISCUSSION:

1. Unlike the film ***The Martian***, which is based on solid science, ***The Martian Chronicles*** is a lyrical fantasy in which "hard science" takes a back seat. Does the "lack" of science take away from the novel? Or is Bradbury making larger points about human nature?

2. What elements of the book make Mars seem realistic? What elements make it seem fantastic?

3. Why do most of the settlers choose to return to an Earth ravaged by nuclear war?

4. Do you sympathize with the Martians when they react with hostility toward the earliest delegates from Earth? Why or why not?

5. Why do you think Spender feels compelled to kill his companions in "And the Moon Be Still As Bright"? How feasible is his plan of slowing—and eventually halting—the space program?

Why, despite all that he has heard, is the captain willing to kill Spender? Is this story a turning point in ***The Martian Chronicles***?

6. What is the significance of the names given to towns, rivers, and cemeteries in "The Naming of Names"?

7. Who is the most fully drawn Martian character in the book? Who is the most fully drawn human character? Are the two characters at all similar?

8. Discuss the role of nostalgia in "The Third Expedition" and "The Martian." What is Bradbury saying about people's attachment to the past in these stories?

Adapted from "The Martian Chronicles - Topics for Discussion" Beacham's Guide to Literature for Young Adults Ed. Kirk H. Beetz. Vol. 4. Gale Cengage 1999 eNotes.com 6 Apr, 2019 http://www.enotes.com/topics/martian-chronicles/in-depth#in-depth-topics-discussion

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The Martian Chronicles is a haunting collection of short stories that chronicles humankind's colonization of Mars. Bradbury opens the volume with tales of the first three Mars expeditions, all of which meet with disaster, and goes on to relate the gradual encroachment of human— and, in particular, American— civilization on Earth's neighboring planet. In a style that is concise yet poetic, Bradbury sketches the lives and aspirations of various individuals who come to Mars in search of revenge, glory, or simply the tranquility of a long-ago era on Earth. Their reactions to the alien environment reveal much about the society they left behind, and in the end, all notions of an escape from Earth prove illusory.

Summary

Though ***The Martian Chronicles*** consists of chronologically arranged stories and sketches having to do with the exploration and colonization of Mars at the end of the twentieth century, Ray Bradbury has provided enough unity to justify calling the work a novel. The book contains fourteen stories and twelve sketches, though one might dispute the proper classification for a long sketch, “The Musicians,” about children playing among the dried corpses of dead Martians, and for the brief story, “There Will Come Soft Rains,” about the death of a mechanized house in California which continued to function for years after an atom-bomb blast killed its human occupants. These pieces can be divided according to phases in humanity’s relationship to Mars.

The first seven pieces are concerned with attempts to complete a successful expedition to Mars. The next fourteen pieces move through colonization toward exploitation of the planet. The next four cover the desertion of the colonies as people return to Earth after an atomic war begins in 2005. The last story tells how a remnant of what was best on Earth, having escaped the final conflagration, begins again on Mars.

Within this structure, three stories stand out for their thematic importance in tying the whole work together: “—And the Moon Be Still as Bright,” which ends the section on expeditions, “The Off Season,” which ends the section on colonization and exploitation, and “The Million-Year Picnic,” the final story. Only the fourth expedition to Mars is successful.

Each of the first three is destroyed, in part because of the telepathic powers of Martians. The first two men are killed by a jealous Martian husband whose unhappy wife has dreamed of the arrival of an attractive Earthman. A Martian psychiatrist kills the second crew as the only cure for their captain's perfect hallucination; apparently, thinking that one is from Earth becomes a serious mental disease on Mars. The third expedition is killed in what at first appears a diabolical plot. The Martians create a hallucination which convinces each member of the crew that his lost loved ones have been given a second chance at life on Mars. Having made the crew feel fully at home, the Martians kill each member in the night. The story becomes a little odd when the illusion of a small town continues through the funeral for the dead crew; the Martians continue to "be" the dead relatives, at least until "their" dead are buried. This oddness may be explained in a story which comes near the end of the next division of pieces. In "The Martian," one of the few remaining living Martians appears among Earth colonists as one who unwillingly becomes the person whom those about him wish most to see. This story resonates with that of the third expedition, suggesting more complexity in this unusual "telepathic" power to become the person whom someone else desires. When the fourth expedition arrives on Mars, virtually all of the Martians have succumbed to chicken pox. Though there appears to be no Martians left, Spender, one crew member, transforms himself into a "Martian" and attempts one last defense of the planet from the dangers of colonization.

"—And the Moon Be Still as Bright" is a key story because it announces the theme of conflict between a majority, which sees Mars as a new America to be exploited for its material wealth and living space, and a minority, which sees Mars as a new source of wisdom and spiritual value. Spender responds to the dead planet with awe and with respect for those who built the civilization of which there are such rich remains. He sees that most of his fellow voyagers are intent on material treasure and are without comprehension of or appreciation for what the remains of Martian culture might offer. To them, the Martians are like the American Indians, now fortunately out of the way. To him, as he quickly begins to learn about them, they are possessors of answers to age-old human conflicts over the question of what is of essential value. In conversations with Captain Wilder, Spender makes it clear that Martians believed that living was of value in itself and, therefore, allowed no other values to supersede the value of life. It becomes clear that this central value, along with other values which Spender sees reflected in Martian culture, is not to prevail in the colonization and exploitation of Mars.

In the fourteen pieces which tell of these processes, commercial and exploitative interests dominate. In the sketches, Bradbury documents the broad cultural movements, while in the stories, he tends to emphasize the minority countermovement: the protoecologist who plants trees to increase the oxygen, the young worker who enters a kind of "time-warp" to meet an ancient or future Martian and to realize their essential similarity, the Southern blacks who secretly arrange a mass exodus to Mars to escape segregation, and the millionaire eccentric who takes revenge on the arrogant forces of cultural conformity. These predominantly comic stories are placed against a backdrop of impending atomic war on Earth and the spread to Mars of the attitudes which have led to this war.

"The Off Season" illustrates these destructive attitudes nicely. Sam Parkhill, a member of the fourth expedition, has found a prime location at which to set up the only hot-dog stand on Mars. Within days, thousands of surplus laborers will arrive from Earth to work in "the mines," and he will rake in cash selling them familiar food. As he glories in dreams of profit, an

emissary of the few surviving Martians arrives to deed him half of the planet and to tell him some news he has not yet heard, that a world war has started on Earth. Parkhill is convinced that the Martians, resentful at the loss of their planet, intend to prevent his realizing his dream. He kills the emissary, then flees from other Martians, killing several more before they can make their intentions clear. He kills them because he can see them only through his own greed and guilt. The Martian attitude toward Sam seems a compound of irony and pity. They appreciate, along with Sam's wife and the reader, the irony that Sam's business will fail because attitudes such as Sam's predominate on Earth. They may deed him so much territory out of pity at his loss of his home or out of irony because the site's commercial value is gone. The values by which Sam lives are ultimately self-destructive. Sam Parkhill embodies the destructive values which bring about the end of Earth. Spender, the converted Martian, articulates the minority values which could save humanity on Earth. Ultimately, these latter values fail, and Earth is utterly destroyed.

In "The Million-Year Picnic," a family representing the values of love, the appreciation of cultural diversity, and the value of life arrives on Mars as the last remnant of Earth culture. These people become the new Martians and, in a world purified of the old sins, begin again the spiritual quest which has run beneath the destructive course of human history in this book.

"The Martian Chronicles - Summary" Critical Survey of Literature for Students Ed. Laurence W. Mazzeno. eNotes.com, Inc. 2010 eNotes.com 6 Apr, 2019 <http://www.enotes.com/topics/martian-chronicles/summary/more#summary-more-the-story>

In the 1940's, Bradbury had established himself as a highly popular short-story writer. When a Doubleday editor encouraged him to try connecting some of his stories into a unified, novelistic collection, Bradbury quickly responded with ***The Martian Chronicles***, a group of stories about people from Earth colonizing Mars.

The idea of the colonization of Mars had long fascinated Bradbury. When he produced ***The Martian Chronicles***, he had published more than ten Martian stories, and he continued to produce more after the book was published. This book became the first of several Bradbury works that are called novels not because they have the traditional plot characteristics of the novel but because they are somewhat unified collections of related stories, rather like Sherwood Anderson's ***Winesburg, Ohio*** (1919). Bradbury repeated this form with varying success in ***The Illustrated Man*** (1951) and ***Dandelion Wine*** (1957).

The Martian Chronicles is an apt title. Bradbury structured the book as a loose chronicle, beginning in 1999 with the first expedition to Mars and ending in 2026, with what is probably the last. The chronological ordering establishes a strong forward movement in the first one-third of the book, which deals with four exploratory expeditions from 1999 to 2001. Roughly the middle one-third contains stories and episodes which, though placed from 2001 to 2005, are not very sequential. They seem more like a gathering of incidents illustrating aspects of a colonial period. The final third of the book, though it spans 2005 to 2026, really concentrates on the beginning and the end of this period. In 2005, atomic war begins to destroy Earth civilization, draws most of the Martian colonists back to their home planet, and effectively brings an end to space travel. In 2026, Earth is devastated, but a remnant of idealists from Earth escapes to Mars, hoping to start over. *[NB. A later revision of the Chronicles by*

Bradbury pushed the dates of each section forward by nearly three decades, without changing the content of the individual stories.]

While the overarching structure of a chronicle binds the book together at the beginning and end, there are other important unifying elements. One major element is the metaphor of the frontier. Bradbury repeatedly returns to the idea of Mars as a new frontier. The planet is a new world (like America), populated at first by predominantly peaceful, intelligent beings much like humans, though they have telepathic powers and a slightly different technology. The Martians find themselves playing the role of Americans Indians in the frontier metaphor, resisting invasion somewhat haphazardly until almost completely wiped out by a plague of chicken pox accidentally brought from Earth. There are no "Indian wars," but the abandoned cities and artifacts of Martian civilization become objects of interest, wonder, exploitation, and wanton destruction by the later colonists. The Martians, after their demise, produce converts, people who believe that the Martian civilization was better than their own and set out in various ways to imitate what they believe it was. This motif of conversion into Martians remains important throughout the book and becomes its final note.

The colonial phase begins with a Johnny Appleseed character who dreams of the desert world becoming a green world and sets out on foot to plant trees over large areas. Bradbury's episodes and sketches present positive and negative aspects of the United States' colonial history. On the negative side are exploiters and materialist dreamers who ignore the spiritual significance of this new beginning and seize upon the dross—the chances for wealth and power available on a comparatively free frontier. On the positive side are those who come to Mars in search of spiritual freedoms denied on Earth. Among them is a large group of southern blacks who see in Mars the chance to gain what the United States has denied them. Their story, told in "Way in the Middle of the Air," may seem rather naïvely conceived when read by twenty-first century readers, but sketches such as this one gave Bradbury a reputation for radicalism in 1950. Among the spiritual questers is William Stendahl, who in "Usher II" prefigures themes in Fahrenheit 451, using Mars to escape from anti-imagination book censors on Earth and to take a poetically just revenge upon some of them.

In the last third of the book, Bradbury complicates the frontier metaphor by foregrounding the Eden myth that stands behind it and mixing in the new terror that existed during the period following World War II when he produced this book—the threat of atomic holocaust. In long years of war, Earth finally reduces itself to rubble, and at the last a small group of people flees to Mars, determined to start over and do things right this time. The image of a remnant of the spiritually pure leaving behind a hopelessly corrupt civilization to start anew is, of course, at the center of the American myth of the frontier.

"Pioneers" bringing their purity to an innocent and empty place evokes the idea of Eden regained, where a truly new start is possible. Added to these elements, however, is a feature that points to the profundity of the optimism behind this book that so vividly portrays humanity's failures and weaknesses. Remaining on Mars are the remnants of an ancient and wise Martian civilization and perhaps even some actual Martians. For humans to be converted into Martians, to become products of the place and its native spiritual presences, may lead to a true advance for humanity beyond the blind and selfish passions that have once again produced holocaust.

The idea of a saving remnant of the spiritually chosen pervades the Bible and the Judeo-Christian tradition. It also is important to Bradbury and appears regularly in his stories. This mythic pattern is one of the more important indications of optimism in Bradbury's fiction. He often tells stories such as this one, in which civilization dies because of its failures of wisdom, compassion, and imagination. Nearly always, however, the pattern includes a small new beginning by those whose vision is cleansed by suffering and who vow to preserve the best of the past and leave the worst behind, and this pattern converts Armageddon into a step toward salvation.

As the first work of American science fiction to gain a truly broad reading public, this book is of considerable historical importance in modern American literature. Although literary critics disagree about the book's artistic merits, ***The Martian Chronicles*** promises to remain in print as a popular favorite.

"The Martian Chronicles - Summary" Masterpieces of American Literature Ed. Steven G. Kellman. eNotes.com, Inc. 2006 eNotes.com 6 Apr, 2019 http://www.enotes.com/topics/martian-chronicles/summary/more#summary-more-the-work

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"Rocket Summer" (January 1999/2030)

First published in *Planet Stories*, spring 1947.

The stories of the book are arranged in chronological order, starting in January 1999, with the blasting off of the first rocket. "Rocket Summer" is a short vignette which describes Ohio's winter turning briefly into "summer" due to the extreme heat of the rocket's take-off, as well as the reaction of the citizens nearby.

"Ylla" (February 1999/2030)

First published as "I'll Not Ask for Wine" in *Maclean's*, January 1, 1950.

The following chapter, "Ylla", moves the story to Mars, describing the Martians as having brown skin, yellow eyes, and russet hair. Ylla, a Martian woman trapped in an unromantic marriage, dreams of the coming astronauts through telepathy. Her husband, though he pretends to deny the reality of the dreams, becomes bitterly jealous, sensing his wife's inchoate romantic feelings for one of the astronauts. After taking his gun under the pretense of hunting, he kills astronauts Nathaniel York and "Bert" as soon as they arrive.

"The Summer Night" (August 1999/2030)

First published as "The Spring Night" in *The Arkham Sampler*, Winter 1948.

This short vignette tells of Martians throughout Mars who, like Ylla, begin subconsciously picking up stray thoughts from the humans aboard the Second Expedition's ship. As the ship approaches their planet, the Martians begin to adopt aspects of human culture such as playing and singing American songs, without any idea where the inspirations are coming from.

"The Earth Men" (August 1999/2030)

First published in *Thrilling Wonder Stories*, August 1948.

This story tells of the "Second Expedition" to Mars. The expedition is a group of four men. The astronauts arrive to find the Martians to be strangely unresponsive to their presence. The one exception to this is a group of Martians in a building who greet them with a parade. Several of the Martians in the building claim to be from Earth or from other planets of the solar system, and the captain slowly realizes that the Martian gift for telepathy allows others to view the hallucinations of the insane, and that they have been placed in an insane asylum. The Martians they have encountered all believed that their unusual appearance was a projected hallucination. Because the "hallucinations" are so detailed and the captain refuses to admit he is not from Earth, Mr. Xxx, a psychiatrist, declares him incurable and kills him. When the "imaginary" crew does not disappear as well, Mr. Xxx shoots and kills them too. Finally, as the "imaginary" rocket remains in existence, Mr. Xxx concludes that he too must be crazy and shoots himself. The ship of the Second Expedition is sold as scrap at a junkyard.

"The Taxpayer" (March 2000/2031)

First appeared in *The Martian Chronicles*.

A man insists that he has a right to be on the next rocket to Mars, because he is a taxpayer. He strongly insists on boarding the ship due to the impending nuclear war on Earth. He is not allowed on the ship and eventually gets taken away by the police.

"The Third Expedition" (April 2000/2031)

First published as "Mars is Heaven!" in *Planet Stories*, fall 1948.

The arrival and demise of the third group of Americans to land on Mars is described [in] this story. This time the Martians are prepared for the Earthlings. When the crew arrives, they see an idyllic small town of the 1920s occupied by the long-lost loved ones of the astronauts. The bewildered and happy crew members ignore their captain's orders and disperse to join their supposed family members. The Martians use the memories of the astronauts to lure them into their "old" homes where they are killed in the middle of the night. The next morning, sixteen coffins are carried from sixteen houses and are buried by mourners who sometimes resemble humans and sometimes "something else."

The original short story was set in the 1960s and dealt with characters nostalgic for their childhoods in the Midwestern United States in the 1920s. In the ***Chronicles*** version, which takes place forty years later but which still relies on 1920s nostalgia, the story contains a brief paragraph about medical treatments that slow the aging process, so that the characters can be traveling to Mars in the 2000s but still remember the 1920s.

"—And the Moon Be Still as Bright" (June 2001/2032)

First published in *Thrilling Wonder Stories*, June 1948.

The next chapter opens with the men of the Fourth Expedition gathering firewood against the cold Martian evening. The scientists have found that all of the Martians have died of chickenpox (brought by one of the first three expeditions)—analogous to the devastation of Native American populations by smallpox. The men, except for the archaeologist Spender and Captain Wilder, become more boisterous. Spender loses his temper when one of his crew-mates starts dropping empty wine bottles into a clear blue canal and knocks him into the canal. When questioned by his captain, Spender replies, "We'll rip it up, rip the skin off, and change it to fit ourselves," and that "we Earth Men have a talent for ruining big, beautiful things," referring to Earth. He leaves the rest of the landing party to explore Martian ruins after one crew member vomits on an ancient tile mosaic.

Spender returns to the rest of the expedition. He carries a gun and, claiming to be the last Martian, shoots six of his crew-mates, including one with sympathy towards the Martians from his Cherokee ancestry. Captain Wilder approaches under a white flag and has a short discussion with Spender about how Martians were better than us. This is because the Martians knew how to combine religion and science, without criticizing and fighting as we humans do. During which, the archaeologist explains that if he manages to kill off the expedition it may delay human colonization of the planet for a few more years, possibly long enough that the expected nuclear war on Earth will protect Mars from human colonization completely. Although he opposes Spender's methods, Captain Wilder somewhat agrees with his attitude towards colonization and wishes for him a humane death. He returns to the others and joins them as they pursue Spender, and Wilder shoots Spender in the chest during the fight before he has the opportunity to be killed by anyone else. Another member of the crew named Parkhill, uses the ruined town as target practice, so Wilder knocks his teeth out.

Many of the characters of the Fourth Expedition—Parkhill, Captain Wilder, and Hathaway—re-appear in later stories. This is the first story that focuses on a central motif of The Martian Chronicles: the colonization of the Western frontier in the United States. Like Spender, Bradbury's message is that some types of colonization are right and others are wrong. Trying to recreate Earth is viewed as wrong, but an approach that respects the fallen civilization that is being replaced is right.

In some editions the two stories relating to Spender were combined as one.

"The Settlers" (August 2001/2032)

First appeared in *The Martian Chronicles*.

This short story describes the first settlers coming to Mars, the "Lonely Ones", the ones that came to start over on the planet.

"The Green Morning" (December 2001/2032)

First appeared in *The Martian Chronicles*.

The next several chapters describe the transformation of Mars into another Earth. Small towns similar to those on Earth begin to grow. In "The Green Morning," Benjamin Driscoll makes it his mission to plant thousands of trees on the red plains to increase oxygen levels. Due to some property of the Martian soil, the trees grow into a mighty forest overnight.

"The Locusts" (February 2002/2033)
First appeared in *The Martian Chronicles*.

This vignette concerns the swift colonization of Mars. The title refers to the rockets and settlers which quickly spread across all of Mars.

"Night Meeting" (August 2002/2033)
First appeared in *The Martian Chronicles*.

This story begins with a conversation between an old man and a young traveler, Tomás Gomez. The older man explains that he came to Mars because he appreciates the new and novel. Even everyday things have become amazing to him once again. He has returned full circle to his childhood. Later, Tomás encounters a Martian named Muhe Ca. Each can see the Mars he is accustomed to, in his own time frame, but the other person is translucent and intangible to him and has the appearance of a phantom. The young man sees ruins where the Martian sees a thriving city, while the Martian sees an ocean where Tomás sees the new Earth settlement. Neither knows if he precedes the other in time, but Bradbury makes the point that any one civilization is ultimately fleeting.

This is the only full-length story in The Martian Chronicles that had not previously appeared in another publication.

"The Shore" (October 2002/2033)

This story describes the rippling outward of colonization, the first wave being loner, pioneer types, and the second, also Americans, being from the "cabbage tenements and subways" of New York City.

"The Fire Balloons" (November 2002/2033)
First appeared as "…In This Sign" in *Imagination*, April 1951.

A missionary expedition of Episcopal priests from the United States anticipates sins unknown to them on Mars. Instead, they meet ethereal creatures glowing as blue flames in crystal spheres, who have left behind the material world, and thus have escaped sin.

This story appeared only in a few editions of the novel: the 1951 British edition that was called ***The Silver Locusts***, the 1974 edition from The Heritage Press, the September 1979 illustrated trade edition from Bantam Books, the "40th Anniversary Edition" from Doubleday Dell Publishing Group, and in the 2001 Book-of-the-Month Club edition. It otherwise appeared in ***The Illustrated Man*** (1951).

"Interim" (February 2003/2034)
First appeared in *Weird Tales*, July 1947.

This story describes the building of a Martian town by colonists and how much it was made to resemble an average Midwestern American town. The town was said to have appeared to have been swept up by a tornado on Earth and brought to Mars.

"The Musicians" (April 2003/2034)

First appeared in *The Martian Chronicles*.

Several boys venture into the ruins of Martian cities. They enter houses and play with the debris, imagining that they are on Earth playing with the autumn leaves. They have fun playing "white xylophones"—Martian ribcages. They play with a sense of urgency because the Firemen are due to arrive soon, cleaning and disinfecting the ruins and destroying this source of fun.

"The Wilderness" (May 2003/2034)

First appeared in *The Magazine of Fantasy and Science Fiction*, November 1952.

Two women, Janice Smith and Leonora Holmes, prepare to depart on a rocket to Mars, to find husbands or lovers waiting for them there. Janice muses on the terrors of space, drinks in last memories of the Earth she will soon be leaving and compares her situation to that of the pioneer women of the 19th-century American frontier.

This story only appears in the 1974 edition of ***The Martian Chronicles*** by The Heritage Press, the 1979 Bantam Books illustrated trade edition, and the 1997 edition of ***The Martian Chronicles***. In its original form, the story was dated 2003, and this date is consistent with the other stories. As it appears in the 1997 edition, the date (together with all the other dates) has been shifted ahead 31 years, to May 2034.

"Way in the Middle of the Air" (June 2003/2034)

First appeared in *Other Worlds*, July 1950.

In an unnamed Southern town, a group of white men learn that all African Americans are planning to emigrate to Mars. Samuel Teece, a racist white man, decries their departure as a flood of African Americans passes his hardware store. He tries to stop one man, Belter, from leaving due to an old debt, but others quickly take up a collection on his behalf to pay it off. Next he tries to detain Silly, a younger man who works for him, saying that he signed a contract and must honor it. As Silly protests, claiming that he never signed it, one of Teece's friends volunteers to take his place. Several of Teece's friends stand up to him and intimidate him into letting Silly depart.

As Silly drives off, he yells to Teece, "What you goin' to do nights?" - referring to Teece's nightly activities with a gang that had terrorized and lynched blacks in the area. The enraged Teece and a friend give chase in his car, but soon find the road cluttered with the discarded belongings of the rocket passengers. After they return to the hardware store, Teece refuses to watch as the rockets lift off. Wondering how he and his friends will spend their nights from now on, he takes a small triumph in the fact that Silly always addressed him as "Mister" even as he was leaving.

This episode is a depiction of racial prejudice in America. However, it was eliminated from the 2006 William Morrow/Harper Collins, and the 2001 DoubleDay Science Fiction reprinting of the book.

"The Naming of Names" (2004-05/2035-36)

First appeared in *The Martian Chronicles*. Not to be confused with the short story "The Naming of Names", first published in *Thrilling Wonder Stories*, August 1949, later published as "Dark They Were, and Golden-Eyed."

This story is about later waves of immigrants to Mars, and how the geography of Mars is now largely named after the people from the first four expeditions (e.g., Spender Hill, Driscoll Forest) rather than after physical descriptions of the terrain.

"Usher II" (April 2005/2036)

First published as "Carnival of Madness" in *Thrilling Wonder Stories*, April 1950.

"Usher II" is about censorship. William Stendahl is a book lover who has retreated to Mars after the government confiscated and destroyed his vast collection. On Mars, he constructs his image of the perfect haunted mansion, complete with mechanical creatures, creepy soundtracks, and thousands of tons of poison to kill every living thing in the surrounding area. He is assisted by Pikes, a film aficionado and former actor whose collection was confiscated and destroyed by the government and who was subsequently banned from performing. When the "Moral Climate Monitors" come to visit, Stendahl and Pikes arrange to kill each of them in ways that allude to different horror masterpieces, culminating in the murder of Inspector Garrett in a sequence reminiscent of Edgar Allan Poe's "The Cask of Amontillado". Once Stendahl's persecutors are dead, he and Pikes watch from a helicopter as the house crumbles and sinks into the lake as in Poe's short story "The Fall of the House of Usher". At the end of this story, Poe (or Stendahl) hints that the "Moral Climate Monitors" could have avoided these deaths if they had only read the books they banned, since then they would have recognized what was happening to them.

Bradbury hints at past events on Earth, set in 1975–30 years prior to the events in "Usher II". The government sponsored a "Great Burning" of books and made them illegal, which leads to the formation of an underground society of book owners. Those found to possess books had them seized and burned by fire crews. Mars apparently emerged as a refuge from the fascist censorship laws of Earth, until the arrival of a government organization referred to only as "Moral Climates" and their enforcement divisions, the "Dismantlers" and "Burning Crew". Bradbury would reuse the concept of massive government censorship (to the point of abolishing all literature) in his book Fahrenheit 451.

In 2010, Los Angeles artist Allois, in collaboration with Bradbury, released illustrated copies of "Usher" and "Usher II".

"The Old Ones" (August 2005/2036)

First appeared in *The Martian Chronicles*.

A very brief prelude to the following story, describing the immigration of elderly people to Mars.

"The Martian" (September 2005/2036)

First published in *Super Science Stories*, November 1949.

LaFarge and his wife Anna have forged a new life for themselves, but they still miss their dead son Tom. A night thunderstorm startles the elderly pair, who see a figure standing outside their home in the rain.

When morning comes, "Tom" is busy helping Anna with chores. LaFarge sees that Anna is somehow unaware of Tom's death, and after speaking privately with him, LaFarge learns that "Tom" is a Martian with an empathic shapeshifting ability: the Martian appears as their dead son to them.

Later that day, Anna insists on a visit to the town. "Tom" is deathly afraid of being so close to so many people. LaFarge promises to keep him close, but at the town they become separated. While searching for "Tom", LaFarge hears that the Spaulding family in town has miraculously found their lost daughter Lavinia. Desperate to avoid a second devastating heartbreak to his wife, LaFarge stands outside Spaulding's home and finds "Tom" now masquerading as Lavinia. He is able to coax "Tom" to come back, and they run desperately back for their boat to leave town. However, everyone "Tom" passes sees someone significant to them—a lost husband, a son, a wanted criminal. The Martian, exhausted from his constant shape-changing, spasms and dies.

"The Luggage Store" (November 2005/2036)

First appeared in *The Martian Chronicles*.

The story of Mars and its inhabitants is continued in a discussion between a priest and a luggage storeowner. Nuclear war is imminent on Earth, and the priest predicts that most of the colonists will return to help.

"The Off Season" (November 2005/2036)

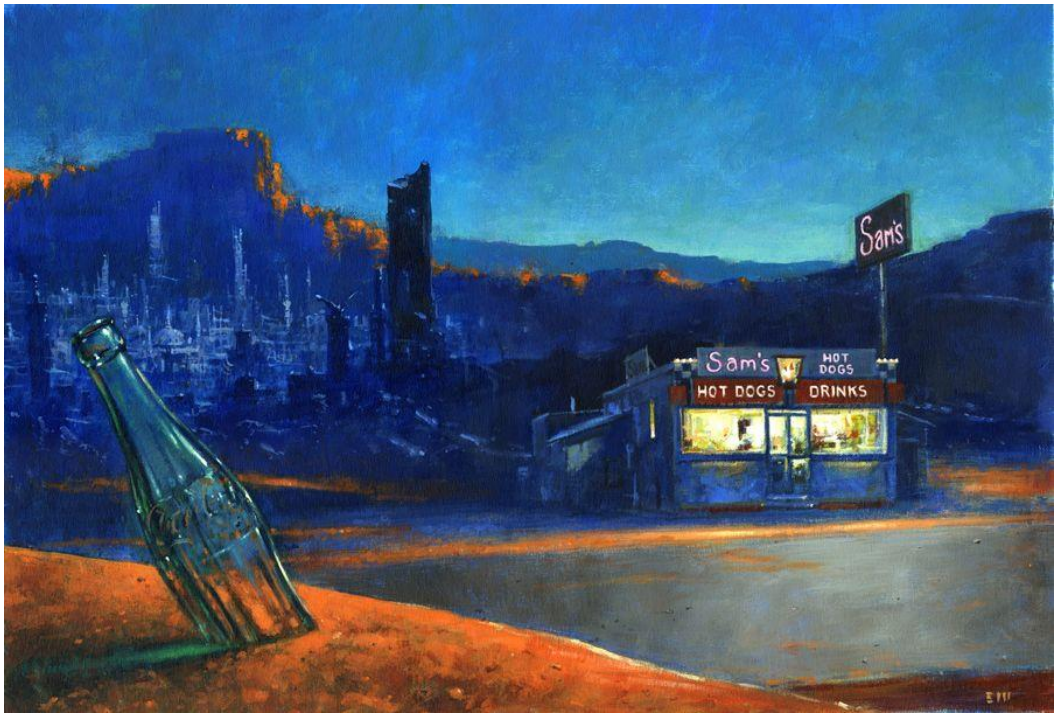
First published in *Thrilling Wonder Stories*, December 1948.

On Mars, former Fourth Expedition member Sam Parkhill has opened a hot-dog stand and is expecting a huge rush of business as soon as the next wave of settlers and workers arrives from Earth. When a lone Martian walks in one night, Parkhill panics and kills him. Other Martians arrive in sand ships, prompting Parkhill and his wife to flee across the desert in their own ship. Once the Martians catch up, they surprise Parkhill by giving him ownership of half the planet. He returns to his hot-dog stand just in time to witness the start of the nuclear war on Earth, which puts an end to the settler flights and his business.

"The Watchers" (November 2005/2036)

First appeared in The Martian Chronicles.

The colonists witness a nuclear war on Earth from Mars. They immediately return out of concern for their friends and families, buying up the luggage store owner's entire inventory before they leave.



"The Silent Towns" (December 2005/2036)

First published in *Charm*, March 1949.

Everybody has left Mars to go to Earth, except Walter Gripp—a single miner who lives in the mountains and does not hear of the departure. At first excited by his find of an empty town, he enjoys himself with money, food, clothes, and movies. He soon realizes he misses human companionship. One night he hears a telephone ringing in someone's home, and suddenly realizes that someone else is alive on Mars. Missing the call, and several others, he sits down with a phone book of Mars and starts dialing at A.

After days of calling without answers, he starts calling hotels. After guessing where he thinks a woman would most likely spend her time, he calls the biggest beauty salon on Mars and is delighted when a woman answers. They talk, but are cut off. Overcome with romantic dreams, he drives hundreds of miles to New Texas City, only to realize that she drove to find him on a back road. He drives back to his town, and meets Genevieve Selsor as he pulls in.

Their meeting is the opposite of what he had hoped for in his dreams; she is unattractive (due to her weight and pallor), foolish, and insipid. After a sullen day, she slyly proposes marriage to him at dinner, as they believe they are the last man and the last woman on Mars. Gripp flees, driving across Mars to another tiny town to spend his life happily alone, avoiding all contact with Genevieve and ignoring any phone he hears ringing.

"The Long Years" (April 2026/2057)

First published as "Dwellers in Silence" in *Maclean's*, September 15, 1948.

Hathaway (the physician/archaeologist from the Fourth Expedition), now retired, is living on Mars with his wife and children in the hills above an old, abandoned settlement, vacated many years ago when everyone returned to Earth at the beginning of the war there. A gifted inventor and tinkerer, he has wired the old ghost town in the valley below so that he can

make it come alive at night with lights and sounds as if it were still inhabited. One night, he sees a rocket approaching Mars and sets fire to the old town to attract the attention of those on board.

On board the rocket is his old commander, Captain Wilder (also from the earlier stories about the Fourth Expedition), returning to Mars after twenty years exploring the outer solar system. He and his crew land and are met by Hathaway, now old and suffering from heart disease. Hathaway brings the crew to his house for breakfast and introduces them to his family. Wilder, who remembers meeting Hathaway's wife many years earlier, remarks that she looks remarkably young, while Hathaway has aged considerably. Wilder pales when he and one of his crew realize that Hathaway's son, who gives his age as 23, must be at least in his forties. Wilder sends the crewmember off to the local cemetery to check the headstones. He returns to report that he has found the graves of every member of the family but Hathaway.

Wilder offers to take Hathaway back to Earth, but he declines. In the next moment, Hathaway has a heart attack and dies, begging Wilder not to call his family to his side because they "would not understand". Wilder then confirms that Hathaway's wife and children are actually androids, created by Hathaway after the originals died years ago.

As Wilder prepares to depart, one of the crew returns to the house with a pistol, thinking to put an end to the androids, whose existence seems pointless now that Hathaway is gone, but he returns shortly, having been unable to bring himself to kill the robotic family even knowing that they are not truly human. The rocket departs, and the android family continues on with its meaningless routine.

"There Will Come Soft Rains" (August 4, 2026/2057)

First published in *Collier's*, May 6, 1950.

The story concerns a household in Allendale, California, after the nuclear war has wiped out the population. Though the family is dead, the automated house that had taken care of the family still functions.

The reader learns a great deal about what the family was like from how the robots continue on in their functions. Breakfast is automatically made, clothes are laid out, voice reminders of daily activities are called out, but no one is there. Robotic mice vacuum the home and tidy up. As the day progresses, the rain quits, and the house prepares lunch and opens like a flower to the warm weather. A starving dog, apparently the family pet, whines at the door, is admitted and dies. Outside, a vivid image is given: the family's silhouettes were permanently burned onto the side of the house (as occurred at Hiroshima) when they were vaporized by the nuclear explosion. That night, a storm crashes a tree into the home, starting a fire that the house cannot combat, as the municipal water supply has dried up and failed. By the next morning, the entire house has collapsed except for one wall that announces the date over and over.

The title of the story comes from a randomly selected bedtime poem called "There Will Come Soft Rains", which is an actual poem by Sara Teasdale published in 1920. In the original story in *Collier's*, the story takes place 35 years in the future.

"The Million-Year Picnic" (October 2026/2057)
First published in *Planet Stories*, summer 1946.

A family saves a rocket that the government would have used in the nuclear war and leaves Earth on a "fishing trip" to Mars. The family picks a city to live in and call home, destroying the rocket so that they cannot return to Earth. They enter and the father burns tax documents and other government papers in a campfire, explaining that he is burning a misguided way of life. A map of Earth is the last thing to be burned. Later, he offers his sons a gift in the form of their new world. He introduces them to the Martians—their own reflections in a canal.

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CHARACTERS

Bradbury does not create fully developed, complex characters in The Martian Chronicles. Though there are memorable characters, most tend to be representative. Ylla, the unhappy Martian wife, is a typical unhappy wife. Sam Parkhill is a typical, small-minded businessman, unable to see beyond his desire for wealth. William Thomas in “The Million-Year Picnic” is a good-hearted Everyman who tries until the last minute to save humanity and then tries to continue what is best in humanity on Mars. Perhaps the most memorable character is William Stendahl, the creator of the new House of Usher in “Usher II.” This story is related thematically to Bradbury’s Fahrenheit 451 (1953). Stendahl is a millionaire eccentric who has dedicated his life to preserving the imaginative literature (especially the stories of Edgar Allan Poe) which has been outlawed and burned by controllers of the “moral climate” on Earth. He devises the new House of Usher as an exact external replica of the original in order to trap most

of the moral-climate officials and kill them there. The story tells of his success with this plot. Though Stendahl is memorable, especially for forcing his victims to die like characters in Poe's tales and in twitting them for their ignorance of Poe, which is also ignorance of their fates, he still is essentially one-dimensional. Even the most important character, Spender, is essentially a mouthpiece for the main positive values of the book.

"The Martian Chronicles - The Characters" Masterpieces of American Fiction Ed. Steven G. Kellman. eNotes.com, Inc. 2000 eNotes.com 6 Apr, 2019 http://www.enotes.com/topics/martian-chronicles/characters#characters-characters-characters-the-characters

John Spender

John Spender, an astronaut, a member of the fourth expedition to Mars. In "June 2001: And the Moon Be Still as Bright," he is overwhelmed by the deaths of the Martians, accidentally caused when the third expedition infected them with chicken pox. He realizes that Earth people will exploit and destroy Mars, making it into another intolerable Earth. He tries to prevent colonization by stopping his own crewmates and kills several of them in the process. He explains his thoughts to Captain Wilder, but then rather than running away, he allows himself to be found and killed because he realizes that his cause is doomed. The crew buries him as they think a Martian would be buried.

Captain Wilder

Captain Wilder, an astronaut, the leader of the fourth expedition to Mars. He and his crew find the Martians dead of chicken pox and the planet little more than a museum. He understands that Spender is trying to save Mars from the destruction that humans will bring, and he knows that instead of creating a new life on Mars, the people of Earth will only bring with them the evil that they are trying to escape. Not satisfied with staying on the new planet and watching what will happen, he leaves to take command of a ship going to the outer planets. In "April 2026: The Long Years," he stops at Mars on his return to Earth many years after war has destroyed most life on Earth and finds Hathaway living alone with a family he has created. Hathaway, now an old man, dies during the reunion, and the captain and his crew leave Mars to go back to Earth to see if any life remains.

Sam Parkhill

Sam Parkhill, an astronaut, a member of the fourth expedition. He sees Mars as a planet ripe for the picking, and he takes considerable joy in destroying Martian monuments. When Spender starts killing crew members, he is the first to want to hunt Spender down, and he is determined to shoot him in the head. Captain Wilder prevents this killing and eventually knocks Sam's teeth out after Spender's death when Sam uses the crystal towers of the deserted city for target practice. In "November 2005: The Off Season," Sam brings his wife to Mars and sets up a hot dog stand on one of the highways, hoping to cash in on the boom of business he thinks will come when the fleet of colonization rockets arrives. The last of the Martians, knowing telepathically what is happening on Earth, arrive to give him the deed to the planet, but he kills many of them and flees in panic. Finally, they convince him that their intentions are peaceful,

and they give him the deed. He thinks that he will at last be a rich man, but on that night war breaks out on Earth, and he and his wife see it catch fire in the night sky.

Hathaway

Hathaway, an astronaut, a member of the fourth expedition. He brings his family to Mars and settles there. In “April 2026: The Long Years,” when war breaks out on Earth and everyone is recalled from Mars, he and his family are up in the hills and are left behind, becoming the last humans on Mars of which he is aware. When his family dies, he creates machines in their images and eventually forgets that they are machines. He creates a lighted city around them and becomes content in the illusion that he is not alone. He dies shortly after Captain Wilder returns and is buried on Mars near the graves of his human family. The androids he creates remain behind to live on the Mars he has created for them.

"The Martian Chronicles - Characters Discussed" Great Characters in Literature Ed. A. J. Sobczak and Frank N. Magill. eNotes.com, Inc. 1998 eNotes.com 6 Apr, 2019 ***http://www.enotes.com/topics/martian-chronicles/characters#characters-characters-characters-characters-discussed***

THEMES

Underlying Bradbury's futuristic writing is an enormous nostalgia for the simplicity of wholesome, early twentieth-century, small-town life. This nostalgia infuses both The Martian Chronicles and many of the author's other works. His immigrants to Mars are usually looking for a place to call their own—a cozy home and a bit of land. When they reach Mars they immediately set about turning it into another, better version of their place of origin. In "The Off Season," Sam Parkhill thinks that he has achieved his lifelong dream by opening up a roadside hot dog stand. Other new immigrants set up luggage stores, or plant maple and elm trees.

Bradbury suggests that nostalgia can, at times, be dangerous. In "The Third Expedition," a party of astronauts lands on Mars and discovers aninnocent-lookingg town apparently inhabited by deceased family members—mothers, brothers, grandparents, all of them long since dead back on Earth. These people turn out to be Martians, who have used nostalgia as a lure to entrap and eventually kill the unsuspecting astronauts.

The nostalgia theme in Bradbury's stories differentiates his work from that of many other science fiction writers of his generation. There is almost nothing of the fascination with technology that characterizes much work in the genre. Even the exotic settings of Bradbury's tales are largely superfluous, serving primarily to introduce a narrative tension between the familiar and the unfamiliar. The invaders from Earth rename ancient places on Mars in honor of their own civilization; conversely, Bradbury places unfamiliar names on his settings, and proceeds to tell tales of haunting familiarity, in which age-old passions such as jealousy, nostalgia, and passion spell the fates of Martians and humans alike.

Several of Bradbury's stories also deal with the dividing line between reality and illusion. In the touching "Night Meeting," a human and a Martian meet on a deserted road only to discover that each is an impalpable ghost to the other and that each sees a totally different Mars. In "Usher II," Mars is invaded by government bureaucrats from Earth who want to limit the settlers' freedom, both political and imaginative. In response, a man builds a bizarre duplicate of the House of Usher—from the Edgar Allan Poe story "Fall of the House of Usher"

(1839)—peopling it with deadly traps taken from various Poe stories. The bureaucrats, condemned by their ignorance and lack of imagination, are dealt with promptly.

Another theme of some importance in The Martian Chronicles is humanity's inability to escape the past or to overcome preconceptions. Many of Bradbury's characters have sorrows they cannot put behind them, scars that will not heal—all of which causes them to hurt others, often unintentionally. In "The Martian," an older couple takes in what appears to be an abandoned child, one who looks remarkably like their dead son. He is actually a Martian, able to simulate their son's face. The Martian has no ulterior motive; he is simply trying to find a home. Eventually, however, other people see him, recognize in him the dead loved ones they still mourn, and—without meaning to—kill him through the terrible power of their need.

It soon becomes obvious that Mars is not the new start that so many settlers hoped for, but rather a continuation of old difficulties. In such stories as "Way In the Middle of the Air" and 'The Green Morning," both of which show Mars as a new Eden, Bradbury makes it clear that few, if any, of the immigrants have solved their problems by fleeing Earth. This is, perhaps, simply a downbeat restatement of the nostalgia theme. The immigrants are unable to successfully put behind them the unhappiness they brought from Earth.

Near the end of ***The Martian Chronicles***, the Earth destroys itself in a nuclear war and most of the settlers, though they know they are probably going to their deaths, choose to return home. Bradbury presents this decision to return to Earth, this suicidal need to reconfirm origins, as proof of the settlers' inability to achieve a new sense of home on Mars. Only those few humans who have truly become Martians, who have truly separated themselves from the Earth, can achieve a new childhood, a new innocence, and remain on Mars. For them alone will it be a new Eden. Literary Qualities Bradbury was for years science fiction's premier literary stylist and, although his heavy use of adjectives and metaphors can seem cloying today, he remains one of the most sophisticated writers in the genre. He is particularly fond of similes, depicting "housewives lumbering like great black bears in their furs along the icy streets" in "Rocket Summer" and spaceships landing on Mars in "The Locusts": "The rockets came like drums, beating in the night. The rockets came like locusts, swarming and settling in blooms of rosy smoke." Much of the metaphoric language in The Martian Chronicles slips easily into allegory, adding depth to Bradbury's fiction. Bradbury is a quintessentially American writer with a good ear for the patterns of small-town talk and nonstandard English. At its best, his dialogue is reminiscent of Hemingway's, and Bradbury has always spoken of that writer as an influence. What most readers remember about the literary technique of The Martian Chronicles, however, are the complex, almost surrealistic, narrative passages, which contain Bradbury's beautiful and touching descriptions of a far-away but strangely familiar world.

"The Martian Chronicles - Themes and Characters" Beacham's Guide to Literature for Young Adults Ed. Kirk H. Beetz. Vol. 4. Gale Cengage 1999 eNotes.com 6 Apr, 2019 http://www.enotes.com/topics/martian-chronicles/characters#characters-characters-characters-themes-characters-50532

Setting

The Martian Chronicles presents a series of connected tales ranging in time from January 1999 to October 2026. Most of the stories are set on Mars, although some—"Rocket Summer," which opens the collection, "Way In the Middle of the Air," and "There Will Come

Soft Rains"—are set on Earth. Bradbury's Mars is shaped by the preconceptions of the astronauts and settlers who explore it; they project their fantasies upon the landscape, and create a world that will help them recall the one they have left behind. But despite the new settlements (built of Oregon pine and California redwood) and the new names (Iron Town, Grain Villa, Detroit II), the land remains inescapably alien.

Most of the native Martians are killed off early in the book by a chicken pox epidemic, carried over by the first waves of explorers. However, the traces of Martian civilization that remain—a few representatives of a near-vanished race, and their legacy, the beautiful shells of once-vital cities—constantly remind the visitors from Earth that they must adapt, rather than impose, patterns of behavior if they are to survive on this alien world.

"The Martian Chronicles - Setting" Beacham's Guide to Literature for Young Adults Ed. Kirk H. Beetz. Vol. 4. Gale Cengage 1999 eNotes.com 6 Apr, 2019 <http://www.enotes.com/topics/martian-chronicles/in-depth#in-depth-setting>

Literary Techniques

For years, Bradbury was science fiction's premier literary stylist and, although his heavy use of adjectives and metaphors can seem cloying today, he remains one of the most sophisticated users of language in the genre. He is particularly fond of similes such as the one which opens "Rocket Summer," "housewives lumbering like great black bears in their furs along the icy streets," or, more startling, his description of spaceships landing on Mars in "The Locusts": "the rockets came like drums, beating in the night. The rockets came like locusts, swarming and settling in blooms of rosy smoke." In The Martian Chronicles, as in many of Bradbury's stories, such metaphoric language slips easily into allegory.

Bradbury also has a good ear for the patterns of small town and nonstandard English. At its best his dialogue is reminiscent of Hemingway's and Bradbury has always spoken of that writer as an influence. What most readers remember about the literary technique of The Martian Chronicles, however, are the complex, almost surrealistic, narrative passages, which contain Bradbury's beautiful and touching descriptions of normal people in very unusual settings.

"The Martian Chronicles - Literary Techniques" Beacham's Guide to Literature for Young Adults Ed. Kirk H. Beetz. Vol. 4. Gale Cengage 1999 eNotes.com 6 Apr, 2019 <http://www.enotes.com/topics/martian-chronicles/in-depth#in-depth-techniques>

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Bradbury was for years science fiction's premier literary stylist and, although his heavy use of adjectives and metaphors can seem cloying today, he remains one of the most sophisticated writers in the genre. He is particularly fond of similes, depicting "housewives lumbering like great black bears in their furs along the icy streets" in "Rocket Summer" and spaceships landing on Mars in "The Locusts": "The rockets came like drums, beating in the night. The rockets came like locusts, swarming and settling in blooms of rosy smoke." Much of the metaphoric language in The Martian Chronicles slips easily into allegory, adding depth to Bradbury's fiction.

Bradbury is a quintessentially American writer with a good ear for the patterns of small-town talk and nonstandard English. At its best, his dialogue is reminiscent of Hemingway's, and Bradbury has always spoken of that writer as an influence. What most readers remember about

the literary technique of The Martian Chronicles, however, are the complex, almost surrealistic, narrative passages, which contain Bradbury's beautiful and touching descriptions of a far-away but strangely familiar world.

"The Martian Chronicles - Literary Qualities" Beacham's Guide to Literature for Young Adults Ed. Kirk H. Beetz. Vol. 4. Gale Cengage 1999 eNotes.com 6 Apr, 2019 <http://www.enotes.com/topics/martian-chronicles/in-depth#in-depth-literary-qualities>

Social Concerns

Bradbury's social and political philosophy has always been humanist, liberal, pacifist, and populist, and the stories in The Martian Chronicles frequently reflect these positions. "Way in the Middle of the Air," for example, relates the disbelief and consternation of a group of white bigots when they discover that all of the local blacks have immigrated to Mars. "There Will Come Soft Rains" is a poignant if overly sentimental warning against both the evil of nuclear war and, more generally, the dangers of runaway technology. Several stories, including "The Martian" and "The Off Season," parallel the fate of the native Martians to that of the American Indian. In these stories Bradbury comments on both American culture's obsession with material wealth and the Manifest Destiny philosophy which has allowed Americans, in previous centuries and today, to feel that they have the moral justification to take that wealth from their less powerful cousins.

Additional Commentary

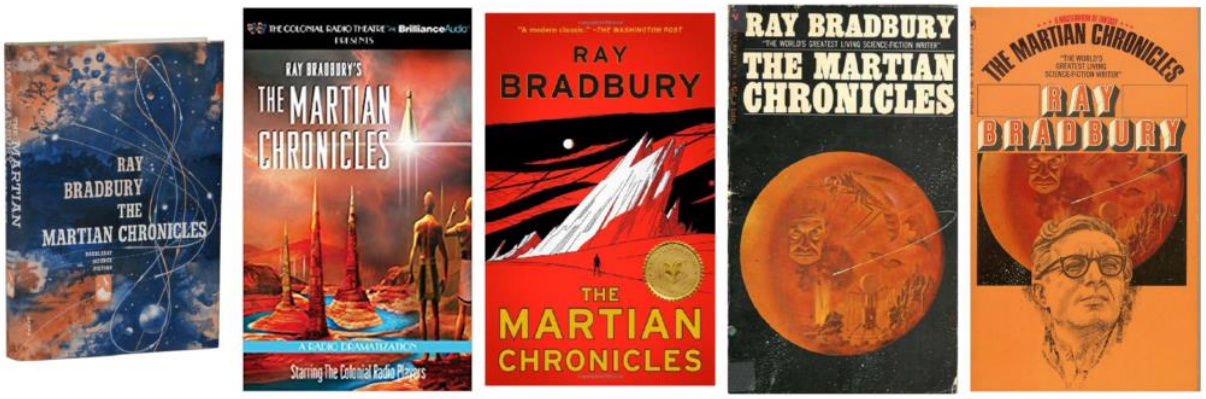
Bradbury's social and political philosophy has always been humanist, liberal, pacifist, and populist, and the stories in The Martian Chronicles frequently reflect these positions. "Way In the Middle of the Air," for example, relates the disbelief and consternation of a group of white bigots when they discover that all of the local blacks are emigrating to Mars. The bigots

are shown to be cruel and, in the final analysis, fashioners of their own fate, shortsighted oppressors who cannot fathom an existence suddenly lacking potential victims. Other stories, such as "There Will Come Soft Rains," contain poignant warnings against the dangers of runaway technology, or the evils of nuclear war.

Several stories, including "The Martian" and "The Off Season," parallel the fate of the native Martians to that of Native Americans. In these stories Bradbury comments on American culture's obsession with material wealth and on the Manifest Destiny philosophy that has allowed Americans, in previous centuries and today, to feel morally justified in taking land and other possessions from the less powerful.

Another target of Bradbury's is censorship and, in its broader incarnation, lack of imagination. Many of the settlers who come to Mars are incapable of appreciating the new planet. They shut out that which they cannot comprehend, and destroy that which they deem threatening. Whether the object be a single book or an entire civilization, Bradbury stresses that failure to appreciate or tolerate other points of view is one of the greatest of evils. In "Usher II," the protagonist recalls the growth of a strict censorship movement on Earth, leading to government-sanctioned book burning: "There was always a minority afraid of something, and a great majority afraid of the dark, afraid of the future, afraid of the past, afraid of the present, afraid of themselves and shadows of themselves." Bradbury suggests that fear of the unfamiliar may spread from one person to another, and eventually lead to similar tragedies.

"The Martian Chronicles - Social Concerns" Beacham's Guide to Literature for Young Adults Ed. Kirk H. Beetz. Vol. 4. Gale Cengage 1999 eNotes.com 6 Apr, 2019 <http://www.enotes.com/topics/martian-chronicles/in-depth#in-depth-social-concerns>

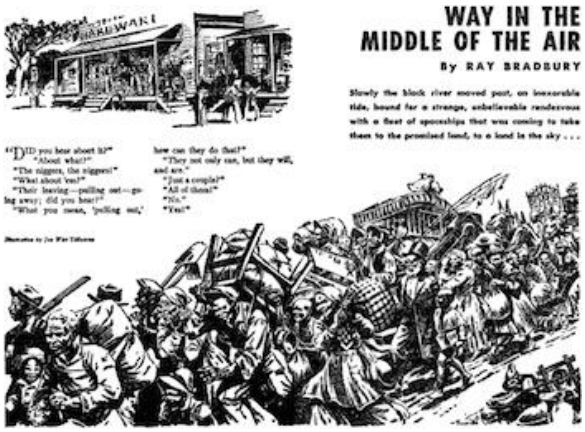


WAY UP IN THE MIDDLE OF THE AIR

Originally published in ***Other Worlds*** in 1950, this episode depicting prejudice in America was eliminated from the 2006 William Morrow/Harper Collins, and the 2001 DoubleDay Science Fiction reprinting of the book. The story is often banned--as is the entire book--because of the use of the word “nigger” and its depiction of racial tension in the Deep South.

Summary: Back on Earth, in June of 2003, a group of white men are sitting on the porch of a hardware store. News has come that all the Negroes in the American South have banded together to emigrate to Mars. They have built their own rockets. The white men are shocked.

The Negroes walk by in a stream of humanity on their way to the rocket. One of the men on the porch, Mr. Teece, tries to stop one of them, Belter, who owes him $50, but a crowd gathers and pays off the debt. Then, Teece's employee at the store, Silly, rides up to leave, but Teece tries to make him stay because of his work contract. The other men, however, force Teece to let him go. Teece thinks of how all his nights of lynching are over, and he grabs his rifle and goes in a car to chase after the exodus. On the way, he notices bundles of their possessions left behind, and he has a wreck trying to run over the piles.



WAY IN THE MIDDLE OF THE AIR (June 2003/2034)

by Ray Bradbury

“Did you hear about it?”

“About what?”

“The niggers, the niggers!”

“What about ’em?”

“Them leaving, pulling out, going away; did you hear?”

“What you mean, pulling out? How can they do that?”

“They can, they will, they are.”

“Just a couple?”

“Every single one here in the South!”

“No.”

“Yes!”

“I got to see that. I don’t believe it. Where they going — Africa?”

A silence.

"Mars."

"You mean the *planet* Mars?"

"That's right."

The men stood up in the hot shade of the hardware porch. Someone quit lighting a pipe. Somebody else spat out into the hot dust of noon.

"They can't leave, they can't do that."

"They're doing it, anyways."

"Where'd you hear this?"

"It's everywhere, on the radio a minute ago, just come through."

Like a series of dusty statues, the men came to life.

Samuel Teece, the hardware proprietor, laughed uneasily. "I *wondered* what happened to Silly. I sent him on my bike an hour ago. He ain't come back from Mrs. Bordman's yet. You think that black fool just pedaled off to Mars?"

The men snorted.

"All I say is, he better bring back my bike. I don't take stealing from no one, by God."

"Listen!"

The men collided irritably with each other, turning.

Far up the street the levee seemed to have broken. The black warm waters descended and engulfed the town. Between the blazing white banks of the town stores, among the tree silences, a black tide flowed. Like a kind of summer molasses, it poured turgidly forth upon the cinnamon-dusty road. It surged slow, slow, and it was men and women and horses and barking dogs, and it was little boys and girls. And from the mouths of the people partaking of this tide came the sound of a river. A summer-day river going somewhere, murmuring and irrevocable. And in that slow, steady channel of darkness that cut across the white glare of day were touches of alert white, the eyes, the ivory eyes staring ahead, glancing aside, as the river, the long and endless river, took itself from old channels into a new one. From various and uncountable tributaries, in creeks and brooks of color and motion, the parts of this river had joined, become one mother current, and flowed on. And brimming the swell were things carried by the river: grandfather clocks chiming, kitchen clocks ticking, caged hens screaming, babies wailing; and swimming among the thickened eddies were mules and cats, and sudden excursions of burst mattress springs floating by, insane hair stuffing sticking out, and boxes and crates and pictures of dark grandfathers in oak frames — the river flowing it on while the men sat like nervous hounds on the hardware porch, too late to mend the levee, their hands empty.

Samuel Teece wouldn't believe it. "Why, hell, where'd they get the transportation? How they goin' to *get* to Mars?"

“Rockets,” said Grandpa Quartermain.

“All the damn-fool things. Where’d they get rockets?”

“Saved their money and built them.”

“I never heard about it.”

“Seems these niggers kept it secret, worked on the rockets all themselves, don’t know where — in Africa, maybe.”

“Could they *do* that?” demanded Samuel Teece, pacing about the porch. “Ain’t there a law?”

“It ain’t as if they’re declarin’ war,” said Grandpa quietly.

“Where do they get off, God damn it, workin’ in secret, plottin’?” shouted Teece.

“Schedule is for all this town’s niggers to gather out by Loon Lake. Rockets be there at one o’clock, pick ’em up, take ’em to Mars.”

“Telephone the governor, call out the militia,” cried Teece. “They should’ve given notice!”

“Here comes your woman, Teece.”

The men turned again.

As they watched, down the hot road in the windless light first one white woman and then another arrived, all of them with stunned faces, all of them rustling like ancient papers. Some of them were crying, some were stern. All came to find their husbands. They pushed through barroom swing doors, vanishing. They entered cool, quiet groceries. They went in at drug shops and garages. And one of them, Mrs. Clara Teece, came to stand in the dust by the hardware porch, blinking up at her stiff and angry husband as the black river flowed full behind her.

“It’s Lucinda, Pa; you got to come home!”

“I’m not comin’ home for no damn darkie!”

“She’s leaving. What’ll I do without her?”

“Fetch for yourself, maybe. I won’t get down on my knees to stop her.”

“But she’s like a family member,” Mrs. Teece moaned.

“Don’t shout! I won’t have you blubberin’ in public this way about no goddamn — ”

His wife’s small sob stopped him. She dabbed at her eyes. “I kept telling her, «Lucinda,» I said, «you stay on and I raise your pay, and you get *two* nights off a week, if you want,» but she just looked set! I never seen her so set, and I said, «Don’t you *love* me, Lucinda?» and she said yes, but she had to go because that’s the way it was, is all. She cleaned the house and dusted it and put luncheon on the table and then she went to the parlor door and — and stood there with two bundles, one by each foot, and shook my hand and said, «Good-by, Mrs. Teece.» And she

went out the door. And there was her luncheon on the table, and all of us too upset to even eat it. It's still there now, I know; last time I looked it was getting cold."

Teece almost struck her. "God damn it, Mrs. Teece, you get the hell home. Standin' there makin' a sight of yourself!"

"But, Pa…"

He strode away into the hot dimness of the store. He came back out a few seconds later with a silver pistol in his hand.

His wife was gone.

The river flowed black between the buildings, with a rustle and a creak and a constant whispering shuffle. It was a very quiet thing, with a great certainty to it; no laughter, no wildness, just a steady, decided, and ceaseless flow.

Teece sat on the edge of his hardwood chair. "If one of 'em so much as laughs, by Christ, I'll kill 'em."

The men waited.

The river passed quietly in the dreamful noon.

"Looks like you goin' to have to hoe your own turnips, Sam," Grandpa chuckled.

"I'm not bad at shootin' white folks neither." Teece didn't look at Grandpa. Grandpa turned his head away and shut up his mouth.

"Hold on there!" Samuel Teece leaped off the porch. He reached up and seized the reins of a horse ridden by a tall Negro man. "You, Belter, come down off there!"

"Yes, sir." Belter slid down.

Teece looked him over. "Now, just what you think you're doin'?"

"Well, Mr. Teece…"

"I reckon you think you're goin', just like that song — what's the words? «Way up in the middle of the air»; ain't *that* it?"

"Yes, sir." The Negro waited.

"You recollect you owe me fifty dollars, Belter?"

"Yes, sir."

"You tryin' to sneak out? By God, I'll horsewhip you!"

"All the excitement, and it slipped my mind, sir."

"It slipped his mind." Teece gave a vicious wink at his men on the hardware porch. "God damn, mister, you know what you're goin' to do?"

"No, sir."

"You're stayin' here to work out that fifty bucks, or my name ain't Samuel W. Teece." He turned again to smile confidently at the men in the shade.

Belter looked at the river going along the street, that dark river flowing and flowing between the shops, the dark river on wheels and horses and in dusty shoes, the dark river from which he had been snatched on his journey. He began to shiver. "Let me go, Mr. Teece. I'll send your money from up there, I promise!"

"Listen, Belter." Teece grasped the man's suspenders like two harp strings, playing them now and again, contemptuously, snorting at the sky, pointing one bony finger straight at God. "Belter, you know anything about what's up there?"

"What they tells me."

"What they tells him! Christ! Hear that? What they tells him!" He swung the man's weight by his suspenders, idly, ever so casual, flicking a finger in the black face. "Belter, you fly up and up like a July Fourth rocket, and bang! There you are, cinders, spread all over space. Them crackpot scientists, they don't know nothin', they kill you all off!"

"I don't care."

"Glad to hear that. Because you know what's up on that planet Mars? There's monsters with big raw eyes like mushrooms! You seen them pictures on those future magazines you buy at the drugstore for a dime, ain't you? Well! Them monsters jump up and suck marrow from your bones!"

"I don't care, don't care at all, don't care." Belter watched the parade slide by, leaving him. Sweat lay on his dark brow. He seemed about to collapse.

"And it's cold up there; no air, you fall down, jerk like a fish, gaspin', dyin', stranglin', stranglin' and dyin'. You *like* that?"

"Lots of things I don't like, sir. Please, sir, let me go. I'm late."

"I'll let you go when I'm *ready* to let you go. We'll just talk here polite until I say you can leave, and you know it damn well. You want to travel, do you? Well, Mister Way up in the Middle of the Air, you get the hell home and work out that fifty bucks you owe me! Take you two months to do that!"

"But if I work it out, I'll miss the rocket, sir!"

"Ain't that a shame now?" Teece tried to look sad.

"I give you my horse, sir."

"Horse ain't legal tender. You don't move until I get my money." Teece laughed inside. He felt very warm and good.

A small crowd of dark people had gathered to hear all this. Now as Belter stood, head down, trembling, an old man stepped forward.

“Mister?”

Teece flashed him a quick look. “Well?”

“How much this man owe you, mister?”

“None of your damn business!”

The old man looked at Belter. “How much, son?”

“Fifty dollars.”

The old man put out his black hands at the people around him, “There’s twenty-five of you. Each give two dollars; quick now, this no time for argument.”

“Here, now!” cried Teece, stiffening up, tall, tall.

The money appeared. The old man fingered it into his hat and gave the hat to Belter. “Son,” he said, “you ain’t missin’ no rocket.”

Belter smiled into the hat. “No, sir, I guess I ain’t!”

Teece shouted: “You give that money back to them!”

Belter bowed respectfully, handing the money over, and when Teece would not touch it he set it down in the dust at Teece’s feet. “There’s your money, sir,” he said. “Thank you kindly.” Smiling, he gained the saddle of his horse and whipped his horse along, thanking the old man, who rode with him now until they were out of sight and hearing.

“Son of a bitch,” whispered Teece, staring blind at the sun. “Son of a bitch.”

“Pick up the money, Samuel,” said someone from the porch.

It was happening all along the way. Little white boys, barefoot, dashed up with the news. “Them that has helps them that hasn’t! And that way they *all* get free! Seen a rich man give a poor man two hundred bucks to pay off some’un! Seen some’un else give some’un else ten bucks, five bucks, sixteen, lots of that, all over, everybody!”

The white men sat with sour water in their mouths. Their eyes were almost puffed shut, as if they had been struck in their faces by wind and sand and heat.

The rage was in Samuel Teece. He climbed up on the porch and glared at the passing swarms. He waved his gun. And after a while when he had to do something, he began to shout at anyone, any Negro who looked up at him. “Bang! There’s another rocket out in space!” he shouted so all could hear. “Bang! By God!” The dark heads didn’t flicker or pretend to hear, but their white eyes slid swiftly over and back. “Crash! All them rockets fallin’! Screamin’, dyin’! Bang! God Almighty, I’m glad *I’m* right here on old terra firma. As they says in that old joke, the more firma, the less terra! Ha, ha!”

Horses clopped along, shuffling up dust. Wagons bumbled on ruined springs.

"Bang!" His voice was lonely in the heat, trying to terrify the dust and the blazing sun sky. "Wham! Niggers all over space! Jerked outa rockets like so many minnows hit by a meteor, by God! Space fulla meteors. You know that? Sure! Thick as buckshot; powie! Shoot down them tin-can rockets like so many ducks, so many clay pipes! Ole sardine cans full of black cod! Bangin' like a stringa ladyfingers, bang, bang, bang! Ten thousand dead here, ten thousand there. Floatin' in space, around and around earth, ever and ever, cold and way out, Lord! You hear that, *you* there!"

Silence. The river was broad and continuous. Having entered all cotton shacks during the hour, having flooded all the valuables out, it was now carrying the clocks and the washboards, the silk bolts and curtain rods on down to some distant black sea.

High tide passed. It was two o'clock. Low tide came. Soon the river was dried up, the town silent, the dust settling in a film on the stores, the seated men, the tall hot trees.

Silence.

The men on the porch listened.

Hearing nothing, they extended their thoughts and their imaginations out and into the surrounding meadows. In the early morning the land had been filled with its usual concoctions of sound. Here and there, with stubborn persistence to custom, there had been voices singing, the honey laughter under the mimosa branches, the pickaninnies rushing in clear water laughter at the creek, movements and bendings in the fields, jokes and shouts of amusement from the shingle shacks covered with fresh green vine.

Now it was as if a great wind had washed the land clean of sounds. There was nothing. Skeleton doors hung open on leather hinges. Rubber-tire swings hung in the silent air, uninhibited. The washing rocks at the river were empty, and the watermelon patches, if any, were left alone to heat their hidden liquors in the sun. Spiders started building new webs in abandoned huts; dust started to sift in from unpatched roofs in golden spicules. Here and there a fire, forgotten in the last rush, lingered and in a sudden access of strength fed upon the dry bones of some littered shack. The sound of a gentle feeding burn went up through the silenced air.

The men sat on the hardware porch, not blinking or swallowing.

"I can't figure why they left *now*. With things lookin' up. I mean, every day they got more rights. What they *want*, anyway? Here's the poll tax gone, and more and more states passin' anti-lynchin' bills, and all kinds of equal rights. What *more* they want? They make almost as good money as a white man, but there they go."

Far down the empty street a bicycle came.

"I'll be goddamned. Teece, here comes your Silly now."

The bicycle pulled up before the porch, a seventeen-year-old colored boy on it, all arms and feet and long legs and round watermelon head. He looked up at Samuel Teece and smiled.

“So you got a guilty conscience and came back,” said Teece.

“No, sir, I just brought the bicycle.”

“What’s wrong, couldn’t get it on the rocket?”

“That wasn’t it, sir.”

“Don’t tell me what it was! Get off, you’re not goin’ to steal my property!” He gave the boy a push. The bicycle fell. “Get inside and start cleaning the brass.”

“Beg pardon?” The boy’s eyes widened.

“You heard what I said. There’s guns need unpacking there, and a crate of nails just come from Natchez — ”

“Mr. Teece.”

“And a box of hammers need fixin’ — ”

“Mr. Teece, sir?”

“You *still* standin’ there!” Teece glared.

“Mr. Teece, you don’t mind I take the day off,” he said apologetically.

“And tomorrow and day after tomorrow and the day after the day after that,” said Teece.

“I’m afraid so, sir.”

“You *should* be afraid, boy. Come here.” He marched the boy across the porch and drew a paper out of a desk. “Remember this?”

“Sir?”

“It’s your workin’ paper. You signed it, there’s your X right there, ain’t it? Answer me.”

“I didn’t sign that, Mr. Teece.” The boy trembled. “Anyone can make an X.”

“Listen to this, Silly. Contract: «I will work for Mr. Samuel Teece two years, starting July 15, 2001, and if intending to leave will give four weeks’ notice and continue working until my position is filled.» There.” Teece slapped the paper, his eyes glittering. “You cause trouble, we’ll take it to court.”

“I can’t do that,” wailed the boy, tears starting to roll down his face, “If I don’t go today, I don’t go.”

“I know just how you feel, Silly; yes, sir, I sympathize with you, boy. But we’ll treat you good and give you good food, boy. Now you just get inside and start working and forget all about that nonsense, eh, Silly? Sure.” Teece grinned and patted the boy’s shoulder.

The boy turned and looked at the old men sitting on the porch. He could hardly see now for his tears. “Maybe — maybe one of these gentlemen here…” The men looked up in the hot, uneasy shadows, looking first at the boy and then at Teece.

“You meanin’ to say you think a *white man* should take your place, boy?” asked Teece coldly.

Grandpa Quartermain took his red hands off his knees. He looked out at the horizon thoughtfully and said, “Teece, what about me?”

“What?”

“I’ll take Silly’s job.”

The porch was silent.

Teece balanced himself in the air. “Grandpa,” he said warningly.

“Let the boy go. I’ll clean the brass.”

“Would you, would you, really?” Silly ran over to Grandpa, laughing, tears on his cheeks, unbelieving.

“Sure.”

“Grandpa,” said Teece, “keep your damn trap outta this.”

“Give the kid a break, Teece.”

Teece walked over and seized the boy’s arm. “He’s mine. I’m lockin’ him in the back room until tonight.”

“Don’t, Mr. Teece!”

The boy began to sob now. His crying filled the air of the porch. His eyes were tight. Far down the street an old tin Ford was choking along, approaching, a last load of colored people in it. “Here comes my family, Mr. Teece, oh please, please, oh God, please!”

“Teece,” said one of the other men on the porch, getting up, “let him go.”

Another man rose also. “That goes for me too.”

“And me,” said another.

“What’s the use?” The men all talked now. “Cut it out, Teece.”

“Let him go.”

Teece felt for his gun in his pocket. He saw the men’s faces. He took his hand away and left the gun in his pocket and said, “So that’s how it is?”

“That’s how it is,” someone said.

Teece let the boy go. “All right. Get out.” He jerked his hand back in the store. “But I hope you don’t think you’re gonna leave any trash behind to clutter my store.”

"No, sir!"

"You clean everything outta your shed in back; burn it."

Silly shook his head. "I'll take it with."

"They won't let you put it on that damn rocket."

"I'll take it with," insisted the boy softly.

He rushed back through the hardware store. There were sounds of sweeping and cleaning out, and a moment later he appeared, his hands full of tops and marbles and old dusty kites and junk collected through the years. Just then the old tin Ford drove up and Silly climbed in and the door slammed. Teece stood on the porch with a bitter smile. "What you goin' to do *up there?*"

"Startin' new," said Silly. "Gonna have my *own* hardware."

"God damn it, you been learnin' my trade so you could run off and use it!"

"No, sir, I never thought one day *this'd* happen, sir, but it did. I can't help it if I learned, Mr. Teece."

"I suppose you got names for your rockets?"

They looked at their one clock on the dashboard of the car.

"Yes, sir."

"Like Elijah and the Chariot, The Big Wheel and The Little Wheel, Faith, Hope, and Charity, eh?"

"We got names for the ships, Mr. Teece."

"God the Son and the Holy Ghost, I wouldn't wonder? Say, boy, you got one named the First Baptist Church?"

"We got to leave now, Mr. Teece."

Teece laughed. "You got one named Swing Low, and another named Sweet Chariot?"

The car started up. "Good-by, Mr. Teece."

"You got one named Roll Dem Bones?"

"Good-by, mister!"

"And another called Over Jordan! Ha! Well, tote that rocket, boy, lift that rocket, boy, go on, get blown up, see if I care!"

The car churned off into the dust. The boy rose and cupped his hands to his mouth and shouted one last time at Teece: "Mr. Teece, Mr. Teece, what *you* goin' to do nights from now on? What you goin' to *do* nights, Mr. Teece?"

Silence. The car faded down the road. It was gone. "What in hell did he mean?" mused Teece. "What am I goin' to do nights?"

He watched the dust settle, and it suddenly came to him.

He remembered nights when men drove to his house, their knees sticking up sharp and their shotguns sticking up sharper, like a carful of cranes under the night trees of summer, their eyes mean. Honking the horn and him slamming his door, a gun in his hand, laughing to himself, his heart racing like a ten-year-old's, driving off down the summer-night road, a ring of hemp rope coiled on the car floor, fresh shell boxes making every man's coat look bunchy. How many nights over the years, how many nights of the wind rushing in the car, flopping their hair over their mean eyes, roaring, as they picked a tree, a good strong tree, and rapped on a shanty door!

"So *that's* what the son of a bitch meant?" Teece leaped out into the sunlight. "Come back, you bastard! What am I goin' to do nights? Why, that lousy, insolent son of a…"

It was a good question. He sickened and was empty. Yes. What *will* we do nights? he thought. Now *they're* gone, what? He was absolutely empty and numb.

He pulled the pistol from his pocket, checked its load.

"What you goin' to do, Sam?" someone asked.

"Kill that son of a bitch."

Grandpa said, "Don't get yourself heated."

But Samuel Teece was gone around behind the store. A moment later he drove out the drive in his open-top car. "Anyone comin' with me?"

"I'd like a drive," said Grandpa, and got up.

"Anyone else?"

Nobody replied.

Grandpa got in and slammed the door. Samuel Teece gutted the car out in a great whorl of dust. They didn't speak as they rushed down the road under the bright sky. The heat from the dry meadows was shimmering.

They stopped at a crossroad. "Which way'd they go, Grandpa?"

Grandpa squinted. "Straight on ahead, I figure."

They went on. Under the summer trees their car made a lonely sound. The road was empty, and as they drove along they began to notice something. Teece slowed the car and bent out, his yellow eyes fierce.

"God damn it, Grandpa, you see what them bastards did?"

"What?" asked Grandpa, and looked.

Where they had been carefully set down and left, in neat bundles every few feet along the empty country road, were old roller skates, a bandanna full of knicknacks, some old shoes, a

cartwheel, stacks of pants and coats and ancient hats, bits of oriental crystal that had once tinkled in the wind, tin cans of pink geraniums, dishes of waxed fruit, cartons of Confederate money, washtubs, scrubboards, wash lines, soap, somebody's tricycle, someone else's hedge shears, a toy wagon, a jack-in-the-box, a stained-glass window from the Negro Baptist Church, a whole set of brake rims, inner tubes, mattresses, couches, rocking chairs, jars of cold cream, hand mirrors. None of it flung down, no, but deposited gently and with feeling, with decorum, upon the dusty edges of the road, as if a whole city had walked here with hands full, at which time a great bronze trumpet had sounded, the articles had been relinquished to the quiet dust, and one and all, the inhabitants of the earth had fled straight up into the blue heavens.

"Wouldn't burn them, they said," cried Teece angrily. "No, wouldn't burn them like I said, but had to take them along and leave them where they could see them for the last time, on the road, all together and whole. Them niggers think they're smart."

He veered the car wildly, mile after mile, down the road, tumbling, smashing, breaking, scattering bundles of paper, jewel boxes, mirrors, chairs. "There, by damn, and *there!*"

The front tire gave a whistling cry. The car spilled crazily off the road into a ditch, flinging Teece against the glass.

"Son of a bitch!" He dusted himself off and stood out of the car, almost crying with rage.

He looked at the silent, empty road. "We'll never catch them now, never, never." As far as he could see there was nothing but bundles and stacks and more bundles neatly placed like little abandoned shrines in the late day, in the warm-blowing wind.

Teece and Grandpa came walking tiredly back to the hardware store an hour later. The men were still sitting there, listening, and watching the sky. Just as Teece sat down and eased his tight shoes off someone cried, "Look!"

"I'll be *damned* if I will," said Teece.

But the others looked. And they saw the golden bobbins rising in the sky, far away. Leaving flame behind, they vanished.

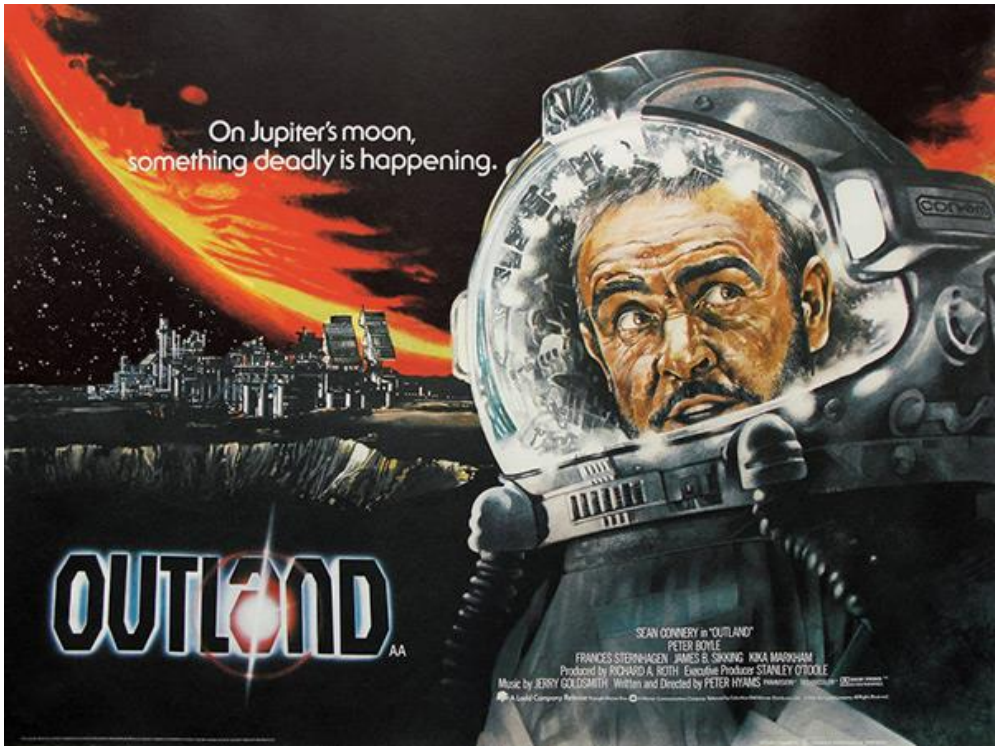
In the cotton fields the wind blew idly among the snow dusters. In still farther meadows the watermelons lay, unfingerprinted, striped like tortoise cats lying in the sun.

The men on the porch sat down, looked at each other, looked at the yellow rope piled neat on the store shelves, glanced at the gun shells glinting shiny brass in their cartons, saw the silver pistols and long black metal shotguns hung high and quiet in the shadows. Somebody put a straw in his mouth; someone else drew a figure in the dust.

Finally Samuel Teece held his empty shoe up in triumph, turned it over, stared at it, and said, "Did you notice? Right up to the very last, by God, he said «Mister»!"

SESSION FIVE:

OUTLAND



CLASS DISCUSSION:

1. The greenhouse might be speculated as to providing the oxygen for the mining operation. Do you see it as a credible part of the film? Why or why not?

2. Describe and discuss the architecture used in the film.
   - The mine
   - The medical lab
   - O'Neil's apartment
   - The prison
   - The general sleeping quarters

3. The food and "method of eating" in this film is quite different from that proposed in ***2001*** or ***Silent Running***. Is the food proposed for this film believable? Does it support the plot?

4. Discuss the role of leisure in the film.

5. Doors play a very important part in the film. Explain the system of doors. How do they assist the plot? Are they effective?

6. Discuss the issue of "personal space" or "privacy" in the film. How does the architectural set support this part of the film?

7. Respond to this viewer comment. What do you agree with? Disagree with?

> I've always wondered why ***Outland*** doesn't get more love? It's very similar to Gary Cooper's ***High Noon***, but in space. It features one of Sean Connery's strongest performances, boasts a killer Jerry Goldsmith score, and drips with atmosphere that you can cut with a knife. There's real tension and suspense with solid action. It also has mostly convincing visual effects and incredible production design. Yet hardly anyone I know has seen it! Anybody else with me on this? Or has my nostalgia blinded me?

8. Discuss some of the principal characters. Are they believable or merely "types"? Marshal William T. O'Niel, Carol O'Niel, Mark B. Sheppard, Dr. Lazarus. Are there any other characters that you feel are pivotal to the film's plot/effectiveness?

9. Do the issues raised in this film--drug addiction, black market deals, law enforcement, the dangers of mining, et al--still seem relevant nearly 40 years after the film premiered?

10. Just as today we know that Mars never hosted a vast civilization with canals and monumental buildings, we know that Io is the most volcanically active body in our solar system, making the kind of mining activity we see in ***Outland*** highly improbable. Does that scientific reality detract from our enjoyment of the film, its story, or its "message"?

Cast

Sean Connery as Marshal William T. O'Niel
Peter Boyle as Mark Sheppard
Frances Sternhagen as Dr. Marian Lazarus
James B. Sikking as Sgt. Montone
Kika Markham as Carol O'Niel
Nicholas Barnes as Paul O´Niel
Clarke Peters as Sgt. Ballard
Steven Berkoff as Sagan
John Ratzenberger as Tarlow
Manning Redwood as Lowell
Angus MacInnes as Hughes
Eugene Lipinski as Cane
Sharon Duce as the prostitute attacked by Sagan
P.H. Moriarty as hitman #1
Doug Robinson as hitman #2
Angelique Rockas as a maintenance woman

Outland is a 1981 British science fiction thriller film written and directed by Peter Hyams and starring Sean Connery, Peter Boyle, and Frances Sternhagen.

Set on Jupiter's moon Io, it has been described as a space Western, and bears thematic resemblances to the 1952 film ***High Noon***.

Plot

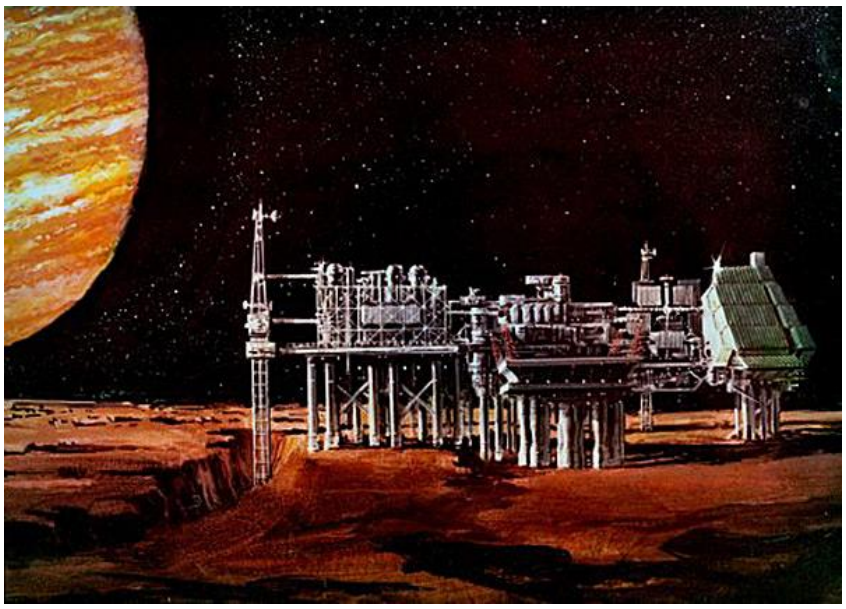
Federal Marshal William O'Niel is assigned to a tour of duty at the titanium ore mining outpost Con-Am 27, operated by the company Conglomerates Amalgamated on the Jovian moon of Io. Conditions on Io are difficult: gravity is 1/6 that of Earth's with no breathable atmosphere, spacesuits are cumbersome and miners carry their own air supply. Shifts are long but significant bonuses are paid. The general manager, Mark Sheppard, boasts that productivity has broken all records since he took over. Carol, O'Niel's wife, feels she cannot raise their son Paul on Io and leaves with their child to the Jupiter space station to await a shuttle back to Earth. Tarlow, a miner, suffers an attack of stimulant psychosis – he sees spiders and rips open his spacesuit – resulting in death by explosive decompression. Cane, another miner, enters an elevator without his spacesuit during another psychotic episode and dies from decompression. With the reluctant assistance of Dr. Lazarus, O'Niel investigates the deaths.

Another incident involves a worker, Sagan, who takes a prostitute hostage and threatens to kill her with a knife. O'Niel attempts to calm the man while Montone, his sergeant, sneaks in via the air duct and kills Sagan with a shotgun. O'Niel and Lazarus discover that Sagan had traces of polydichloric euthimal, a powerful amphetamine-type drug in his bloodstream, which would allow the miners to work continuously for days at a time until they "burn out" and turn psychotic after approximately ten months of use. O'Niel uncovers a drug distribution ring run by a corrupt Sheppard and sanctioned by Montone.

Using surveillance cameras, O'Niel finds and captures Nicholas Spota, one of Sheppard's dealers, who is murdered before he can be questioned. Montone is found garrotted. In a meat locker, O'Niel finds the latest shipment of drugs, which was shipped from the space station. He is then attacked there by another dealer, Russell Yario. O'Niel knocks him out, then destroys the shipment of drugs. When Sheppard finds out, he threatens O'Niel and contacts his drug distributor, asking him to send in professional hitmen. O'Niel is prepared, having been monitoring Sheppard's communications.

O'Niel waits for the arrival of the hitmen on a supply shuttle from the other side of Jupiter. Realizing what is coming and with only Dr. Lazarus willing to help him, O'Niel sends a message to his family promising to return to Earth when his "job is done". O'Niel ambushes the hitmen one by one. Lazarus helps him kill the first by trapping him in a pressurized corridor; O'Niel activates a bomb, causing an explosive decompression that kills the hitman. The second is killed in a glass greenhouse structure of the outpost when O'Niel tricks him into shooting a window, causing it to break open and blow him out to his death in orbit.

O'Niel is then confronted by Sheppard's "inside man" who is revealed to be one of his own deputies, Sgt. Ballard. The two fight outside the outpost near the satellite structure until O'Niel pulls Ballard's oxygen hose, suffocating him. O'Niel then confronts the surprised Sheppard inside the outpost's recreation bar, knocking him out with one punch. It is implied Sheppard will now be brought to justice or murdered by his own associates. O'Niel bids farewell to Lazarus and leaves on the shuttle to join his wife and son on the journey back to Earth.



*Concept drawing for **OUTLAND***

Production

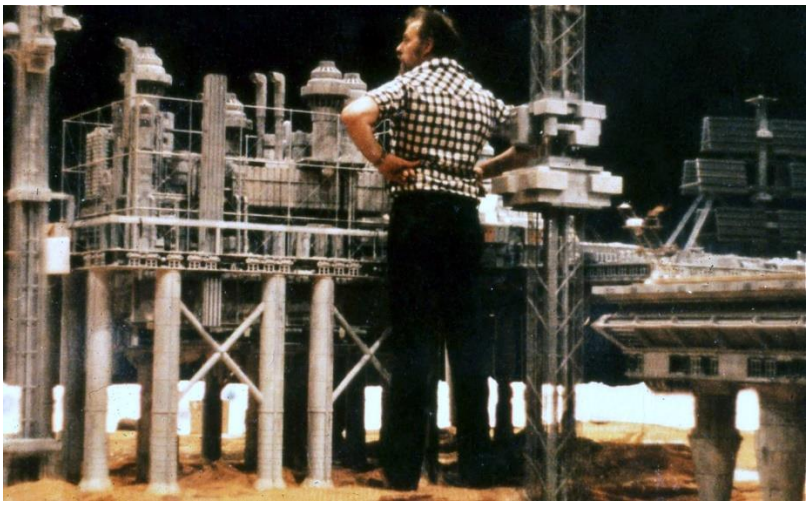
The director, Peter Hyams, recalled:

> *I wanted to do a Western. Everybody said, 'You can't do a Western; Westerns are dead; nobody will do a Western'. I remember thinking it was weird that this genre that had endured*

for so long was just gone. But then I woke up and came to the conclusion – obviously after other people – that it was actually alive and well, but in outer space. I wanted to make a film about the frontier. Not the wonder of it or the glamour of it: I wanted to do something about Dodge City and how hard life was. I wrote it, and by great fortune Sean Connery wanted to do it. And how many chances do you get to work with Sean Connery?

Outland was filmed at Pinewood Studios, Iver Heath, Buckinghamshire, UK, with an estimated budget of $16,000,000. The film's working title was "Io" after the setting of the film. This was later changed because many people read it as the number 10, or "Lo" ("low"). Principal photography took place starting with the miniature models in May 1980 and with the actors beginning in June 1980. Post-production for the film was completed in February 1981.

Outland was pioneering as the first motion picture to use Introvision, a variation on front projection that allows foreground, mid-ground and background elements to be combined in the camera, as opposed to using optical processes such as bluescreen matting. This enabled characters to convincingly walk around miniature sets of the mining colony.



*One of the miniature sets for **OUTLAND***

Soundtrack

The mostly atonal and dissonant music to ***Outland*** was composed and conducted by veteran composer Jerry Goldsmith, who had previously worked with writer/director Peter Hyams on the science fiction thriller ***Capricorn One*** (1978) and had recently provided the soundtrack to ***Alien*** (which had a similar style to ***Outland***, reflecting isolation, remoteness and fear). The soundtrack to ***Outland*** has been released three times on disc; 19 November 1993 through GNP Crescendo (with his score to Capricorn One), June 2000 through Warner Music Group, and a two-disc extended edition released 15 June 2010 through Film Score Monthly.

The distributed 35 mm film prints have Dolby Stereo audio and the 70mm Anamorphic Blow-Up film prints featured Six-Track Dolby Stereo audio. All 70mm prints were encoded for a Megasound option, in which theaters needed to be outfitted with more speakers and sound

equipment. ***Outland*** was one of four films released by Warner Bros. to officially make use of their Megasound movie theater sound system, in the early 1980s.

Reception

The film received mixed reviews and box office reception when it was released. It opened strongly with $3,059,638 in weekend box office receipts in the U.S., but total estimated box offices receipts in the country are between $17,374,595 and $20,000,000, just above its $16 million budget.

The film was nominated for the Academy Award for Best Sound (John Wilkinson, Robert W. Glass Jr., Robert Thirlwell and Robin Gregory).

Gary Arnold at *The Washington Post* had this to say: "In ***Outland***, writer-director Peter Hyams has adapted the plot of ***High Noon*** to an intriguing sci-fi environment—a huge titanium mine located on Io, a volcanic moon of Jupiter. But the conventions that worked for ***High Noon*** break down in the high-tech atmosphere of ***Outland*** and the story seems trite and dinky".

In *The Boston Globe*, Michael Blowen was more favorable: "The parallels between ***Outland*** and Fred Zinneman's 1952 western ***High Noon*** are apparent. Writer-director Peter Hyams has transported the characters and motifs from the dusty frontier town of Gary Cooper to the frontiers of space. While Hyams keeps the story barreling along, he also develops a corollary anti-capitalist theme. Io is an outpost for exploitation, and it doesn't make any difference whether the miners are digging gold in the Colorado hills or titanium on Jupiter's moon, the greed of the corporate class will prevail. ***Outland*** marks the return of the classic western hero in a space helmet. His outfit has changed and his environment has expanded but he's still the same. When Connery stares down the barrel of that shotgun, you'd better smile".

Desmond Ryan at *The Philadelphia Inquirer* called it: "A brilliant sci-fi Western. In many ways, Hyams has made a film that is more frightening than ***Alien***, because he surmises that space will change us very little and the real monsters we are liable to encounter will be in the next space suit."

Outland has endured many comparisons to Ridley Scott's ***Alien*** (released two years earlier), most notably in its 'future realism' production design which reflects a dark, claustrophobic and isolated neo-industrial environment in deep space, and the portrayal of future 'megacorporations' as sinister and ruthless organizations pursuing profit at any cost, with their employees' lives being expendable.

SCIENTIFIC REALITY CHECK:

Jupiter's fifth moon, Io, is the most volcanically active body in the solar system. Plumes of sulfur spew upward as high as 190 miles (300 kilometers). The surface of Io is splotched with lava lakes and floodplains of liquid rock.

Astronomers have mapped about 150 volcanoes on the moon, some of which blast lava 250 miles (400 km) out into space. There are volcanoes all over Io's surface, and as scientists perform observations they still occasionally see new hotspots pop up.

Age: Io is about 4.5 billion years old, about the same age as Jupiter.

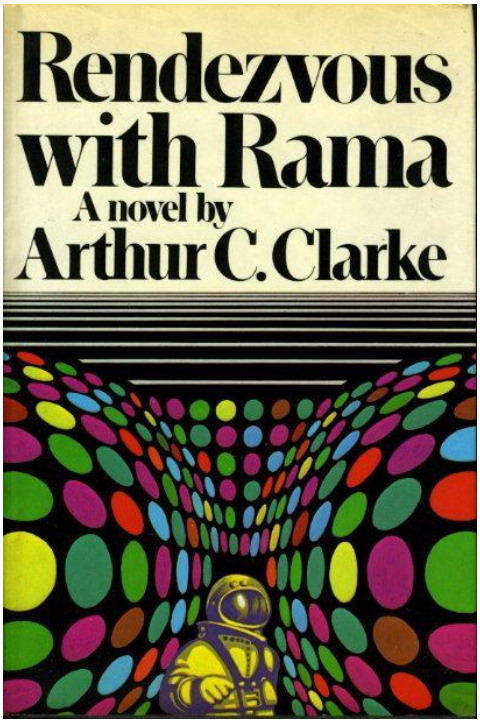
Distance from Jupiter: Io is the fifth moon from Jupiter. Its average orbital distance is about 262,000 miles (422,000 km). Io takes 1.77 Earth-days to orbit Jupiter. Io is tidally locked, so the same side always faces Jupiter.

Size: Io has a mean radius of 1,131.7 miles, making it slightly larger than Earth's moon. It has a slight elliptical shape, with its longest axis directed toward Jupiter. Among the Galilean satellites Io ranks third, behind Ganymede and Callisto but ahead of Europa, in both mass and volume.

Temperature: Io's surface temperature averages about minus 202 degrees Fahrenheit (minus 130 Celsius), resulting in the formation of sulfur dioxide snowfields. But Io's volcanoes can reach 3,000 F (1,649 C). Io is often referred to as a celestial body of fire and ice.

SESSION SIX:

RENDEZVOUS WITH RAMA



CLASS DISCUSSION:

1. What is the purpose of leaving questions unanswered in the novel? List a few of the mysteries that are left unsolved by the author.
2. Discuss the attitude of the members of the different committees meeting on Earth and elsewhere to discuss Rama. Is preparing for war, as the ambassador from Mercury would rather have it, the best way to insure peace and security?
3. Discuss the importance of the vocabulary in the novel. List of few words made up by the author to fit the alien world of Rama. In the absence of any self-referential written or sounded words, what would be the rules for constructing a vocabulary to describe alien objects or environments?
4. Why did Jimmy decide to pick up the lone flower of Rama instead of filling his pockets with the valuable jewels that are littering some of the fields nearby? What would you have done in a situation such as this one, and why?
5. Discuss the possible purpose of Rama. Is Rama just an experiment lost in space, a vessel with a definite yet unknown purpose, or something else completely?

6. Discuss the difference between the creatures that evolve on Rama and the explorers from the solar system. Are the creatures of Rama engineered biological devices or simply robots? Give a few example of how you could engineer a device to differentiate between humans and other automated and animated objects in your world.
7. Discuss the implications of the physical characteristics of Rama in the novel. Which laws of physics are broken, if any, inside Rama? Why is Rama cylindrical? Why is Rama spinning so fast?
8. Discuss the impact of evolving technology on fiction writing. If you were to write Rendezvous with Rama today, what would you need to change to make it more believable? How different is the future world that the current state of technology enables you to anticipate now from the fictive creation that the author was able to foresee just a few decades ago?
9. Discuss the importance of evolution versus design in the world of Rama. Does science fiction provide clues to answering the dilemma of creation vs. evolution? What role does this dilemma plays in the decisions of Commander Norton?

OVERVIEW:

Rendezvous with Rama by Arthur C. Clarke recounts the mission of the spaceship *Endeavour* and its staff as it completes an exploratory mission on an alien space vessel traveling though the solar system. The novel underlines the difficulties encountered by the explorers as they try to adapt to an environment that obeys the rules of physics in a place that is very different from the one found on Earth. The story concentrates on Bill Norton's character, the commander of the spaceship *Endeavour*, and the technical problems he faces as he tries to gather information and understand the world of Rama.

GENERAL PLOT:

During the last quarter of the 22nd century, humankind spotted an unknown and unexpected space object traveling across the path of the planets toward the Sun. The object is dubbed Rama and scientists send a probe near the object. The probe identifies Rama as an artificial, metallic object the size of a small asteroid, perfectly cylindrical and apparently inactive. A team of explorers is then sent on a mission to land on the object and explore its contents. The team aboard spaceship *Endeavour* discovers a world whose physical characteristics are very different from that which prevails elsewhere in the solar system and where the laws of physics apply to a self-enclosed, self-sufficient cylindrical world.

At first, the world of Rama seems to have been either asleep or dead for a million years as it drifted through space. Then as it gets nearer to the Sun, the cold and dark alien ship awakens without a warning and lights up. Life emerges from the depth of the Cylindrical Sea that cuts the Rama world in half. Evolution takes place at a highly accelerated pace as several species of aliens are constantly born and later recycled by their environment. The explorers encounter different, non-threatening species of aliens. These alien creatures, party biological

and partly robotic, are being repeatedly replaced by more complex beings over cycles lasting only a few days.

The adventurers face different technological challenges and have to rely on both their own knowledge and the advice of a committee of scientists located on Earth to conquer the secrets of Rama. The path of the alien ship forces the explorer's vessel to end its mission and leave just as the world of Rama seems to revert to its original dark, silent and apparently sleepy state. Rama then realigns itself and accelerates towards the Sun, then bounces off the fiery star and continues towards its unknown destination.

Chapter 1-3 Summary

Until the late twenty first century, the human race has been spared twice by meteorites falling from the sky. The first meteorite missed Moscow on June 30, 1908. The second meteorite landed four hundred kilometers from Vladivostok on February 12, 1947. Then, on September 11, 2077, a meteorite flying at over fifty kilometers per second struck Italy, killing over six hundred thousand people. The blast wiped out Padua and Verona and triggered a tidal wave that drowned Venice and all its treasures. In response to this catastrophic event, humans put together Project SPACEGUARD, a massive technological enterprise devised to protect the planet against the threat of meteorites from space.

Using powerful computers and radars, the SPACEGUARD project managed to keep track of half a million meteorites. One day, the project's computers locate an unidentified object traveling across the solar system. The object is christened Rama, after a Hindu divinity, and is all but forgotten until the day an astronomer notes some unusual characteristics about the alien object. From what he is able to gather, Rama seems to be a perfectly symmetrical object, forty kilometers across, and spinning at the incredible rate - one revolution every 4 minutes. These conclusions, proving that Rama is indeed a very unusual object, launch a wave of renewed interest about the space intruder.

The Space Advisory Council, led by the renowned astrophysicist Olaf Davidson, meets to debate the need to send a spaceship on intercept course with Rama to take a closer look at the new space intruder. The Council agrees to send a probe to examine Rama. A team of scientists quickly modifies a spaceship originally meant to travel from Mars to Neptune, renames it Sita and proceeds to launch it towards Rama. When the camera pods relay the images of the object back to a billion television sets on Earth, humanity discovers that Rama is nothing like a natural meteorite. Rather, it is a perfectly cylindrical object that looks "almost comically like an ordinary domestic boiler." The spinning cylinder's color is uniform and metallic, except for a kilometer-long mark in the middle of the structure. The body of this first visitor from outer space, measuring fifty kilometers in length and twenty kilometers in width, appears hollow.

Chapter 1-3 Analysis

The novel starts with a reminder of the potentially devastating effects of an alien intrusion into human-controlled space. The reader learns about the deadly impact of a meteorite on Earth: Near the end of the 21st century, a meteorite struck earth, killing over half a million people and turning an important part of the world's culture and heritage to ashes. Humanity has since prepared itself to face such dangers by developing technology and

scattering radar through the solar system and preparing for the worst. Danger should never be underestimated and survival of civilization as a whole is the main drive pushing technology forward.

This first group of chapters sets the tone for most of the upcoming developments. The initial reaction of the human race to an alien intruder is one of curiosity. The results of the scouting mission are shared with billions of enthusiastic spectators. The novel provides a wealth of technical details and scientific clues pointing to the possible origin of the space object. However, besides establishing once and for all that Rama is in fact an artificial object of gigantic proportions, nothing conclusive comes out of this deluge of information. This pattern of acquiring mountains of information yet being unable to come to a meaningful conclusion about the object of the research will be repeated systematically throughout the novel.

Chapter 4-8 Summary

Captain Norton, the commander of the space vessel *Endeavour*, does not know what to expect when he lands on Rama. The sheer size and weight of the unknown space object, estimated at 10 trillion tons, makes his enterprise both inspiring and terrifying. His spaceship was the only vessel in the galaxy located close enough to Rama to enable such an interception course with its trajectory. In order to reach the alien object, he had to borrow fuel from three other space vessels. The spaceship hovers a thousand meters over the northern extremity of Rama while Lieutenant Joe Calvert prepares for landing. The landing site has to be near the pole to avoid the centrifuge effect of the fast spinning cylinder, yet away from the central disc that he imagines serves as a door for Rama's inhabitants. A few minutes later, the spaceship lands safely on Rama, near the circular structure. He relays the message back to the command center: "Rama Base. *Endeavour* has landed."

The monitoring sensors aboard *Endeavour* do not pick any sort of signal emanating from the gigantic metallic structure on which the vessel landed. After a 24 hour waiting period, Norton and Lieutenant Mercer slip into their respective spacesuits and set out to explore the surface of Rama first hand using their jet propeller. They start to examine the surface of the alien cylinder around the landing area. A few meters from the landing site, Norton stumbles on a wheel embedded in the metallic frame of Rama. The spacemen help each other and manage to turn the wheel 180 degrees counterclockwise, revealing an opening into Rama.

The Rama committee is a temporary creation of the United Planet Science Organization meant to supervise *Endeavour*'s recognition mission to Rama. The Rama committee meets at the United Planet headquarters located on the Moon. The members all attend in person, except for Sir Lewis Sands, who attends via a stereogram beamed from earth. The committee reviews the credentials of Captain Norton, *Endeavour*'s commander, and agrees that he matches perfectly the requirements of the mission. They also discuss the possible reactions of the visitors and decide that Norton should go forward and continue exploring Rama.

From his desk aboard the spaceship *Endeavour*, Bill Norton records a message that he intends to send to both his wives. In the video recording, he recounts his careful solo

exploration of the alien vessel through multiple dark and silent corridors separated by similar airlocks. He notes that the Ramans seem to do everything in threes. Norton explains that after 30 hours of exploration, he finally reached the entrance to the inside portion of Rama. He then turned back without entering the actual cylinder and returned to *Endeavour*. As he is recording this message, he is waiting for an official authorization from the Rama Committee to continue the journey. He wonders if Rama is simply a giant tomb, like one of the great pyramids of the Egyptian kings, only this time wandering through space instead of sitting in the middle of the desert.

After going through the last air lock, Bill Norton starts his jet engine and immediately finds himself in total darkness, just as he expected. His flashlight beam isn't powerful enough to cut through the darkness and doesn't reveal much of the inner world of Rama. He decides to throw a lighting flare ahead of him to light up the area. The burning flash lights up the area and reveals incredible scenery. He is standing at the entrance of an enormous cylinder measuring 16 kilometers in diameter and extending at least 50 kilometers ahead. The cylinder is an artificial terrain scattered with geometrical structures and traversed by a network of rivers or canals extending into darkness. Norton realizes that he is the first human to witness the work of an alien civilization.

Chapter 4-8 Analysis

These chapters introduce Captain Bill Norton along with the spaceship *Endeavour* and its crew. *Endeavour* turns out to have been chosen solely for its availability and its proximity to the alien object's expected path. This fact points to one of the limitations of technology, as well as one of its advantages. Time and physical distance are the Achilles' heel of technology. To paraphrase a recent general, "You explore with the equipment you have available nearby, not with the equipment you want or need." *Endeavour* might not have been the best-equipped or most efficient spaceship for the job, but it was the closest, which is sufficient given that there were no other alternatives. However, where the physical resources are unavailable, humans can compensate with intelligence and experience. The staff of *Endeavour* will have to do its best with what it has.

Rama is an artificial world - an alien vessel whose dimensions are beyond any self-propelled object ever manufactured by human technology. The description of the landing of *Endeavour* on Rama uses a terminology that could otherwise be used to describe landing on any "natural" planet. From the beginning, the crew of explorers is bound to explore a world where each and every "unknown" element is artificial. ***Rendezvous with Rama*** is the scientific counterpart to a typical explorer's diary set in the natural world. In the latter, the newly discovered world will be filled with mysteries and drama that doesn't require an explanation beyond the simple metaphoric description. However, in the case of Rama, every question posed by the artificial environment must be answered in technological terms. Each fact and observation must eventually fit like the pieces of a puzzle in the greater picture that will undoubtedly emerge as the mission progresses. The first of such mysteries is the shape of Rama itself. The spinning cylindrical shape poses unexpected challenges to a ship trying to land on its surface.

From the very start, the qualities and shortcomings of Commander Norton are made quite clear. He mostly relies on his staff to perform the technical feats required by the ongoing events. He sticks very closely to the rules and the laws and he rarely improvises. He does not use his authority to give orders, but he reserves his position to make the final and critical decision after consulting with his staff. Whereas most people would quickly resort to an aggressive behavior in order to extract a solution from a difficult source, Norton will exhaust all non-violent possibilities when confronted with such a problem. This sometimes overly cautious attitude may (or may not) cost humanity essential knowledge about the alien intruder.

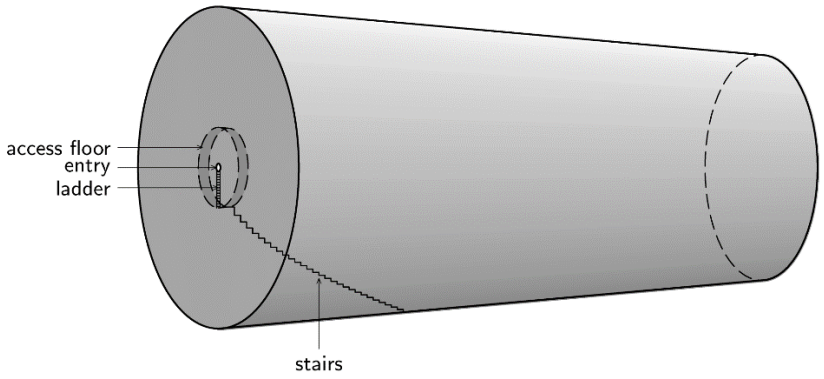
Chapter 9-16 Summary

The *Endeavour* sends a special communication to the Rama Committee. It describes the details of the reconnaissance mission's findings. It outlines the analysis of the visual data collected after the launch of five long-delay lighting flares inside Rama. The explorers depict a complex structure consisting of two circular hemispheres on opposite ends of one fifty-kilometer-long cylinder using terms borrowed from earth's geography. The members of the Committee debate what this discovery means to the human race as a whole. They envision that Rama must be similar to an Ark for an alien civilization fleeing some catastrophic event. They deduct from its estimated trajectory that the vessel must have traveled for at least a few hundred thousand years, and possibly even millions of years, before reaching the solar system. They also speculate that the Ramans are probably dead and that the vessel is a tomb drifting through space. While they find it sad that they were unable to interact with the aliens, they conclude that they have at least answered an age-old question: Humans are not alone in the universe.

A team made of Karl Mercer, Willard Myron and Joe Calvert leave *Endeavour* to descend into Rama. The aim of their mission is to evaluate the problems presented by accessing the main part of Rama through the Northern entrance. In order to access Rama, they have to use one of the three ladder-like structures and descend toward the cylinder. The rungs of the three symmetrical ladders are recessed into the wall of the ship and they are arranged evenly, although the half-meter space between each of them seems a little uncomfortable for humans. Because gravity on Rama is roughly one-thirtieth of earth's gravity, the men are able to carry along an enormous load of life-support equipment and tools. However, they anticipate that gravity will change as they descend into the spinning cylinder. Because of the absence of gravity, it was nearly impossible to tell whether they are traveling up or down the ladder.

Mercer goes in first, followed by the other two spacemen. Mercer compares the journey to swimming in a sea with no current or water resistance. He starts feeling the weight around the four hundredth rung. He decides to stop for a break around the five hundredth rung and contacts the commander to let him know that they are doing okay. Myron then turns around and uses the gravity to drop to the platform located one hundred meters below him. Norton gives him permission to continue toward the next platform. Myron and his companions conclude that the only possible usage of the stairway would be form going upward and use the

rail to pull themselves down instead of trying to use the rungs. Once on the second platform, Mercer is happy to enjoy the effects of the centrifugal gravity. He decides to try and take a breath of the alien air by removing his helmet. The exercise confirms that the oxygen content is too low to sustain life. Having reached the goal of their mission, the exploratory team turns around and starts climbing back toward the exit by pulling themselves up between every step of the way.



In a meeting with the Surgeon Commander Laura Ernst, Commander Norton asks about the health of the crew members who participated in the last reconnaissance mission. The doctor reveals that Myron shows signs of physical exhaustion, but the others are doing fine. The commander decides to impose a more vigorous exercise program for his crew. Norton announces that he will head the next mission and take along Joe Calvert and another crewmember, explicitly excluding Karl Mercer.

The crew of the *Endeavour* consists of men, women and "simps". Simps are genetically engineered creatures that resemble monkeys. They are the products of a company called Superchimpanzee Corporation and are designed to handle almost 3 times the amount of chores that can be performed by humans under the same conditions. The simps look like monkeys and they are equipped with a long tail that enables them to perform manual tasks more efficiently than humans can. They cook, clean, and perform other mundane and routine chores for the crew. Simps are friendly and sexless beings that can only communicate with humans through sign language. The names of the simps serving aboard Endeavour are Blackie, Blondie, Brownie, and Goldie.

Bill Norton, Joe Calvert and Boris Rodrigo travel down the ladder into Rama. The stairs remind Norton of a visit he once made to the ruins of an Aztec temple on planet Earth, but he finds the proportions and the absence of physical signs of decay difficult to compare. After traveling between the six platforms, the exploration team reaches the bottom of the cylinder. Since the oxygen content is now sufficient to sustain life, the spacemen are able to remove their helmets and breathe on their own. The gravity is about half the level of Earth, thus making it possible for the explorers to move around relatively easily while wearing their heavy life-support equipment. Because of the proportions of the cylinder, the curvature of the terrain at the bottom of Rama appears flat to the explorers. After consulting with the doctor through their

radio, they decide to go ahead and walk toward the nearest structure, nicknamed Paris. Paris lays 8 kilometers ahead of them. They imagine that this "city" should reveal some secrets about the Ramans through pictures, artifacts or maybe even bodies. The explorers imagine that the Ramans could be humanoids, quite possibly 50% taller than humans. They wonder if the fact that the Ramans are oxygen breathers implies that all alien life also relies on oxygen to survive. The commander worries that the journey back to the ship via thousands of stairs will pose physical challenge much greater than the men anticipate.

The three spacemen continue to walk across the Straight Valley in the silent darkness toward Paris. Joe Calvert imagines he can break the monotony of the walk, so he starts whistling themes from ancient movies, starting with the "Heigh-ho, it's off to work we go" from Disney's classic ***Sleeping Beauty***. Calvert soon realizes that his whistling is annoying his companions and refrains from making any more sound. On his way to Paris, Norton decides to make a detour in order to examine the 100-meter wide groove that looks like a river stretching across Rama. There are three such trenches going across Rama, 120 degrees apart. He uses his companions as anchors and lowers himself into the 40-meter deep groove. He tries to use his hammer to recover a sample of the white crystalloid material that covers the bottom of the groove but finds it too hard to break. Standing in the river reminds him of an old train track going through forests and tunnels back on earth.

The Rama committee calls a special meeting because Dr. Perera has something important to announce. Professor Solomons and Dr. Taylor had to be excused from the meeting for personal reasons. Summarizing the state of exploration of Rama since the last meeting, Dr. Price says that all the buildings in Paris are identical 35-meter high rectangular structures. None of them has any door or window and there is no apparent joint between them and the ground. A grid of 5-centimeter wide grooves runs through the city streets. There is a track ending in front of each of the buildings, but since there is no visible opening, it is impossible to confirm that the tracks were built for some transportation system. Dennis Solomons, a science historian taking part in

the committee, suggests that the buildings might be artificial cocoons designed to seal and protect their content from decay. Dr. Perera hints that the *Endeavour* mission might need to be cut short. He explains that while it traveled through space, Rama remained frozen. However, since Rama is getting closer to the Sun, its surface is heating up at a rapid pace. Dr. Perera expects this phenomenon to create a major obstacle for the explorers inside Rama: hurricanes.

A team composed of Surgeon Commander Laura Ernst, Boris Rodrigo and Sergeant Pieter Rousseau set out to explore the edge of the Cylindrical Sea. The Cylindrical Sea is a wide body of water that separates both hemispheres of Rama. The distance between the stairway and the sea is about 15 kilometers, but the low gravity makes the journey feels like half that amount. The adventurers reach the northern edge of the sea and are stopped by a fifty-meter high cliff. They aim their powerful light beam at New York, the distant city-like agglomeration of buildings that stands on the southern side of Rama. Boris Rodrigo spots a stairway descending along the cliff and to the frozen sea. Dr. Ernst uses it to explore the surface and collect samples with a hammer. After returning to her party, she concludes from her analysis of the samples that it is indeed water in the form of a dense soup of multiple pathogens. Since it is frozen, the team wonders if it is possible to use it to cross over to New York before deciding against walking on kilometers of icy surface. On her way back, Dr. Ernst pays little attention to the slight breeze that brushed against her neck.

Speaking to the members of the Rama Committee, the mathematical meteorologist explains that the heated atmosphere combined with the spinning of Rama will thaw the Cylindrical Sea and create violent winds. However, this situation should only last a few hours. Everything should return to normal after the temperature stabilizes across the metallic enclosure. From his station on camp Alpha, Bill Norton starts to record identical messages to both his wives. The commander recounts his crew's latest discoveries and mentions that although New York is a collection of building-like structures, he does not believe that it is actually inhabited. He is interrupted by an urgent message from Earth. The Rama Committee warns him of possible sudden onset of high velocity winds. The Commander recalls the adventures of his personal hero, Captain James Cook, who had sailed around the world between 1768 and 1771. He decides that the matter may not be so urgent as to require him to recall his exploring teams immediately. Instead, he chooses to send back a message to Earth asking for the exact meaning of "sudden onset."

Chapter 9-16 Analysis

This section recounts the initial exploratory ventures into Rama by the Endeavour team. The size of the alien vessel is a major obstacle for the mission. The kilometers of ladders and stairways descending onto the inner surface of the Rama cylinder occupy most of the time and energy of the explorers. The members of the Rama Committee try to assess the meaning of Rama by equating it with Noah's Ark but fail to come to a meaningful conclusion.

Arthur C. Clarke takes care of reminding the reader of the laws of physics as they apply to the particular universe of Rama. He repeatedly refers to the law of gravity and its effect on the explorers. The laws governing the flow of air and the change in temperature across the Rama

environment are just as important. From a literary point of view, Rama can be seen as a fictional scientific experiment where the laboratory rats are replaced by human explorers trying to find their way through the maze of alien technology.

The multiple expeditions into Rama are small, progressive steps into an alien world. Each one of those steps brings more raw information but until something conclusive is found, there is nothing on Rama worthy of awe. Norton's reference to the historical voyages of Captain Cook is an attempt to establish a link between the two kinds of explorations. However, beside the particulars of Rama's configuration, nothing truly extraordinary is found on the alien ship. It appears to be nothing more than an immense landscape with no identifiable purpose. It points to the fact that unless it has a definite purpose, an artificial construction such as Rama has only limited interest for civilization. All the videos and data transmitted to the scientists sitting on the Rama Committee and elsewhere fail to bring any new knowledge about the elusive Ramans. This mass of information remains, for all practical purpose, a map with nowhere to go.

Chapter 17-23 Summary

Norton and his fellow sleeping explorers are awakened by incredibly loud noises. The noises sound as if the whole of Rama is suddenly being ripped opened. The sounds come in waves of monstrous cracking noises followed by series of crystalline crashes. The cameras and light beams aimed at the Cylindrical Sea relay the images of icebergs crashing violently onto each other. The Cylindrical Sea is thawing from the bottom up, creating an unexpected and quite unusual phenomenon. The explorers are ordered to retreat to the safety of *Endeavour*, and they start to ascend the northern hemisphere along the stairway leading to the air locks, eight kilometers above. Norton, who is the last individual to ascend the stairway to the air locks, is near the end of his journey when he is suddenly blinded by a light so bright that he has to close his eyes and keep them shut for more than a minute.

Rama is now wholly illuminated by powerful light coming from the trenches that were noticed in the previous explorations. The light sources are located in six equidistant areas arranged symmetrically along the surface of Rama. Commander Bill Norton continues to climb along the last stretch of the ladder leading to the air locks while he tries to get used to the new, blinding environment. The Commander wonders for a moment what the purpose of this sudden change of season is and who, or what, triggered the dawn on Rama. As much as he tries, Norton is unable to come up with a plausible answer. As he reaches the end of the ladder and the entrance of the air locks leading to the surface of Rama, Bill Norton turns around and observes the early effects of the trade winds on the horizon. This is the beginning of the formation of giant hurricanes in this artificial environment.

Professor Solomons and Dr. Taylor, back with the Rama Committee, are discussing whether further and possibly unexpected atmospheric changes could compromise the *Endeavour* mission. They decide that once the temperature stabilizes, it should be not only safe for the explorers to return to Rama, but also imperative for the sake of science. The Ambassador from the planet Mercury, speaking through a video conferencing device, suggests that more

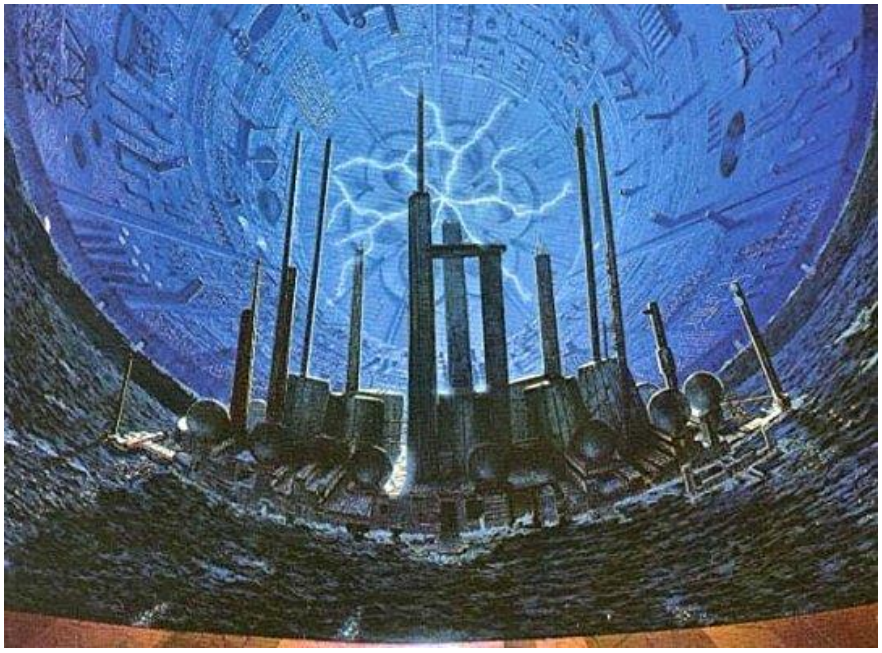
attention should be given to the possibility of Rama being belligerent. If the vessel managed to stop on its course and start orbiting the Sun instead of continuing back into space, it would be in a strategic position to dominate the solar system. The members of the Rama Committee wonder what kind of propulsion system hidden in Rama would enable it to change course. Dr. Perera suddenly concludes that acceleration is the only way to explain the tenfold in the size of cliffs bordering the Cylindrical Sea. The Committee says that exploration of the southern hemisphere of Rama is nonetheless necessary to assess the alien technology. The Ambassador from Mercury adds that since it is impossible to assess the presence of a military capability onboard Rama, it is also impossible to eliminate the possibility of the alien object having intention to use it. Obviously, time is getting short and Rama is like an egg ready to hatch.

While the Endeavour team waits for the temperature on Rama to return to normal, Lieutenant Boris Rodrigo asks Commander Norton for permission to use a priority channel to contact Earth. He says he needs to inform the Mother Church of Fifth Church of Christ that Rama is probably the cosmic version of Noah's Ark. The Commander promises that he'll relay his discovery as a scientific theory to the Rama Committee and he will send a copy to the Church.

After waiting in *Endeavour* for two days for the weather to return to normal, Norton sends Karl Mercer, Joe Calvert and Willard Myron back into Rama. The alien spaceship is now filled with low hanging clouds. The atmosphere inside Rama is warmer and, to the explorers' surprise, breathable. The spacemen are thus able to do down the stairs without having to wear their masks. The clouds are thick, and it is hard for the adventurers to see more than a couple of meters in front of them. The sound of a distant waterfall fills the air as they emerge from under the cloud. They contemplate for a moment the strangeness of the curved Rama universe.

Lieutenant Mercer notices the change in the color of the Cylindrical Sea and the team concludes that the organic soup has already evolved into life, which would explain the increased presence of oxygen and CO2 in the atmosphere. Apparently, the artificial universe of Rama accomplished in a 48-hour cycle what evolution on planet Earth required 375 million years to deliver.

More members of the crew are sent to help. After several days of gathering the material that was scattered by the intense winds of Rama, the exploration team reaches the edge of the Cylindrical Sea. They build a vessel out of empty storage drums and a metallic frame. They christen the new ship "Resolution," after the name of one of Captain Cooks' ships. Ruby Barnes, an experienced and certified navigator, takes Resolution out for its maiden voyage. The ship proves its ability to travel reliably at a speed of around 12 kilometers per hour. Barns, Rousseau, Rodrigo and Norton then set out to cross the five kilometers of the Cylindrical Sea and enter the alien version of New York. A close examination of the photographs of Rama's New York showed that because of structural redundancy, it should be sufficient to explore one ninth of the city. Commander Norton is the first to climb the ladder going up the 500 meters cliff. He reaches the edge of New York only to find that there is no imminent danger. He then calls on his two fellow male team members to follow him while Ruby Barnes stays on the Resolution, ready to depart in case something goes wrong.



Commander Norton quickly concludes that New York is a machine, and possibly a factory. However, the explorers find no evidence of any mechanical or electrical activity. Just like the buildings found on Paris, all the buildings populating New York are completely sealed and the city is utterly silent. Karl Mercer suggests that since New York is an island, the raw material for the factory probably comes from the sea. Through a radio communication, Simp Master Ravi McAndrews suggests that New York could in fact be a factory designed to manufacture Ramans.

On the opposite side of the island, access to southern hemisphere is blocked by half-a-kilometer high cliffs acting as levees. The explorers are unable to locate a ladder, leaving them to wonder how they will ever be able to explore this part of the alien ship. Norton and his team then return to *Endeavour* empty handed.

Chapter 17-23 Analysis

Without a warning, the cold, dark and silent world of Rama turned into an active and brightly illuminated universe. The sequence of events that follows will dramatically alter the course of the mission led by Bill Norton. These events will also modify the requirements from the men and women involved in the reconnaissance mission. Up to that moment, Rama was suspected to be either a dead alien artifact or a sleeping spaceship devoid of activity. The scientists theorize that Rama might have been through a sleepy season for millions of years. The unexpected change of season means that the explorers will have to adapt quickly to their new conditions. The adventurers will also have to foresee what else awaits them if changes come without a warning.

As predicted by Dr. Perera, the dramatic change of conditions is accompanied by the building up of violent storms inside Rama. The unforeseen melting of the Cylindrical Sea from the bottom up triggers the clash of huge blocks of ice breaking through the surface of the sea. This melting of the sea makes it even more difficult for the explorer to cross the distance between the edge of the northern hemisphere and the island of New York. The explorers are then forced to retreat to their mother ship while the introverted world of Rama lights up and comes to life.

Even though science had predicted the effects of the rising temperatures on Rama, it has failed to foresee the fundamental change of season. The dawn of a new season opens up new possibilities for the adventurers and makes the whole scientific endeavor much more interesting to the reader. Some scientists had abandoned the Rama Committee that was designed to oversee the mission, as science itself has limited interest in dead objects. Without heat, light, air and eventually life, science itself is of very limited use to humanity.

Because of its introverted organization and its constant spinning, the world of Rama has literally no "up" or "down". Again, the author provides constant reminders to the impact of such an organization on the conditions of living for humans. The explorers are constantly trying to keep up with Rama and to adapt their behavior according to the changing conditions. In a strange twist of fate, the explorers are becoming the aliens in the world of Rama.

Chapter 24-30 Summary

James Pak, a junior officer on board *Endeavour*, requests a private meeting with Commander Norton. The officer's main interests are sex and sports, and he is known for his participation in the Lunar Olympics a year earlier. He suggests that he could use his ability to fly a sports device called a sky-bike to cross over to the southern side of Rama. He reveals to the ship's skipper that he brought "Dragonfly," his own sky-bike on board and that he's ready to take the risk of flying it across the Cylindrical Sea. Norton agrees, but warns him that should he

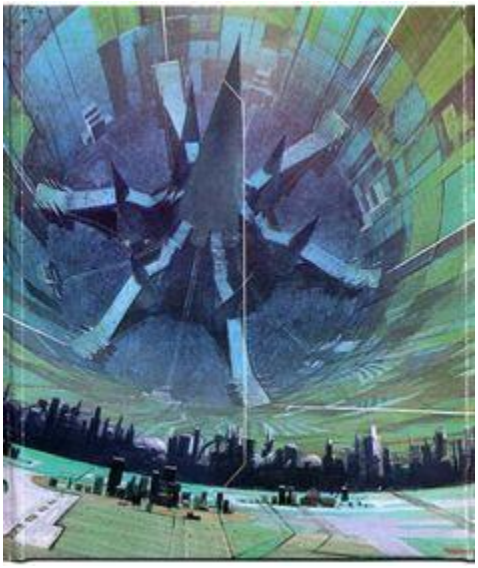
survive the ordeal, his adventure could earn him either a much-anticipated promotion or a court-martial appearance.

The sky-bike is an ultra-light device that uses wind power combined with human energy transmitted through foot pedals. Dragonfly is made of a thin frame and supported by transparent, molecule-thin wings controlled by a simple joystick. The sky-bike's maiden voyage on Rama proves successful. Dragonfly and its passenger are virtually weightless when it is at the center of the cylinder, where the gravity is almost null. Pak manages to fly Dragonfly for a significant amount of time without problems and he figures out a way to land it safely by first jumping off the bike and pulling the vehicle back to him before anchoring it to the ground. Surgeon Ernst decides that some necessary physical tests should be performed before letting Pak go ahead on his solo exploration mission.

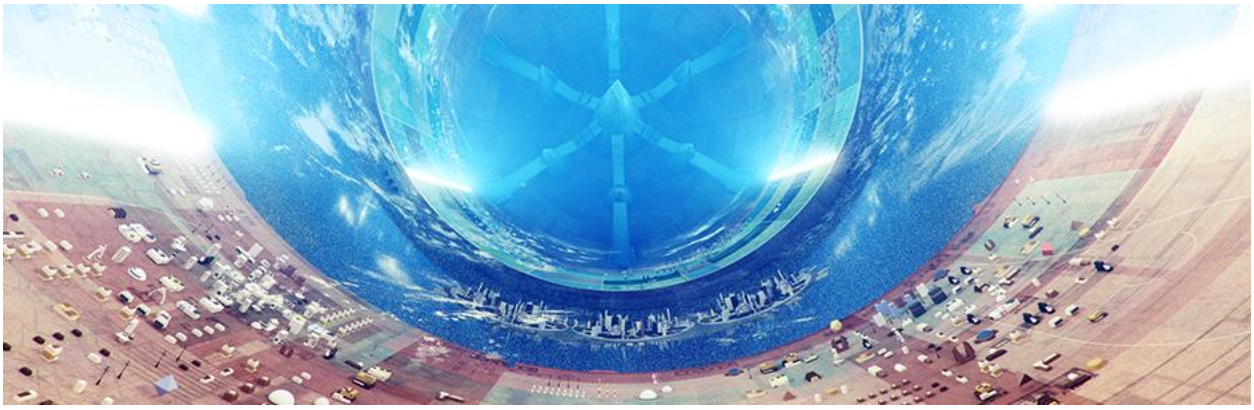
The Dragonfly

Jimmy Pak pedals his way through the northern hemisphere of Rama at an altitude of several kilometers without any problems. He crosses the Cylindrical Sea over the island nicknamed "New York". The complex and repeating structures of the island are a mystery to him, but he nonetheless relays the panoramic video images to the team on *Endeavour*. He reaches the southern hemisphere and discovers that it is essentially made of a central, gigantic spike over five kilometers long surrounded by six smaller, identical horns. The aviator anchors his vehicle on the summit of the main spike. Communication with the mother ship is temporarily disrupted by what appears to interferences from a magnetic field of unknown origins. Pak abandons his

hope of actually landing on the spike, so he begins his journey back to the northern hemisphere.

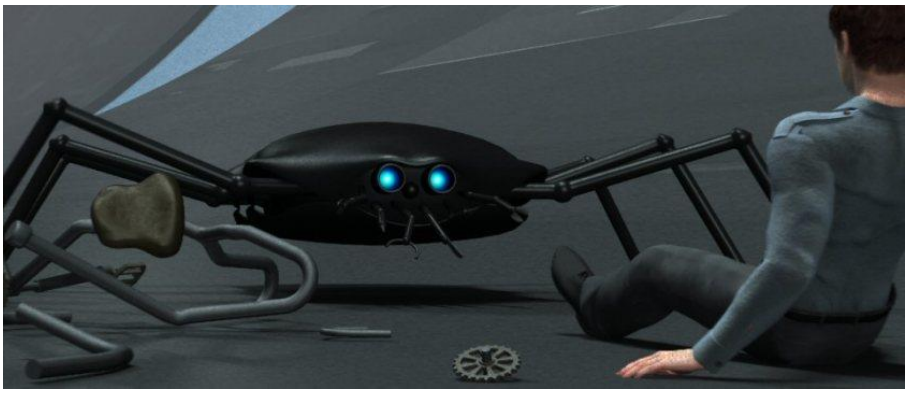


Jimmy Pak is starting to feel like Icarus as he is approaching the circular sea. He is overwhelmed by an uneasy sensation of general oppression and discovers that he is in the middle of an electrical field. He calls the control to let them know that the buildup of static energy is most likely the result of an upcoming storm. He notices that spikes of electrical bolts are coming out of the tip of the six smaller horns. A growing humming sound coming out of the big horn convinces Jimmy Pak that there is a major electrical storm in the making. Suddenly, six huge ribbons of fire shoot out of the main horn and into each of the smaller horns.

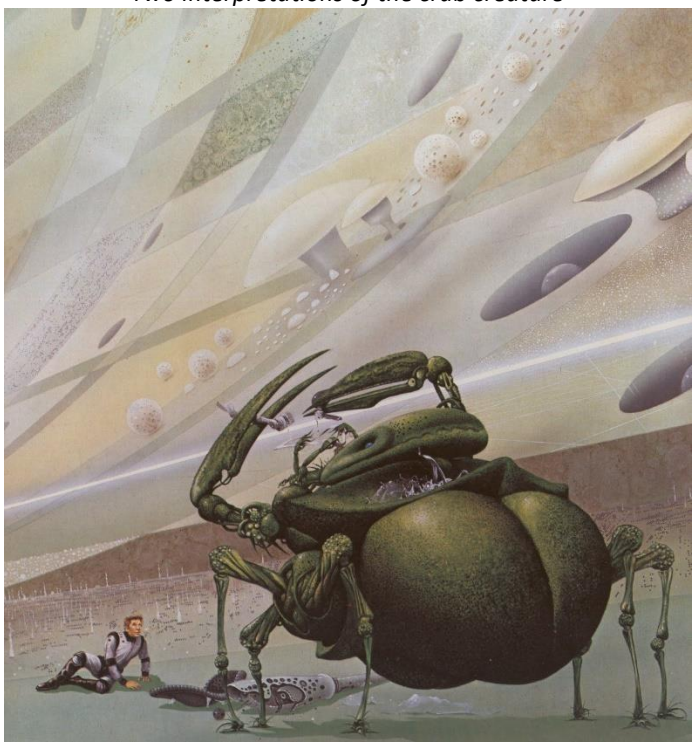


The electrical storm created by the activity on the ground of Rama created a turbulence that finally hits "Dragonfly." Each of the sky-bike wings fold and the machine starts spiraling downward. As the broken equipment spins toward the ground, Jimmy Pak has to use all his skills and knowledge to control the fall.

When Jimmy Pak wakes up, he appears unharmed but observes that a giant crab-like creature is taking the remains of his sky-bike and packing it on its own back. The metallic creature seems oblivious to the fallen aviator's presence. Jimmy radios the control hub and relays images of the monster feasting on the remains of the Dragonfly. Jimmy Pak is able to grab his water flask and emergency ration-pack from the pile on the creature's back. The crab is walking toward a 500 meters wide pit named Copernicus by the cartographers of Rama. Instead of descending in the symmetrical shaft, the crab-like creature shrugs off the debris of the Dragonfly down the hole. The creature then walks towards Jimmy and past him, ignoring him totally.



Two interpretations of the crab creature



Jimmy Pak decides that instead of losing his time and energy exploring the depths of Copernicus, he should try to find his way to the edge of the circular sea, which lays 3 kilometers ahead. However, the road to the sea turns out to be a maze of roads separating fields of different content. After traveling for a while, the officer climbs over a triple fence surrounding a

metallic grid set around a small and colorful flower. This finding of an earth-like plant growing in this artificial environment is so unusual that Pak informs the central command hub that he is going to try to collect the flower. The skinny explorer crawls through the openings and retrieves the plant. While he's crawling backward in order to exit the grid, he observes the rest of the plant retreating back into the ground.

Chapter 24-30 Analysis

The section spanning chapters 24 through 30 is entirely dedicated to Jimmy's journey to the southern hemisphere of Rama. The young man displays an incredible amount of courage, if only for the fact that he pushes himself to the front line of the mission. While most every other member of the exploration team tends to stick to his or her official duties and systematically avoid unnecessary risks, James Pak compensates by lending his talent and courage to the mission's objectives. Without him, the southern hemisphere would have remained a complete mystery.

His enterprise comes very close to a successful completion. He even manages to control his flying device while crashing without becoming a victim. He emerges from the crash unhurt and continues his mission on foot. This outstanding display of courage and endurance is a reflection of the qualities required from a true Olympian. Upon his return to *Endeavour*, Norton will in fact mention that he probably earned the medal that he didn't get while competing in the Lunar Olympics a year earlier.

Pak is also the first explorer to encounter the creatures spawned by Rama. He is slightly upset by the fact that the alien creatures are ignoring his signs. His choice of a flower over a fortune in gems is a sign that life takes precedence over money. It shows the true value of the character and the importance of the mission over the individual.

Chapter 31-38 Summary

Commander Norton and his team review every solution to recover Jimmy Pak that they could possibly think of. Climbing the half kilometer-high cliff is a virtually impossible task, even with reduced gravity. EVA thrusters are unreliable and balloons are unstable. However, a priority communication from Dr. Perera provides them with an easy solution. They use *Resolution* once again to go around the island and position it right below Jimmy's position. The space biker wraps the only flower on Rama and throws it down to the ship below. Then he jumps off the cliff, using his shirt as a parachute to minimize the velocity of his body on impact. The shock of his body hitting the water is great but not overwhelming. Jimmy manages to keep his eyes and mouth closed to the poisonous water and to swim up to the surface safely. Just when they thought they are safe, a message from *Endeavour* warns the sailors that a small “earthquake” had just shook Rama for a few seconds. They realize that a tidal wave triggered by the tremor was forming along the Cylindrical Sea and that it is coming right at them.

After making sure that *Endeavour* and its crew are okay, Commander Norton turns to Master Ruby Barnes to navigate Resolution in order to minimize the impact of the coming tidal wave.

The ripple circling the sixteen-kilometer long sea looked like an avalanche coming right toward Resolution and its crew. Undisturbed by the magnitude of the challenge, Barnes manages to position the makeshift boat in the middle of the water, in between two sets of submerged baffles intended by the architects of Rama to break down the tidal waves. The roaring depression barely shakes the boat as the wave passes Resolution to continue its cycle around Rama, losing strength along the way. While sailing back toward a safer shore, the improvised sailors encounter a gigantic, nine-legged creature resembling a starfish surfacing along the anticipated ship path. Their first reaction is to try to maneuver in order to avoid it, but they realize that it is being dismantled by a few smaller, shark-like creatures. Jimmy Pak notes that this process is identical to the way the crab-like creatures on the southern hemisphere were treating the remains of his sky-bike. Once all the crewmembers are safely ashore, Norton swears that he will not tempt the gods of Rama by sailing the Cylindrical Sea again.

The explorers are surprised by the sudden appearance of a spider-like creature. The alien has a relatively small body that resembles a regular typical soccer ball in both shape and size. The body is surrounded by three eyes, possibly allowing for a 360-degree vision. The creature is supported by a trio of 2-meter-long articulated legs. Three long, whip-like tendrils also extend from the body. The inquisitive creature from Rama uses the tendrils to investigate its inanimate surroundings while totally ignoring the humans. Identical copies of this alien spider are soon popping up everywhere around Rama. Dr. Ernst patiently waits for one of the creatures to die before taking its body to the lab and puts it under the scalpel.

The Rama Committee meets once again, this time without the Ambassador from Mercury. The absence of the Mercury representative only furthers the Committee president's suspicions that the Hermians are up to something. In his opening address, Professor Davidson notes that the discharge of energy felt by Jimmy Pak were by-products of the spaceship's internal changes. He also states that Rama is altering its path and that it may choose to orbit the Sun instead of exiting the solar system. Dr. Perera presents the results of Dr. Ernst's autopsy on the spider's body. The alien creature has no organ allowing it to either breathe or eat. The spider's brain is a relatively big organ whose main purpose is computing the movement of the legs and the triangulation of the eyes. Eighty percent of the creature's body is occupied by an organic cell shaped like a honeycomb. According to the scientist, the creature is designed for a single task and has no life beyond the power that its cell is able to deliver. He also suspects that the explorers are very likely to encounter increasingly complex creatures as the accelerated evolution progresses on Rama. The Ramans themselves may just be the final link in this particularly fast chain of evolution.

Norton receives a top-priority message from headquarters. The message is encoded and for security reasons, it has to be handed to him personally. Lieutenant Commander Kirchoff has to leave his commanding post on *Endeavour* to relay the message.

Sitting on a platform at the end of the stairway, Sergeant Pieter Rousseau is using his telescope to keep track of the many species that are now appearing and disappearing on Rama. Kirchoff relays him a container addressed at Norton and Rousseau manages to deliver the good to its

addressee by throwing the container. The message warns the Commander of the *Endeavour* that a high-speed vehicle launched from Mercury on a high-speed intercept course with Rama is only a few million miles away from reaching its target. Concluding that there is no real urgency to act on it, Norton destroys the secret message and goes back to his post.

Norton receives another message from headquarters, warning the Commander that the vehicle is in fact a missile-like probe loaded with explosives. The skipper is advised to stay tuned to a broadcast of the General Assembly of the United Planets and to contact Commander in chief afterward to decide on a course of action. The message further notes that debris from the destruction of Rama might pose a greater danger to *Endeavour* than the explosion itself.

During the assembly of the United Planets, His Excellency the Ambassador from Mercury keeps busy with his computer until it is time for him to speak. He starts by delivering a summary of the situation regarding Rama. He then proceeds to explain the particular position of Mercury. He reminds his audience that despite the knowledge acquired by *Endeavour* and its staff, the purpose of Rama is still unknown. He notes that Rama has now proven its ability to alter its own course and that the full spectrum of creatures spawned by the alien vessel remains a complete mystery. Therefore, the Hermians have decided to pro-actively send an explosive probe near the alien vessel as a preventive measure. He says that the missile would only be used if Rama was determined an actual threat to the security of the planets.

Chapter 31-38 Analysis

The rescue mission aimed at bringing back Jimmy Pak to a safer shore is an example of the discipline that characterized the crew of *Endeavour*. Obviously, the team will leave no man behind. The whole rescue mission is a risky adventure, given the constantly changing conditions on Rama, but insuring that all the team members are safe and sound is worth the trouble. Once again, Jimmy displays incredible courage by jumping right into the depth of Cylindrical Sea. The importance of teamwork is once again tested against the elements when the makeshift boat encounters some alien creatures on its own. Surprisingly, the aliens ignore the boat even though it is an inanimate object fitted for recycling. Human abilities are put to the test when *Resolution*, the makeshift boat used to pick up Jimmy, has to face the giant tidal wave that is circling the Cylindrical Sea. Experience and talent come to the rescue of the team's limited technology when Master Barnes is able to navigate the boat to avoid a disaster.

The appearance of the inquisitive spiders on the northern hemisphere also underlines the isolation of the explorers. The creatures are systematically ignoring the humans and seem only interested in the material that can be recycled. To the creatures of Rama, the humans are once again the aliens, just as useless to them as the spiders are to the explorer's quest to discover the true meaning of Rama.

Millions of miles away from Rama, a drama is brewing. The Hermians have decided that Rama is a possible threat to their power, and they have launched a missile aimed at destroying the intrusive spaceship. The Hermians are described as essentially belligerent, and as such, they tend to consider the unknown as a menace to their security. They hold a position at the exact opposite of that of the explorers on Rama: They are like those barbarians "who smash what they cannot understand."

Chapter 39-46 Summary

Rodrigo asks Norton for permission to land on the Hermian probe and disable its explosives. He says that he has the technical skills required to perform the mission and that there is no way for the Hermians to counteract his actions before the bomb is actually disabled. After debating the ins and out of Boris Rodrigo's proposal, Norton agrees and allows him to sabotage the probe.

Lieutenant Rodrigo leaves *Endeavour* aboard a space scooter and lands on the Hermian probe. A few minutes after Rodrigo's departure, Norton receives a message from Mercury telling him to gather his staff and leave the vicinity of Rama within the hour using maximum acceleration. By then it is too late for Norton to contact Rodrigo and the commander decides to ignore the message completely, hoping that the Hermians would rather delay their action than destroy *Endeavour* and its crew. After weighting all the possibilities, Rodrigo anchors his scooter on the Hermian probe and disables both remote trigger mechanisms. By then the space bomb has fired up its accelerators. The Lieutenant decides to disable the remote-control antenna as a preventive measure. The missile misses its intended target and fails to detonate.

Norton records a message to his wives, telling them that Rodrigo's heroic mission was successful in preventing the destruction of Rama. The Commander adds that his next trip inside Rama will be his last, as the proximity of the Sun will soon make it impossible for *Endeavou*r to remain operational.

Commander Norton decides that during their last venture into Rama, the explorers should be allowed to use force and penetrate the sealed structures of "London." He reasons that by piercing though the surface of Rama, they should be able to occupy the scientists on Earth and elsewhere with a new and much needed data about the alien vessel. Joe Calvert uses a laser torch to cut away a piece of one of the sealed structures. The team members enter the structure and discover a gigantic field of glass pillars. The pillars are holographic images representing tri-dimensional objects such as tools, machines and utensils. Some of these objects look quite conventional while others remain a mystery. The explorers imagine this collection of virtual objects to be a catalog for the Ramans. Such a catalog could allow the Ramans to choose the objects to be created at will by their environment. Joe Calvert calls on his teammates to look at a specific item: A 2-meter high uniform apparently designed for a giant creature with three arms and as many legs. The explorers suspect that this uniform must be what the Ramans wear. From his outpost, Pieter Rousseau warns the adventurers that they should start to retreat because the lights are starting to fade out.

As they are exiting the structure, the team feels a slight tremor shaking the vessel, an indication that Rama is changing course. The *Endeavour* staff is ordered back to the mother ship, abandoning all the material behind. As the adventurers painfully climb the endless stairways toward the air locks, the fading suns of Rama start flashing in sync, calling all the creatures back

to the Cylindrical Sea. The creatures of Rama rush back to the sea after performing their last recycling duties in an apparent hurry.

Two days later, *Endeavour* is hovering a few hundred kilometers away from Rama and the staff is resting. Calvert suddenly warns the ship's skipper that although the instruments are not registering any movement, *Endeavour* is spinning uncontrollably. The explorers' spaceship, caught in Rama's powerful space drive as it realigned itself into a different orbit, manages to pull itself to a safer distance from the alien vessel.

The crew of *Endeavour* can observe Rama as it seemingly plunges right into the solar star. The alien ship then avoids being melted away by turning on a shield around itself. The scientists conclude that far from being on a suicide mission, the ship is actually fueling up using the Sun's energy. Rama then starts orbiting extremely fast around the Sun. After a few hours of elliptic revolutions, the alien cylinder leaves the area and heads for its unknowable destiny.

Surgeon Ernst pays a visit to Bill Norton, bringing him the good news that he has been issued a permit to father a baby with his wife on Mars. The two individuals fall into each other's arms. Norton knows that fame awaits him when he returns to civilization, but he also feels that a part of his life went away with Rama.

Chapter 39-46 Analysis

Rodrigo saves the day when he decides to disarm the missile sent by the Hermians to destroy Rama. His religious beliefs play an important role in this series of events and he is the only individual who is opposing violence against the non-threatening alien vessel. This underlines the fact that principles and beliefs are just as important as technological tools in countering the effects of political decisions.

The late discovery of the collection of holographic images hidden by the buildings in the city of London highlight the fact that hesitancy can lead to lost opportunities. The importance of this discovery is probably lost forever because the explorers hesitated for so long to pierce through the surface of Rama.

As the alien craft nears the Sun, the whole world of Rama starts to revert to its virginal state. The lights that were used to keep Rama alive are now used to call the creatures back to the sea where they can be recycled. In an ultimate drive to recycle every bit of material, the creatures dismantle everything in sight. Rama appears to be the ultimate recycling machine. On Rama, it seems like nothing is ever lost and nothing truly dies. The true aliens of the world of Rama, the ones that cannot be recycled, escape just in time to witness the refueling of the vessel.

CHARACTERS

Bill Norton

Bill Norton is the 55-year-old commander of the spaceship Endeavour. He leads a mission whose task is to explore the alien spacecraft Rama. As a commander, he takes an active

role in most of the missions. Just like a true captain, he is always the first one to go in and the last one to come out.

Norton has two wives, who live on different planets. He is traveling through space for most of the time, so he keeps in contact with his spouses by sending them near-carbon copies of his messages. His hero is Captain James Cook, an explorer of the 18th century. He often relies on the imaginary advice of Captain Cook to make important decisions regarding his missions. Whenever he faces a difficult decision or a problem that science alone cannot resolve, he imagines what Cook would do in the same situation.

As a leader, he uses very little authority or direct pressure on the staff of his spacecraft. He mostly relies on his companions to perform the technical feats required by the ongoing mission. He sticks very closely to the rules, and he rarely improvises. He does not use his authority to give orders, but he reserves his position to make the final and critical decisions after consulting with his staff. He will usually choose to let his team members use their own experience and judgment to decide on a course of action during the mission. The most important steps of *Endeavour*'s mission to Rama are the result of plans and ideas put forward by the members of the team. For instance, the exploration of the southern hemisphere was entirely planned and performed by Jimmy Pak. The same is true for Rodrigo's mission to sabotage the Hermian missile.

Bill Norton's shortcomings as a commander become obvious when he postpones the use of force until the very last moments of the mission. It appears that a lot of the missing data pointing to Rama's secrets could have been uncovered if the explorer team had been more aggressive towards the alien environment.

In spite of having no apparent close friends aboard *Endeavour*, Norton had a short-lived relationship with Surgeon Ernst during a past mission. The latter relationship is temporarily re-activated at the end of the novel, once the mission is over for all practical purposes.

Boris Rodrigo

Lieutenant Boris Rodrigo is a communications officer aboard the spaceship *Endeavour*. Rodrigo is also a member of the Fifth Church of Christ. His religion is based on the belief that Jesus was in fact a visitor from space. Not surprisingly, the great majority of members of this Church, also known as Cosmo Christers, happen to work in a space-related domain. Lieutenant Rodrigo is appreciated among his peers and he makes no attempt to convert them to his own religious beliefs.

Boris Rodrigo was part of the second exploratory mission on Rama. He was also part of the first team that reaches the edge of the Cylindrical Sea. His religious beliefs lead him to believe that Rama may be the equivalent of Noah's Ark, sent by remote aliens to seek and save the worthy humans from an imminent disaster. His request to Commander Norton to relay the urgent message of his discovery to his Church is granted, though somewhat indirectly. Boris Rodrigo is also part of the team that explores the island of New York.

Lieutenant Rodrigo, like the rest of the Cosmo Christers, tends to see the Hermians as the evil side on the war between good and bad. After learning about the Hermians' plan to destroy Rama, he volunteers to land on the loaded probe and single-handedly disable the missile's explosive charge. He travels to the bomb and manages to disable it before it reaches its target. He is then treated as a hero.

James Pak

Lieutenant James Pak is junior officer on board *Endeavour*. The officer's main interests are sex and sports. He was a participant in the Lunar Olympics a year prior to the mission, but he lost the competition due to technical difficulties. He uses his own sky-bike, which he christened "Dragonfly," to fly over the New York levees and reach the southern part of Rama. His device becomes the victim of a series of atmospheric disturbances and he crashes on the southern hemisphere, a few kilometers short of the Cylindrical Sea. He manages to stay alive until a rescue team comes to rescue him aboard the makeshift boat named *Resolution*. He steals the only flower growing on Rama from one of the fields on the southern hemisphere and jumps off a 500-meter cliff into the Cylindrical Sea to save his life.

Laura Ernst

Surgeon Commander Laura Ernst is the chief doctor aboard *Endeavor*. She is beautiful and an authority in biological matters. She had a single and quick affair with Norton during a previous mission, but the relationship never went further. She advises Commander Norton on the various health-related aspects of the mission.

Surgeon Ernst participates in several missions and collects a sample from the frozen sea during one of the initial missions. Ernst is also responsible for giving Jimmy Pak the go-ahead for his solo sky-biking mission to the southern hemisphere of Rama. Dr. Ernst got very excited when she first meets the alien creatures and wishes she could get one of them in her laboratory for a thorough examination. The rules of encounter with alien species are preventing the team from capturing an alien creature for research purposes. Yet her wishes are granted when a spider falls to its "death" and can be safely gathered and examined. She brings the corpse aboard *Endeavor* to have it dissected. She is literally shocked by her findings when her scalpel slits through the alien's flesh.

Joe Calvert

Joe Calvert is the lieutenant of the vessel *Endeavour*. He maneuvers the ship during the initial landing of *Endeavour* on the northern hemisphere of Rama. He later takes part in the first scouting team that evaluates the possible problems of descending onto the surface of Rama via one of the long stairways along the northern entrance point. He later joins Commander Bill Norton on the first mission that attempts to reach the surface. During one of the last missions on Rama, he operates the laser torch to cut through the sealed building in London.

Calvert is an expert in primitive cinema of the 20th century. His extensive knowledge of the soundtracks from ancient cinema is rather annoying to the other explorers, who have no experience of these cultural artifacts.

Karl Mercer

Lieutenant Commander Karl Mercer is the second officer on board *Endeavour*. He is a strongly built individual with a special ability to control his own biological feedback, such as heartbeat or respiratory rhythm. He is an authority in life-support systems and has written a few textbooks on the subject.

Karl Mercer is part of the initial team that descends into the heart of Rama. He has a weight control problem that prevents him from joining one of the initial missions. Surgeon Ernst enjoins him to a stricter regime of exercise and eating. He manages to lose the necessary weight and is able to join the later missions. He is the first one to note that the higher level of oxygen in the atmosphere is related to the life developing in the Cylindrical Sea. He is also the first to suggest that the island of New York is a factory that uses the Cylindrical Sea as a source for its raw material.

Dr. Bose

Dr. Bose is part of the Rama committee. He is now 115. He lived on Earth until he was 30, and then emigrated to Mars where he is now living.

Olaf Davidson

Professor Emeritus Olaf Davidson is the chairman of the Space Advisory Council (SAC). He is also a member of the Rama committee.

Willard Myron

Technical Sergeant Willard Myron is an expert in mechanics. Willard Myron can repair most anything that is broken. He can also design efficient solutions and tools where a mechanical solution doesn't already exist. Despite his abilities, Myron is known for having no ambition at all when it comes to climbing the ladders of the hierarchy.

Conrad Taylor

Conrad Taylor is an anthropologist who first displays little interest in Rama, because it appears dead and no artifact has been found.

Pieter Rousseau

Sergeant Pieter Rousseau takes part in several initial missions into Rama. However, his skills as an expert in telescopes are put to better use when he uses his talents to track the creatures evolving on Rama from his outpost at the bottom of the stairway. His position allows him to issue critical warnings to the explorers' teams when the conditions on Rama change unexpectedly.

Ravi McAndrews

Ravi McAndrews is the Chief Steward and Simp Master on Endeavour. He posesses a limited amount of scientific knowledge but is otherwise an intelligent individual capable of drawing conclusions when factual evidence is in short supply. He is the first one to suggest that New York is probably a factory designed to manufacture Ramans.

The Ambassador from Mercury

The Ambassador from Mercury represents the Hermians (the name given to the population of the planet Mercury) at the United Planets. He is despised and feared by many members of the council. He uses diplomacy as a tool to promote a politically aggressive stance.

OBJECTS/PLACES

Rama

Rama is a gigantic cylindrical object traveling though the solar system. It is an artificial environment built by alien beings for an unknown purpose. According to Hinduism, Rama is also the name of a great king as well as the seventh avatar of Vishnu.

Sita

Sita is the name of the first space probe that provided humanity with close-up images of Rama. According to Hinduism, Sita is the name of Rama's wife.

Simps

The simps are genetically engineered monkey-like creatures provided by Superchimpanzee Corporation. They are sexless animals trained to perform human tasks with great efficiency inside the spaceship. They are smaller than their human counterparts. The names of the simps aboard Endeavour are Blackie, Blondie, Brownie and Goldie. (The Simps appear as scientific characters in other Clarke works.)

Dragonfly

The Dragonfly is name of the sky-bike used by James Pak to cross over the New York Levee and land on the southern part of Rama.

Resolution

Resolution is the name of the makeshift boat used to the explorers to reach New York and to rescue Jimmy Pak from the southern hemisphere.

Endeavour

Endeavour is the spacecraft hired on the mission to explore Rama. It carries the team of explorers and the necessary material to the alien vessel. It remains stationed on Rama until its time to leave the premises.

The Stairway

The stairway leads from the air locks to the “bottom” of Rama (the bottom is the interior, curving wall of the enormous cylinder). It is eight kilometers long and separated by several platforms. The stairway is the only way in and out of Rama and the only way to reach the “surface.”

The Rama Committee

The Rama Committee is a consortium of several scientists from the solar system meant to supervise the Endeavour mission. The Rama Committee meets on the Moon.

The United Planets

The United Planets is a council of seven diplomats similar to the 20th century's United Nations.

New York

New York is a collection of sealed buildings and trenches located on an island in the middle of the Cylindrical Sea. It is delimited by a 50-meters high cliff on the northern side, and a 500-meters high cliff on the southern side.

London

London is a collection of sealed buildings and trenches located on the opposite side of Paris, in the northern hemisphere. It is the last city explored by the Endeavor mission before it leaves Rama.

Paris

Paris is a collection of sealed buildings and trenches located on the northern hemisphere of Rama. It is the first city visited by the members of the Endeavor mission.

The Biots

Biots is a generic name for the creatures spawned by the Rama environment. They are a cross between robots and biological entities. They are moved by biological energy cells and automatically recycled by other biots when they break or become useless. Biots are referred to as crabs, cranes, spiders, starfish, sharks and other earthly creatures by the members of mission *Endeavour*. They have specific tasks to accomplish on Rama and always avoid contact with the humans they encounter.

The Ramans

The Ramans are the builders and maintainers of Rama. No Raman was ever seen on Rama and, if they exist at all, they seem to be oblivious to the presence of humans.

The Hermian missile

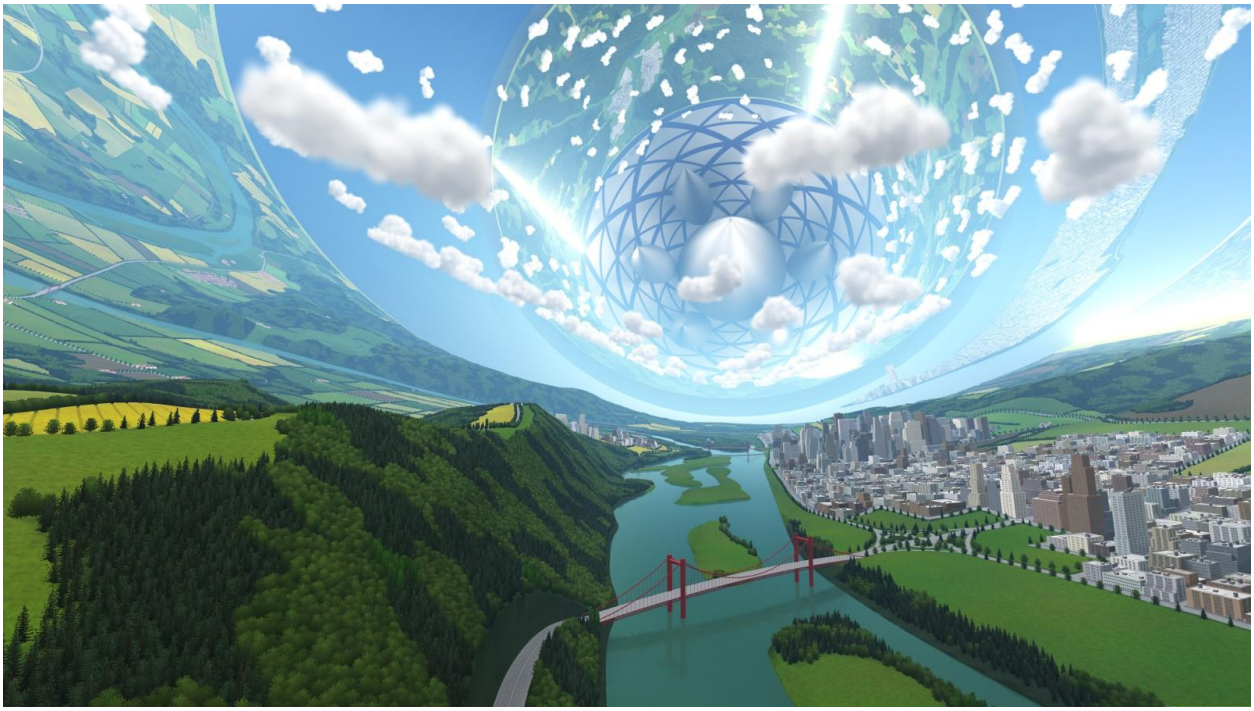
The Hermian missile is the high-speed probe loaded with explosives launched by Mercury to destroy Rama.

THEMES

Technology

In the universe imagined through the words of Arthur C. Clarke, the power of science and technology is virtually limitless. The only barriers standing in the way of what technology can accomplish reside in the mind of the individuals who are using it. The alien world of the Ramans is a purely technological response to the problem of survival through time and space, and to an extent, to the problem of life itself. Rama is a self-contained, artificially created universe that is, from a technological perspective, perfect. Rama is designed to "live" forever as

it recycles itself indefinitely. No one and nothing ever dies on Rama. Everyone and everything is simply recycled and reused. Rama is a purely functional world where everyone and everything has a purpose from which it does not deviate. The "biots" that the world of Rama generates are neither alive nor dead. Rama is a machine that lives for the sole purpose of keeping itself alive indefinitely. In a way, it mirrors the human world while turning it outside in.



The laws of Rama are just an extension of the laws of Nature on Earth. The inhabitants of Mars, Mercury or the Moon are nothing more than immigrants from Earth that have evolved and adapted to the laws inherent to their new environment. They have expanded civilization through technology and they depend on it to survive in their essentially hostile environment. The author extrapolates technology by relying for the most part on solid knowledge of the basics of physics and by projecting the developments of the technology available at the time of writing into the future. The result is therefore limited by the knowledge available a few decades ago.

Anyone familiar with the current technology will recognize the limitation of such an approach to science fiction writing. While the novel was written less than four decades ago, it still shows its age in many areas. More specifically, the author failed to anticipate the evolution of computer technology or its importance in the world beyond that which could be foreseen in the early 1970's. In the novel, computer time is still a high priced commodity, whereas in today's reality, it has already ceased to be an issue a long time ago.

The lack of data is the only reason why many of the mysteries of Rama remain intact after the alien ship leaves the solar system. The Commander's refusal to break through the surface of Rama or use intrusive technology to gather more data is protecting both the Ramans and their secrets. Had sufficient data been available to the crew, there would be no question triggered by the world of Rama that could not be answered with science or with one of its

technological applications. Given enough information, Rama would not be much more than a curious mathematical puzzle waiting to be solved, similar to what the problem of three-legged walking is to the science of robotics.

In a way, Rama is a creationist's dream; it is a completely "designed" universe where even evolution is kept under control. The Ramans are the unseen gods of their own universe, controlling everyone and everything, yet keeping a secret of the planet's own destiny. On Rama, everyone and everything has a purpose and a destiny.

Time and Space

In the world foreseen by the author of Rendezvous with Rama, time and space are the two major problems standing in the way of the human race's effort to understand Rama. While every single problem seems to have either a technological solution or at least a scientific explanation, the limitations of time and space are the real culprits for the exploration team. The first sign of the impact of time and space on the mission is Endeavour itself. The reason why Endeavour is chosen as the exploration device in the first place has nothing to do with the quality of its staff or the reputation of its commander. In fact, Endeavour happened to be the only ship in the vicinity of Rama capable of intercepting the alien object before it reaches the Sun.

Distance dictates much of what happens on Rama. The extraordinary size of the vessel forces the explorer to spend most of their time and energy traveling and transporting material from one place to the other. Space proves to be a major obstacle to the quest of understanding the mysteries of Rama.

While the modern reader might have trouble imagining the usage of "computer time" being a problem 200 years from now, the problem of space traveling has not evolved much during the last decades. Because of the distances involved, it is still a slow process that actually accomplishes little on a scale as grand as the Universe. In Rendezvous with Rama, information technology has more or less overcome the problem of transmitting images and sounds through space. Members of the committee meet in real time while sitting on totally different planets and video messages can be sent over extremely long distances without affecting the content. Except for a few practical details, Arthur C. Clarke's predictions regarding information technology have already come true. Space has indeed been conquered by mediating reality with information.

Rama can also be seen as a theoretical experiment in the geometry of space itself. The alien vessel is an introverted, self-contained and self-sustained planet. Just like Earth, it depends on the Sun's energy to provide its own life forms with necessary light and energy. However, contrary to their counterparts on Earth, the creatures of Rama do not inhale or exhale, they do not feed themselves and they don't emit anything except energy. The creatures of Rama are 100% recyclable, just as they born from 100% recycled material. Therefore, even though the actual life of the creatures of Rama only spans over a relatively short period, these beings are not limited by time. This characteristic of the creatures of Rama is in striking contrast with the explorer's own limitations. Humans depend on inhaling and exhaling as well as feeding and rejecting. Jimmy Pak, the young Olympian who crosses over to the southern hemisphere of Rama, is a characterization of this dilemma. Once he has survived the crash of his space-bike, Pak can only survive for so long with no food or drinkable water. Caught in a world where

nothing is really "living" and where interaction is impossible - and possibly deadly - Jimmy Pak finds himself more interested in a simple specimen of flower than he is in mountains of gems worth a fortune. The flower comes to represent the only link between the artificial world of Rama and the living beings locked in the time-space continuum.

Nature vs. Technology

In the novel, the only "natural" elements are the human beings. Everything else, including the pets carried by Endeavour, is essentially a product of technology. Everything is artificial and at least partly engineered. From the onset of the story, nature is described as an intrusive and often destructive element that is nothing but a hurdle set in the middle of the evolution path of the human race. To the humans of the novel, "nature" essentially means randomness and the inability to predict with any kind of precision the outcome of any given action. The meteorite catastrophes that open the first chapter of the novel provide a justification for the human race to try and obliterate any occurrence of natural randomness. This historically event in turn justifies the later knee-jerk reaction of the Hermians who launched a probe loaded with explosives to try and prevent the possibility of Rama being used as a military device against civilization. However, this paranoid reaction to the presence of aliens could also trigger defense mechanisms that would have unforeseeable consequences to the exploring team. The novel makes the point that anticipating violence is, more often than not, the action that actually triggers it. This point is otherwise underlined by noting that the belligerent inhabitants of Mercury are generally considered as physically weak. The aggressive political reflex is then but a way to compensate for the Hermians' inability to cope with physical violence on a personal level.

For all its benefits, technology proves to be quite inefficient when it cannot be anchored in the environment. When the time comes for the Endeavour staff to explore the southern hemisphere, technology has to be augmented by human power and experience. Jimmy Pak is a sports fanatic whose past as a failed Olympian space-bike competitor foreshadows his failure to complete the mission. However, he provides the Endeavour team its only link to the southern hemisphere of Rama. Jimmy can compensate the limitations of technology with human-specific intelligence, skills and abilities. He "flies" a human-powered, bicycle-like device to the southern hemisphere where he eventually crashes.

The technology underlying all forms of indigenous life on Rama is so advanced that its creatures have the innate ability to differentiate between a technological object and a natural one. Every creature spawned by the alien ship automatically avoids contact with the humans. These creatures seem only interested in the material that is inherently recyclable and they ignore everything else - in this case, biological humans. In turn, humans refrain from any kind of interaction with the aliens that could be perceived as violent.

The anticipated clash between nature and technology never happens, and the latter remains a tool to be used in the process of understanding and exploring. Just as the explorers have managed to prevent any confrontational encounter between the explosive-loaded probe sent by the Hermians and the alien vessel, they also systematically avoid destructive behavior towards the self-contained world of Rama. In a strange twist of the traditional point of view of science fiction, the only true menacing aliens aboard Rama are the humans.