

2061: Odyssey Three Study Guide

2061: Odyssey Three by Arthur C. Clarke

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Plot Summary

Two different science missions in space, one to Haley's comet and another to Europa, become one rescue mission as the spaceship *Universe* travels to the aid of *Galaxy*, which is marooned on the forbidden and hostile surface of Europa. During this rescue, physical verification confirms that Europa has a huge mountain, Mount Zeus, made out of diamond.

Mount Zeus appears out of nowhere and is inexplicable, until Dr. Rolf van der Berg obtains a 1981 *Nature* article that postulates an answer. The core of Jupiter is one big diamond. The implosion of Jupiter as it ignites into the small star, Lucifer, pushes the fragmented core into orbit. Mount Zeus is one of these core fragments.

As *Universe* explores Haley's comet, a terrorist hijacking brings *Galaxy* to the surface of Europa. Captain Smith of *Universe* implements an ingenious plan to use the water of the comet to fuel his ship for the rescue mission. Meanwhile, *Galaxy* bobs among the diverse life forms of the European ocean until beaching on an island that the crewmembers and passengers name, Haven. Dr. van der Berg and Chris Floyd, grandson of Dr. Floyd, fly a shuttlecraft to Mount Zeus. From there, they fly to the site of an earlier spaceship wreck, and then to a mysterious igloo village. Not only does Europa have life, but it also supports intelligent life.

Dr. Floyd appears to Chris as an ethereal entity that tells Chris to leave, because the shuttle emits oxygen, which is poisonous in the Europa biosphere. *Universe* picks up the crew and passengers from *Galaxy*, and all gather together at the science colony on Ganymede.



Chapter 1, The Frozen Years

Chapter 1, The Frozen Years Summary

Dr. Oleg Glazunov comments to Dr. Heywood Floyd that he is in remarkable shape for a man of seventy, although Dr. Floyd is actually one hundred and three years old. Dr. Floyd looks out a window of the Pasteur Space Hospital on the Moon and sees the Earth, six thousand kilometers away. In 2015, Dr. Floyd fell off a second story balcony, which put him in the hospital, when he was only fifty-eight-years-old. Now, forty-six years later in 2061, Dr. Floyd can never return to the Earth, because his body can no longer handle the higher gravity. Two reasons account for Dr. Floyd's longevity. The low lunar gravity slows the aging process, and hibernation during long space flights encourages rejuvenation. Dr. Glazunov assures Dr. Floyd that he is fit to take a space flight on the spaceship *Universe*. This pleases Dr. Floyd, because the maiden voyage of the *Universe* will bring him to the surface of Haley's Comet, which will also be a space exploration first.

Chapter 1, The Frozen Years Analysis

The chapter title refers to a classic piece of literature, *The Magic Mountain* by Thomas Mann, in which a hospital is a primary setting. Dr. Floyd will soon leave the Pasteur Space Hospital to embark on an exciting new adventure, the exploration of the space body, Haley's Comet. The parallel here is that in Mann's novel, the main character leaves the hospital, a tuberculosis sanatorium, to engage in another kind of adventure, World War I. The exploration of Haley's comet promises to be a world-changing event, or at least within the scientific world.

The character of Dr. Floyd first appears in the previous Odyssey novel, *2010: Odyssey Two*, in which he pilots the spaceship *Leonov* back to Earth from its mission to Jupiter. During this period, the mysterious black monolith that was discovered orbiting Jupiter causes the planet to implode. The implosion results in a small star to ignite, thus making Jupiter and its moons a smaller version of the Solar System.



Chapter 2, First Sight

Chapter 2, First Sight Summary

As Haley's comet approaches closer, Dr. Haywood Floyd tries to spot it with the naked eye through the windows of the Pasteur Space Center. He knows where the comet is supposed to be, and one night he sees it. The comet tail cannot be detected, but he knows that the fuzzy dot of light is Haley's. Dr. Floyd thinks about Haley's comet, what its surface looks like from space probe photos, and how he dearly wants to step foot on the surface.

Chapter 2, First Sight Analysis

Haywood Floyd reacts to his first sighting of Haley's comet with quite a bit of enthusiasm. He imagines the landscape of the slowly turning nucleus that is made up of ice, other frozen materials and rock. In his mind's eye, he sees the frozen ice bubbling and shooting out from the nucleus in geysers. One particular geyser erupts predictably, like the terrestrial geyser, Old Faithful, for which the comet geyser is named. As for his desire to set foot on the comet, he knows that he will do this or die trying. Dr. Floyd is a directed man and has the tenacity that comes from living a long life.



Chapter 3, Reentry

Chapter 3, Reentry Summary

Harkening back to the previous novel, the author recounts how the mission to Jupiter worked out. A non-human intelligence had gone through the Solar System four million years before. The intelligence had left behind a black monolith buried in the Moon, which humankind excavated but kept secret except among a chosen few. When a monolith was discovered orbiting Jupiter, the *Leonov* goes to investigate. During this mission, the orbiting monolith produces many other monoliths in Jupiter's gases, which increase the mass of the planet to the point where nuclear fusion occurs, and Jupiter becomes a new star named Lucifer. Irrefutable evidence that the ancient intelligence associated with the monoliths is aware of humankind comes in the form of a broadcast message. The message warns that humans are not to attempt landings on Europa, a former moon of Jupiter and now a satellite of Lucifer.

The impact of this realization that another intelligence inhabits the Solar System causes the Earth to unite politically against a potentially enemy. This does not come quickly or without conflict, but by 2060 the Earth has a Planetary President, and all remaining nuclear weapons are under international control. Meanwhile, Dr. Floyd has lost his family due to spending so much time away from Earth.

Chapter 3, Reentry Analysis

Reentry is an exposition chapter that brings the reader up to date on Dr. Floyd and the world after Jupiter became a star. Haywood Floyd has no ties to his family on Earth, and is thereby able to devote all his attention to space. However, he has not had a passion for anything like he does now about Haley's comet. At this point, the association with Haley's comet and Lucifer is not strong. They both happen to be interesting space objects, one associated with a warning not to land on Europa and the other a scientific curiosity.

An important point about human nature is made toward the end of the chapter. Up until recently, the armament industry depended on a perpetual state of war. The industry formerly absorbed most of the brilliant engineering talent and a great deal of raw materials. With the realization that humans are not the only intelligent species in the Solar System, the energy that had gone into the armament industry focuses instead on rebuilding the Earth and the building of new worlds, such as Mars and Ganymede. Humans always need an outlet for their creative energies, and once war becomes obsolete, the energies must be expressed somehow.



Chapter 4, Tycoon

Chapter 4, Tycoon Summary

Sir Lawrence Tsung is a tremendously rich man accustomed to getting his way. He pays a great deal of money to the Chinese government for his many children, due to the stringent laws about reproduction. He meets his match in Dr. Hessenstein, the director of the Hong Kong Planetarium. Sir Lawrence wants to demolish the planetarium to improve his view of the harbor, but Dr. Hessenstein refuses, no matter how much money Sir Lawrence offers. This results in a friendship between the two men. Sir Lawrence has a hand in changing the history of the Solar System, possibly through his son, William Tsung.

Chapter 4, Tycoon Analysis

Tycoon is another exposition chapter that introduces Sir Lawrence primarily and his son, William Tsung. A predictive point is made that overpopulation will be a problem in China for many years to come, and that making the birth of a child very expensive will be the ultimate solution. However, wealthy individuals such as Sir Lawrence will still have as many children as desired.



Chapter 5, Out of the Ice

Chapter 5, Out of the Ice Summary

Sir Lawrence watches a planetarium show that Dr. Hessenstein puts on in honor of Sir Lawrence's sixtieth birthday. The show follows the history of space exploration from the Chinese point of view, to where a spaceship named the *Tsien* flies to the Jupiter moon, Europa. Upon landing on the moon to take on water, which is used as fuel, the crew encounters a deadly life form that resembles seaweed. Dr. Rupert Chang broadcasts his observations of the life form, which does not do well in the freezing temperatures but does seek out the light from the lamps that the crew has set up. The life form advances onto the *Tsien*, causing the landing gear to buckle, which strands the crew on Europa. This show inspires Sir Lawrence to explore space.

Chapter 5, Out of the Ice Analysis

Dr. Rupert Chang does not realize that the creature on Europa is attracted to the light of the crew's lamps, until it is too late to preserve the *Tsien*. The tragic tale carries with it a warning that landing on alien planets risks the existing life forms and the visitors. The *Tsien* mission is foolish on this level and also ties to the more current warning that no human is to try landing on the Europa after Lucifer. This warning could be a threat, in that anyone trying to land will be destroyed, or it could be an attempt at preserving the life forms on Europa. The latter explanation fits with the *Tsien* tragedy. Human presence causes damage to the Europa ecosphere, perhaps unavoidably.



Chapter 6, The Greening of Ganymede

Chapter 6, The Greening of Ganymede Summary

Rolf van der Berg, a geologist, discovers a mysterious mountain that suddenly appears on Europa and that is almost as high as Mount Everest. The mountain resembles an iceberg in its jaggedness, and so it cannot be a volcano. The anomaly is named Mount Zeus. Van der Berg naturally wants to find out more about the mountain, but landing on Europa is forbidden. One day though, the clouds that usually shroud Mount Zeus clear for a few hours.

Chapter 6, The Greening of Ganymede Analysis

A mysterious object is introduced in this chapter, the strange mountain structure that appears as if by magic on Europa. Rolf van der Berg has a burning curiosity about the origin of the mountain and the material of which it is made. The origin is not volcanic, so it probably fell from space. The material cannot be ice, because the mountain would have shattered from impact. Little further study of Mount Zeus can be made at this time or in the future, unless something unusual happens to bring people within the vicinity.

The mysterious object is a classic element in fiction. The protagonists usually seek out the mysterious object, search for an explanation, or both. In this case, the object is known to exist on Europa, so the seeking activity will not happen. Finding an explanation for its existence will happen, but certainly not through magic. A scientific explanation must exist.



Chapter 7, Transit

Chapter 7, Transit Summary

Dr. Heywood Floyd remembers the first part of a line from a war poem, but not the rest. Two of his friends visit, George and Jerry, and they talk about Dr. Floyd's voyage to Haley's comet and the possibility that he might not return. George and Jerry give Dr. Floyd an antique painting of castaways on a raft.

Dr. Floyd's family history receives some explanation. He has lived so long that his family seems like a group of friendly strangers. He wonders what his grandson, Chris, is doing. At the end of the chapter, Dr. Floyd remembers the second part of the line of poetry. The whole thing reads, "I too take leave of all I ever had. I have been happy: happy now I go."

Chapter 7, Transit Analysis

The voyage to Haley's comet carries certain risks, and Dr. Floyd prepares for the possibility that he might not return. Besides his age, others in his family have died in space, and so he tries to make things easy on those he might leave behind. Dr. Floyd's character takes on humoristic and compassionate features. His pondering of his grandson foreshadows events to come.

The background information given in the chapter includes a reference to the Lunar monolith, the first one discovered. It now resides on Earth in the United Nations Plaza, and had been put there as a reminder that the human race is not alone. The times have changed dramatically with the ignition of Lucifer, done by whatever creates the monoliths.



Chapter 8, Starfleet

Chapter 8, Starfleet Summary

Now interested in Space, Sir Lawrence Tsung founds the Tsung Astrofreight corporation. An efficient way of space flight is developed that uses muon-catalyzed fusion. The primary fuel for this type of propulsion is ordinary water, usually distilled to avoid secondary reactions. The exhaust of such an engine is normally invisible.

The Moon contains vast reservoirs of water in the form of underground ice. Spaceships regularly refuel on the Moon, an easy space body to navigate due to its low gravity and lack of atmosphere. Sir Lawrence's corporation develops the Moon to be a fueling port for the spaceships of the corporation, *Cosmos*, *Galaxy* and *Universe*. Only *Universe* is designed for passengers, and Dr. Floyd will take this ship to Haley's comet.

Chapter 8, Starfleet Analysis

The true Space Age begins, when humans start commerce among the planets of the Solar System. Such an undertaking is not the work of governments, but of wealthy entrepreneurs such as Sir Lawrence. Although this point can be argued, for example the way in which the Internet developed into a means of commerce, generally speaking the pressure of commerce drives the human race to explore new worlds. In addition, Sir Lawrence has a non-scientist's curiosity about the wonders to be found, namely the surface of Haley's comet.

Dr. Floyd has been invited to the first flight of *Universe*, along with several other notable public figures. The motivation for this is likely to make better press coverage than if only scientists were selected. Advertising is a vital component to any form of commerce, and the more dramatic the better. The voyage promises to both improve public relations with the Tsung Astrofreight corporation and to expand the scientific understanding of the Universe.



Chapter 9, Mount Zeus

Chapter 9, Mount Zeus Summary

Dr. van der Berg puzzles over a brief visual recording of Mount Zeus. Light from Lucifer illuminates the mountain for a moment when the clouds clear, and the mountain reflects light in all colors of the rainbow. Dr. van der Berg eliminates the possibility that the mountain could be made of ice or volcanic glass. The material could be quartz though, or some other rock crystal. He imagines that such material would be worth a great deal of money, if humans were allowed to land on Europa, which they are not.

Chapter 9, Mount Zeus Analysis

The question about what Mount Zeus is made of is a mystery, but the brief and colorful light display indicates that it must be some kind of rock crystal. Quartz crystals can split white light into the spectrum, but so can other kinds of rock crystals. Dr. van der Berg thinks that the crystal from the mountain is valuable, possibly as collectors' items. On the other hand, it might have inherent value as a gemstone. Whatever the material is, the truth will never be known unless humans land on Europa and collect samples. This is unlikely to ever happen, but then the story plot might take a dive down to Europa, just to make things interesting.



Chapter 10, Ship of Fools

Chapter 10, Ship of Fools Summary

The passengers on *Universe* consist of Dr. Floyd, five other famous or near-famous people, the crew, and five young scientists. The famous or near-famous people are Victor Willis, a popular science journalist, Yva Merlin, an actress, Dimitri Mihailovich, a classical music composer, Clifford Greenberg, an astronaut, and Margaret M'Bala, a fiction author. Her fellow passengers christened her Maggie M.

Chapter 10, Ship of Fools Analysis

The novel, *Ship of Fools*, was written by Katherine Anne Porter (1890-1980) and published in 1962. This was her only novel, and she is better known for her short stories, essays and journalism. However, the ship-of-fools parallel works at a couple of levels. Porter's book is highly critical of political ideology, a suggestion that some kind of disastrous action might evolve from the *Universe's* flight to Haley's comet. The second, more obscure reference is to how the book title shows up in popular rock music lyrics. The phrase "ship of fools" has become a symbol for any situation that is doomed to failure, usually by the wills of leaders who do not understand the danger. At this point in the story, the meaning has more of a tongue-in-cheek reference to the famous people who accompany the crew and scientists to their destination. If something should happen to endanger the ship, they will become fools who cannot cope. Additionally, they know very little about science, with the exception of Dr. Floyd and Greenberg.

Chapter 11, The Lie

Chapter 11, The Lie Summary

Rolf van der Berg watches the data coming from a probe that orbits Europa, hoping that he can get more information on Mount Zeus. Unfortunately, the probe stops sending data, probably after being hit by a meteorite. He then attempts to talk a fellow scientist into probing Europa with a beam that is usually pointed toward Lucifer, and this proves fruitful after a time. He learns that Europa has an absolutely straight feature, but his attention is only on the makeup of Mount Zeus. He finds out and tells his colleague, Dr. Wilkins, that the mountain is made up of a rare form of quartz. This is not the truth.

Chapter 11, The Lie Analysis

The truth about Mount Zeus must be that it is made out of a rock crystal that has the capability of reflecting all the colors of the rainbow. If quartz is not the material, and if it is a valuable material, then it could be diamond. Dr. van der Berg is not talking, which indicates that his secret is worth keeping. The circumstantial evidence points to Mount Zeus being a huge diamond that juts up higher than Mount Everest.



Chapter 12, Oom Paul

Chapter 12, Oom Paul Summary

Dr. van der Berg contacts his uncle, Dr. Paul Kreuger, and informs him about the discovery of the diamond mountain on Europa. Van der Berg sends the message in a relatively unknown language and with cryptic references that only Dr. Kreuger understands. Dr. Kreuger, also called Oom Paul, deciphers the message with no trouble. He does have doubts about the mountain being made of diamond and starts to research the possibilities.

Chapter 12, Oom Paul Analysis

Oom Paul's research into the possibility of Mount Zeus being made of diamond serves to begin an explanation of how the phenomenon could have happened. This short chapter also reveals that Dr. van der Berg's secret is now shared, which means that someone else might intercept the message and understand the meaning as well.



Chapter 13, "No One Told Us to Bring Swimsuits . . ."

Chapter 13, "No One Told Us to Bring Swimsuits . . ." Summary

Captain Smith of the *Universe* informs Heywood Floyd and the other special guests on board that a swimming pool is available for their use while the ship is under thrust and has a little gravity, one tenth that of Earth. Maggie M'Bala complains that nobody told her to bring swimsuits, and this is indeed a surprise for the guests. Captain Smith explains that the water comes from one of the propellant tanks, and since the ship's thrust must be reversed in two hours, he invites everyone to enjoy the artificial beach while they can. The artificial beach is well done and has the illusion of a tropical beach on Earth.

Chapter 13, "No One Told Us to Bring Swimsuits . . ." Analysis

The possibility of an artificial tropical beach being on a spacecraft is explained in this chapter. Since water is the primary propellant, it can be used for this purpose until needed to generate thrust. The chapter does little else than make an impression of an intriguing scientific possibility that appeals to the senses. Captain Smith is allowed a central roll, which helps to develop the character.

Chapter 14, Search

Chapter 14, Search Summary

Dr. Kreuger researches the possibility of a mountain made of diamond appearing on Europa. He finds a 1981 article in *Nature* magazine that does support the hypothesis. Its title is from a famous Beatles song.

Chapter 14, Search Analysis

The computer search that Dr. Kreuger does to find the *Nature* article costs money. The prediction that the author does here is no longer valid after the introduction of the World Wide Web and subsequent development of search engines that are supported by advertising dollars. Since the copyright date is 1987, the author could not have known how search actually developed in the 1990s and early twenty-first century. The trouble with predictive science fiction is that what is credible at the time does not necessarily come true. In 1987, only a handful of people believed that the Internet would become what it is today.

Finding the *Nature* story and linking it to a Beatles song adds mystery to the story. What would a Beatles song have to do with the cores of the outer planets in the Solar System? How does this article relate to Mount Zeus?



Chapter 15, Rendezvous

Chapter 15, Rendezvous Summary

The crew and passengers of *Universe* rendezvous with Haley's comet. Mihailovich spots an early probe beacon light. *Universe* will touch down on the night side of the comet to avoid the day side temperatures that reach one hundred twenty degrees Centigrade.

Chapter 15, Rendezvous Analysis

Dr. Willis exhibits one of his character traits. He is an impatient man with others who become excited over nothing, as when Mihailovich wonders if the probe beacon might mean others are or have been on the comet. The exposition part of the chapter describes the comet surface as having more interesting features that most people would imagine.



Chapter 16, Touchdown

Chapter 16, Touchdown Summary

Upon touching down, the crew and passengers view a strange landscape that changes regularly, due to the comet's interaction with the solar wind. The comet has gone from a peanut shape to wasp-waisted, indicating that it will soon break into two pieces, which happened to another comet in 1846.

Captain Smith first leaves the ship and comments on the comet surface. He says that it looks like pepper and salt, and that it might grow a crop if thawed out. A team of scientists picks up the probe. Another group establishes a web of cables for others to hang onto in the almost non-existent gravity. The famous passengers become excited about stepping onto the comet surface, except for Yva Merlin who keeps her air of mystery, and Victor Willis, who must shave off his large beard to fit into a spacesuit helmet.

Chapter 16, Touchdown Analysis

The exposition about the surface of Haley's comet continues from the previous chapter as the ship touches down and the teams establish the grid of cables. The material of the comet crumbles easily, being that it is made primarily of ice and dust. Besides exposition, the characters of the famous passengers develop more, as they interact. Victor Willis and his beard give an element of humor to the scene. He must either shave the beard or skip the walk on the comet surface.



Chapter 17, The Valley of Black Snow

Chapter 17, The Valley of Black Snow Summary

As the famous passengers prepare to disembark from the ship, Dr. Floyd picks Yva as his partner. He reflects on her utter lack of personality, probably, because she plays fictional personalities so well. While on the surface, Dr. Floyd makes a snowball and launches it into space, thus creating a tiny comet of his own.

Chapter 17, The Valley of Black Snow Analysis

Dr. Haywood Floyd is a man who, at his considerably advanced age, carries no illusions about Yva having any romantic desires for him. However, he can still be disappointed with her for not having any discernable personality. His observation that this must be what happens to great actors, or might be a prerequisite, could have some merit. Dr. Floyd's character expands greatly, when he makes the snowball and feels the enthusiasm of youth again. Yva may never show enthusiasm for anything, but for Dr. Floyd, standing on Haley's comet is an experience of the utmost thrill.



Chapter 18, Old Faithful

Chapter 18, Old Faithful Summary

Captain Smith navigates *Universe* within one hundred meters of a comet geysers that erupts at regular intervals. It is named after the famous Yellowstone Park geysers. To Captain Smith's considerable annoyance, people track dirt into the airlock from the surface of a nearby tar deposit, named Lake Tuonela. He bans any further excursions onto the deposit.

Chapter 18, Old Faithful Analysis

As the crew and passengers of *Universe* explore the comet, more exposition about its nature comes through. As the comet nucleus heats, geysers of water and steam erupt, causing a perpetual snow that falls upward away from the nucleus. The comet is also a dirty place, which plays an importance in the general idea of space travel. Spaceships need to be clean, and so Captain Smith's annoyance is not simply from a desire to keep things shipshape.



Chapter 19, At the End of the Tunnel

Chapter 19, At the End of the Tunnel Summary

Victor Willis shaves off his beard and appears so different that Dr. Floyd does not immediately recognize him. They talk about a cave exploration that is underway, after which Victor goes outside for the first time.

Dr. Chant explores the cave while tethered to a line. He has a great deal of underwater cave exploration experience, and in the very low gravity of the comet, this exploration has similarities. He finds cave formations that resemble the candle wax drippings. At one point he encounters a barricade wall made of drippings through which he can see the rest of the tunnel. Accidentally turning off his video camera light, he discerns a natural light source deep within the cave, far beyond the barricade wall. He speculates about the light source and wonders if it could be bioluminescence. Dr. Chant is called back to the ship, because some kind of emergency might require *Universe* to return to Earth.

Chapter 19, At the End of the Tunnel Analysis

Cave exploration is a common plot segment that can bring high mystery and suspense to a story. What Dr. Chant encounters while in the comet cave hints that large life, such as a giant snake, might dwell within. However, the chance of any large form of life existing within a comet is highly unlikely. However, microbiological organisms could possibly develop as the ice turns liquid and mixes with the organic chemicals.

Besides the excitement purpose, this chapter brings up a scientific speculation that life begins on planets after comets collide into them, thus delivering the building blocks for life. Water is a key building block, for without it the other building blocks have no solution in which to transport. This chapter extends the speculation to include the development of primitive life right on the comet, before it collides with a forming planet.



Chapter 20, Recall

Chapter 20, Recall Summary

Captain Smith informs Dr. Floyd that the sister ship of *Universe*, *Galaxy*, has been stranded on Europa under the command of Captain Laplace. Dr. Floyd also learns that his grandson, Chris, is onboard.

Chapter 20, Recall Analysis

For some reason, the spaceship *Galaxy* has landed on Europa. This might have been from flying too close to the planet and being brought down by whatever lives there, but for now everything is up to speculation. However this situation developed, it marks the end of the visit to Haley's comet.



Chapter 21, The Politics of Exile

Chapter 21, The Politics of Exile Summary

The South African revolution is explained, where exiled Afrikaners left with most of the transferable and portable wealth. The people left behind resurrect the De Beers diamond company under a different name, and diamonds become the new country's primary source of wealth. Money from these two sources finds its way to Tsung Aerospace, which helps to finance the spaceship fleet.

Chapter 21, The Politics of Exile Analysis

This chapter contains background on how money works, when politics go into an upheaval. Not surprising, the money flows away from conflict and into more stable accounts overseas. Tsung Aerospace benefits from the investments, and so the world of finance turns.



Chapter 22, Hazardous Cargo

Chapter 22, Hazardous Cargo Summary

The spaceship *Galaxy* heads toward Europa to do a flyby investigation with Dr. van der Berg along as the mission planetologist under Captain Eric Laplace. Explosives are discovered in the cargo that turn out to be scientific probes that use solid rocket fuel, which registers as explosives.

Chapter 22, Hazardous Cargo Analysis

The mission to Europa will turn out odd, and as already known, involves landing on the surface. The rocket probes are also odd, not so much that the scientists neglected to declare the explosives, but that they are needed in the first place. The chapter establishes intrigue around the scientists' true goal, which is likely associated with Mount Zeus.



Chapter 23, Inferno

Chapter 23, Inferno Summary

Second Officer Chris Floyd, Dr. Floyd's grandson, thinks about Lucifer and how long it is expected to last as a small star. Estimates range from a thousand to a million years. *Galaxy* approaches Io and launches one of the rocket probes, called penetrometers. This trial works well, but Dr. van der Berg expects the penetrometers to fail on Europa, probably, because he thinks that Mount Zeus is made of diamond, one of the hardest known substances.

Chapter 23, Inferno Analysis

Second Officer Chris Floyd is like his grandfather, Dr. Floyd. Chris appreciates the meanings of cosmic events, such as the ignition of Jupiter into a small star. His relationship with his grandfather is likely close, due to having known each other for the first ten years of Chris' life. The penetrometer experiment seems to be more for preparation than to actually study Io.

Chapter 24, Shaka the Great

Chapter 24, Shaka the Great Summary

An explanation of Shaka the Great is given. At one time this was the name of a great Zulu tyrant, but now Shaka is the name of a shadowy group of terrorists that developed after the formation of the USSA (United States of South Africa). The terrorists sabotage commercial installations, do various bombings, kidnappings and occasional assassinations. There is some doubt that the organization really exists, although its agents might be programmed to kill themselves rather than submitting to capture and interrogation.

Chapter 24, Shaka the Great Analysis

An eerie parallel exists between the Shaka organization and Al Qaeda, the current terrorist organization of interest. Both involve suicidal agents, although religion has a great influence in Al Qaeda, where Shaka is purely a political terrorist organization, if it truly exists. In any case, now that Shaka has been introduced, the story must use it in some way. Shaka is a villain lurking in the shadows, ready to strike.

Chapter 25, The Shrouded World

Chapter 25, The Shrouded World Summary

After the ignition of Lucifer, scientists study Europa while trying to keep within the limitation of not landing on it. Nobody knows the exact limit, so as the scientists creep closer, the action is termed a game of European Roulette. The scientists do detect an odd straight, wall-like structure on the surface and decide that it must be a monolith. Dr. Anderson next wants to launch his probe into Mount Zeus, with which Captain Smith agrees. The probe fails immediately upon impact.

Chapter 25, The Shrouded World Analysis

It is known that life of some type exists on Europa. It is also known that a gigantic monolith is on its surface. What is not known is how Mount Zeus suddenly appeared or of what it is made. Captain Smith knows that a probe might be taken as a violation of the warning to stay away from Europa, yet he allows the experiment to proceed. The captain must be as curious as the scientists as to the nature of Europa, enough so that he risks a confrontation with its inhabitants. An important part of this exposition is that Europa has a massive monolith on its surface that seems like a long, absolutely straight wall.



Chapter 26, Night Watch

Chapter 26, Night Watch Summary

Rose McCullen brings coffee to Second Officer Chang, who mans the bridge of *Galaxy* for the artificially observed midnight shift. She pulls a gun and orders him to land on the surface of Europa. Chang tries to delay and bluff his way out, but Rose does not buy it. He begins to land the ship.

Chapter 26, Night Watch Analysis

Rose McCullen might be a member of the mysterious organization, Shaka. Her quiet act turns deadly cold and efficient, when she takes command of the bridge and orders the landing. This is a pivotal plot turn and explains how the ship ends up on the surface of a forbidden planet.

Chapter 27, Rosie

Chapter 27, Rosie Summary

Captain Laplace and other crewmembers realize that *Galaxy* is heading for the surface of Europa. The captain and crew try to strategize a way of aborting the landing without being on the bridge. None of the plans are workable. They go to the locked door of the bridge and demand answers. Rosie replies, which results in a search of her cabin for any useful clues.

Chapter 27, Rosie Analysis

Captain Laplace faces a formidable challenge in Rosie. She does everything she puts her mind to thoroughly, including hijacking *Galaxy*. This must be the worst moment in his career, feeling helpless and out of control. He is reduced to a common crewmember, with all authority gone in an instant.

Chapter 28, Dialog

Chapter 28, Dialog Summary

Rolf van der Berg knows that *Galaxy* is headed toward Mount Zeus and also that his hypothesis that the mountain is made of diamond has leaked out somehow. Chris Floyd comes to visit Dr. van der Berg and discuss the landing. *Galaxy* is meant to stay in orbit. Its landing gear might not be able to handle the constant earthquakes on the surface of Europa. Dr. van der Berg wonders if Chris Floyd is an undercover police officer.

Chapter 28, Dialog Analysis

Dr. van der Berg actually looks forward to visiting Mount Zeus to test his hypothesis that the mountain is made of diamond. The thought of imminent death is not as nearly important, but Chris Floyd reminds him of the danger involved. Whatever happens, the landing will not be very easy. Tension builds as Dr. van der Berg speculates on whether Chris Floyd and others are part of some grand conspiracy.



Chapter 29, Descent

Chapter 29, Descent Summary

As Chang guides *Galaxy* downward, the clouds that perpetually shroud Europa's daylight side clear, and Mount Zeus comes into view. Chang moves the ship close to the mountain and attempts to land on ice. The ice breaks and he must use the ABORT program, which sends the craft skyward.

Chapter 29, Descent Analysis

The aborted landing sequence might mean that nobody will ever know of what Mount Zeus is made, diamond or some other hard material. The plot lunges away from the mysterious object, and *Galaxy* is in serious trouble. It must find a place to land somewhere in a hostile world. Meanwhile, Rose is thwarted also. She must have a serious interest in the mountain, possibly for the value of its material. Plot conflicts multiply with the aborted landing.

Chapter 30, *Galaxy* Down

Chapter 30, *Galaxy* Down Summary

Chang succeeds in landing *Galaxy* on Europa's ocean. The craft floats well enough, and he tells Rose that she has just killed everybody on board. Rosie commits suicide.

Chapter 30, *Galaxy* Down Analysis

Rosie's suicide is an almost certain indication that she was part of Shaka. Rather than being taken prisoner and interrogated, she destroys herself. *Galaxy* is buoyant in the waters of the European sea, which is to be expected of an airtight craft. Still, the crew and passengers are stranded on an alien forbidden planet. Their danger is immense.



Chapter 31, The Sea of Galilee

Chapter 31, The Sea of Galilee Summary

Captain Laplace and the ship doctor discuss Rose. The doctor had pushed her corpse into the water, and a huge, shark-like animal snapped her up almost right away. The captain and the doctor then see the animal again, which vomits out the corpse and dies. The human body must be poisonous to the creature. Purser Frank Lee suggests that the propellant tanks be flooded to give ballast to *Galaxy* as it bobs on the ocean.

Chapter 31, The Sea of Galilee Analysis

Captain Laplace and the doctor make an important observation about the life on Europa. Humans can likely never join the food chain due to their poisonous affect on the native species. At this point, survival outweighs scientific inquiry, so the incident goes largely unnoticed, other than the sight of a giant shark with a parrot bill awes the two for a while. Giving ballast to the ship helps to limit its bobbing motions, and thus makes the living environment more tolerable. However, the crew and passengers still rely on the life support systems. The atmosphere of Europa is as inhospitable to humans as the ocean.



Chapter 32, Diversion

Chapter 32, Diversion Summary

Universe has been ordered to rescue *Galaxy*, and this means a return to Earth and a delay of months. Second Officer Roy Jolson comes up with a timesaving idea. Water can be obtained from the comet geyser, Old Faithful, thus cutting the delay down to weeks. After all of Captain Smith's questions are answered satisfactorily, or at least to where he cannot think of another objection, he accepts the plan.

Chapter 32, Diversion Analysis

The logistical problem of fueling *Universe* is solved. The comet provides the needed water propellant, thus avoiding a preliminary trip to Earth. This plot twist encourages the story to move toward a happy rescue ending, assuming that most things go well enough to get there. Meanwhile, Sir Lawrence worries about the mission. His two top commanders are now at risk, plus one ship has already been lost. This cannot look good on the balance sheets.



Chapter 33, Pit Stop

Chapter 33, Pit Stop Summary

Taking on water from the comet is named the Floyd-Jolson Maneuver, which Dr. Floyd thinks is unfair to Jolson, since it was his idea alone. The famous passengers worry about the delay for returning home. The Floyd-Jolson maneuver works surprisingly well for filling the propellant tanks.

Chapter 33, Pit Stop Analysis

Dr. Floyd's character fills out as a fair man who gives credit where credit is due. He also has a sense of people, although Yva Merlin continually surprises him. He sees her as an icon of the perfect actress, something that transcends humankind.

The plot moves along rapidly and straight as an arrow. The ship must be fueled, it must be prepared as best it can be, and the journey made to Europa without hitch. There is precious little time, and none of it can be wasted. The plot accelerates like a spaceship at liftoff.



Chapter 34, Car Wash

Chapter 34, Car Wash Summary

The tapping of Haley's comet water brings protests from Earth to keep the hands off the comet. The ineffective protests are taken in good humor aboard *Universe*. As the ship climbs away from the comet, colorful fireworks issue from its exhaust due to the mineral content of the comet water. A last maneuver before leaving the comet involves turning the craft over within the plume of Old Faithful, which cleans *Universe* for rapid and extended space travel. The ship then takes off for Europa.

Chapter 34, Car Wash Analysis

Cleverness has no bounds with Captain Smith and his crew. The use of Old Faithful as a car wash to remove the considerable residue from the comet landing is nearly as smart as the Floyd-Jolson Maneuver. However, the trick is believable and follows logically from earlier plot details. With the added exhaust color show, the image of *Universe* turning above Haley's comet is quite remarkable.



Chapter 35, Adrift

Chapter 35, Adrift Summary

The crew and passengers of *Galaxy* observe alien life forms in the European ocean as the ship drifts along. The large shark-like creatures appear every so often, with schools of smaller fish being more common. One of the crewmembers catches a small fish, but its chemistry is so alien that the captain disallows any further angling. The ship drifts through mysterious organisms that form ten-meter ovals on the surface. All of the life forms move slowly, since oxygen has not yet developed in the European atmosphere, thus making metabolism a slow chemical process.

The spaceship turned lifeboat encounters threatening vortexes, but the ship does not drift close enough to be in danger. Tsunamis are a concern, due to the constant earthquakes. At one time a huge bubble of gas breaks the surface.

Captain Laplace discovers that Chris Floyd sends short encrypted messages back to Earth via Ganymede. Upon questioning Chris, the captain discovers that even Chris does not know who receives the communications, but the captain suspects ASTROPOL. He also expects to be interrogated extensively about the incident that brought *Galaxy* to the surface of Europa. Accepting the fact that Chris is an agent for a legitimate police organization, Captain Laplace dismisses him with a warning to report anything that might endanger the ship.

Chapter 35, Adrift Analysis

Discovering alien life forms creates interest and intrigue in science fiction. The European oceanic creatures are surprisingly developed and organized, given that metabolism is, by chemical necessity, very slow. Skepticism must be suspended for this portion of the story, since extensive explanations of why Europa has highly developed life without oxygen in the atmosphere are not given. Some scientific hypotheses speculate that life can develop on alien planets without oxygen or even carbon, and in this tale, the hypotheses are supported. Otherwise, the images of huge sharks, great schools of fish and an enigmatic blue eye give the impression that Europa might support intelligent life.

Captain Laplace must question Chris Floyd as to his agent activities, because the ship is in grave danger as it narrowly escapes the vortexes and gas bubble. Having an agent for an unknown organization on board as a crewmember is a disconcerting realization. Captain Laplace naturally wonders if Chris suspects him of being part of the conspiracy to hijack *Galaxy*, but since there is nothing to be done about the situation, and since the unknown organization is probably ASTROPOL, he lets the issue drop. Working against the authorities would not help his situation at all.



Chapter 36, The Alien Shore

Chapter 36, The Alien Shore Summary

Acting-Captain Lee orders the flooded tanks of *Galaxy* to be emptied to reduce ballast. The ship rises out of the water and flops onto its long side. The maneuver allows the ship to drift onto dry land.

Chapter 36, The Alien Shore Analysis

The crew and passengers are finally out of the European ocean. They escape the dangers of the water, but now must deal with the dangers of land. Europa is a dangerous place no matter what. If rescue does not come soon, Europa might also become the last resting place for crew and passengers. At least they know that *Universe* is on its way.



Chapter 37, Star

Chapter 37, Star Summary

Universe approaches the Sun as it journeys toward Europa. The gravitational field boosts the ship's velocity, and Captain Smith comments about how cleaning off the comet dirt in the plume of Old Faithful avoids overheating.

The famous passengers occupy themselves in various ways. Mihailovich composes music, Maggie M writes, Victor Willis keeps to his cabin while his beard grows back, Yva Merlin catches up on film classics, and Dr. Floyd enjoys her company while viewing the classics with her. Dr. Floyd and Yva watch the original *Gone With the Wind* and discuss Vivien Leigh, the actress who played Scarlet O'Hara. Yva comments that Vivien Leigh's last movie was *Ship of Fools*.

Chapter 37, Star Analysis

The exposition part of this chapter addresses some of the technical details of space travel within the Solar System. Gravity is a large force at this scale and is used to boost velocity. Cleaning *Universe* in the geyser plume avoids overheating as the ship approaches the sun.

The characters of Dr. Floyd and Yva Merlin develop further. Dr. Floyd detects that Yva becomes more human, rather than an icon, when she watches old movies. She cries over Vivien Leigh, not so much for the part that she plays as for the actress herself. Yva might be thinking about the possibility that the rescue voyage to Europa could be her last, and on a ship of fools at that.

A major theme of human curiosity and ambition emerges with Yva's mention of Maggie's book. The human race is infamous in myth and history for poking its nose into places that are forbidden. Of all the planets in the Solar System, only Europa is forbidden, yet through a hijacking, humans are stuck on the planet and in need of salvation. Fools brought them there, and fools rush off to the rescue. A wiser species might leave Europa alone, but not the human race. The human race is too curious and ambitious to stay away for long.

An element of irony is in this observation. Without human curiosity and ambition, the race would have never left Africa and populated the Earth. The race would not have started exploring the Solar System. On the other hand, nuclear bombs would not have been invented either. Human curiosity and ambition is a two-edged sword that brings people to wonderful places like Haley's comet, as well as to their own destructions.



Chapter 38, Icebergs of Space

Chapter 38, Icebergs of Space Summary

Captain Smith grants an interview with Victor Willis. Willis asks the Captain about the asteroid belt and how dangerous space travel is when surrounded by large rocks. Captain Smith answers that the chances of colliding with an asteroid is about the same as being hit by lightning on Earth. Willis presses the matter by comparing the asteroid belt with icebergs in the North Atlantic, such as the one that sunk *Titanic*. He points out that the skipper of the *Titanic* was also named Captain Smith.

Chapter 38, Icebergs of Space Analysis

The asteroid belt seems like a problem for space travel in that the area has more objects orbiting the Sun than other parts of the Solar System. However, the mathematical probability of colliding with an uncharted asteroid is small, being that huge relative distances separate the bodies. Captain Smith is comfortable with the situation, but Victor Willis wonders, in his journalistic style that addresses the layperson, if an iceberg of space lurks. He also points out a coincidence in captain names, which does not really mean anything, other than a lot of people with the Smith surname exist both in history and the present time. Willis is trying to make a story out of nothing, a common practice in journalism and one that prompted Mark Twain to warn that we should believe only half of what we read and nothing of what we hear.



Chapter 39, The Captain's Table

Chapter 39, The Captain's Table Summary

As the long voyage to Europa continues and life aboard *Universe* settles into routines, the Captain's Table becomes a central discussion and storytelling place for the famous passengers. Theories about who hijacked *Galaxy* and why are batted about, but the only solid information is the background of Rose McCullen. Her real name is Ruth Mason, and she has a background in law enforcement, but then turned to Africa and, assuming from her hijacking, radical politics.

The famous passengers entertain well at the Captain's Table, except for Victor Willis. He claims that small audiences are intimidating to a journalist accustomed to addressing millions of faceless listeners. Yva tells stories about the directors with whom she has worked, and Mihailovich gives backstage anecdotes. Colonel Greenberg's account of the early ice mining on the Moon fascinates the little audience.

Chapter 39, The Captain's Table Analysis

Victor Willis is not an entertainer like Yva and Mihailovich. He cannot tell an interesting story if his life depended upon it, unless in front of a camera and faceless audience, possibly with a teleprompter. Fortunately for the others gathered around the Captain's Table, enough good storytellers are in attendance to pass the time as the monotonous part of the voyage unfolds.

Colonel Greenberg fills in details about the history of the Moon as a source of water for space travel. He had been involved with the operation from the start, and as with development on Earth, he knew that the moonscape would change. He misses the old wilderness, another common emotion regarding development. Wherever humans go, the landscape changes from wild to domesticated. Only a few individuals are fortunate enough to experience the transition.



Chapter 40, Monsters from Earth

Chapter 40, Monsters from Earth Summary

Dr. Floyd talks with another person on the Moon, probably George or Jerry. The other person advises Dr. Floyd to sublet his apartment. The conversation turns to Maggie M abandoning her novel on Shaka and various famous tyrants throughout the ages who happen to have been homosexual. The mention of Sebastian, Dr. Floyd's parrot, establishes his part in the conversation.

Chapter 40, Monsters from Earth Analysis

When first introduced in Chapter 7, George and Jerry seem ambiguously homosexual. This conversation confirms the orientation with the use of *fey*, which can be taken as Moon slang for homosexual, and the general gist of the following passage.

"Almost enough to make one want to switch. We've always claimed that we're gentle and kindhearted (as well as madly talented and artistic, of course) but now you've made us look into some of the so-called Great Warriors (as if there was anything great about killing people!) we're almost ashamed of the company we've been keeping . . ." (p. 185).

The conversation implies that the Zulu warrior, Shaka, was also homosexual and had a psychotic hatred of females. Dr. Floyd must have written something to this effect, probably as an attempt to explain why *Galaxy* was hijacked by a female trained to commit suicide if the mission failed.

While this short chapter carries the story forward in a humorous way, not identifying the people in the conversation is a risky style. The reader might not remember the minor characters or the name of Dr. Floyd's parrot. A casual reading can miss the point that the author attempts to make regarding the motivations of whatever group is responsible for hijacking *Galaxy*, or even that the group might have been identified as Shaka. However, the chapter title and the mention of Shaka do hint that the identification has been made.



Chapter 41, Memoirs of a Centenarian

Chapter 41, Memoirs of a Centenarian Summary

After dinner at the Captain's Table, Dr. Floyd recounts his experiences with David Bowman, the man who dies in *2001: A Space Odyssey*. Somehow, Bowman's consciousness survives his death and appears to Dr. Floyd as condensed dust particles, when Jupiter turned into Lucifer. The speculation is that Bowman's consciousness might still be alive, if that is the term to use, and that Dr. Floyd might be able to contact the consciousness by radio, as suggested by Yva. Dr. Floyd agrees to try.

Chapter 41, Memoirs of a Centenarian Analysis

All through the space odyssey books, the notion that human consciousness survives the death of the body is promoted. David Bowman becomes a star child of sorts, an ethereal being who can still visit people and communicate. He might have issued the message regarding Europa, and now Dr. Floyd might be able to ask Bowman if the restriction can be lifted for the rescue mission. The intriguing part of this speculation is that Bowman contacted Dr. Floyd before and has demonstrated human emotions as a disembodied consciousness. Compassion for the stranded crewmembers and passengers on *Galaxy* might be a possibility. Yva's suggestion to contact Bowman by radio does not seem so impossible upon second thought. Yva appears to be closer to Dr. Floyd, when she calls him by a pet name, Woody dear. They might have become lovers.



Chapter 42, Minilith

Chapter 42, Minilith Summary

Dr. Floyd dreams and extends the conversation from the Captain's Table. In his dream, he defends making the radio message to Europa that requests permission to land. He also sees a floating monolith about the size of a gravestone.

Chapter 42, Minilith Analysis

The radio message to Bowman having been made, Dr. Floyd might be receiving his symbolic answer in the form of a small floating monolith, the minilith. The power of the monolith is well known. Monoliths can spark the evolution of high intelligence and transform worlds. Therefore, the monolith might be able to communicate within a person's dreams.



Chapter 43, Salvage

Chapter 43, Salvage Summary

Now on dry land, the crew and passengers of *Galaxy* must deal with the full force of earthquakes and adjust the interior of the ship to its unnatural horizontal orientation. Nevertheless, the scientists on board eagerly anticipate exploring the land. They select a name for their island home, Haven.

Chapter 43, Salvage Analysis

Human curiosity wins out over the dismal mood from being stranded on a rough, dangerous island. The scientists must explore and learn despite the hazards outside the ship. The name given to the island, Haven, also means a sheltered port, although this is a triumph of hope over reality. When conditions are dismal, humans will also try to make the best out of a bad situation, at least at the beginning.



Chapter 44, Endurance

Chapter 44, Endurance Summary

Captain Laplace makes his daily report to Ganymede. He thanks Margaret M'Bala for the message about history not repeating, but that historical situations recur. He reminisces on Ernest Shackleton, an old polar explorer, who endures extreme conditions and saves his entire crew. Captain Laplace mentions that spacesuits have been modified to support excursions of up to six hours for the scientists who want to explore. He ends his report with a weather analysis and the observation that earthquake activity will increase, when Io comes into conjunction with Europa.

Chapter 44, Endurance Analysis

One way to handle a tough situation is to remember those who have had worse problems. Ernest Shackleton certainly demonstrated an enormous amount of endurance, and compared to his situation, waiting for rescue from *Universe* does not seem so bad. Another positive to look at is the enthusiasm of the scientists. They will be allowed to go outside and play. Captain Laplace attempts to make his report as lighthearted as possible, because keeping the spirits up during hard times is a necessary survival technique.



Chapter 45, Mission

Chapter 45, Mission Summary

Chris Floyd, Second Officer Chang and Dr. van der Berg approach Captain Laplace with a proposition. They want to take the shuttle, *William Tsung*, to Mount Zeus and unravel its mystery. Captain Laplace agrees.

Chapter 45, Mission Analysis

Captain Laplace has no idea what the truth of Mount Zeus might mean, but Dr. van der Berg does. If the mountain is made of diamond, then the reason for hijacking *Galaxy* and attempting to land near the mountain becomes clear. Diamonds could flood the world market and bring down the economy of USSA, or the diamonds could be trickled into the marketplace to fund terrorism. Either way, the economic impact would be significant for Shaka. Of more importance for Dr. van der Berg is the proof of his hypothesis. Floyd and Chang probably enjoy the prospect for adventure, plus Floyd must make his report to ASTROPOL regarding what might have prompted the hijacking.



Chapter 46, Shuttle

Chapter 46, Shuttle Summary

First Officer Chang successfully flies *William Tsung* away from *Galaxy*. Upon returning to the ship, Chang talks with Captain Laplace, who is willing to authorize Chang to go with Floyd and Dr. van der Berg to Mount Zeus. Chang refuses and suggests that the extra fuel will allow further exploration of the big monolith and the dropping of a wreath at the wreckage of *Tsien*. Captain Laplace agrees.

Chapter 46, Shuttle Analysis

Europa has three major features worth investigating. Mount Zeus of course, the huge monolith called the Great Wall and the wreckage of the old spaceship that first landed on Europa, *Tsien*. Chang shows a great depth of priority by refusing to go along in order that enough fuel can be loaded into *William Tsung* to visit all three sites, and by his desire to lay a wreath at *Tsien*. Regardless that the human race is a ship of fools, a few members have real class.



Chapter 47, Shards

Chapter 47, Shards Summary

Ganymede Central warns that the next conjunction with Io will be especially bad for earthquakes, because Ganymede will also be somewhat in alignment. Chris Floyd controls *William Tsung* as it lifts off, and Dr. van der Berg gives a report on the condition of *Galaxy*.

Upon approaching Mount Zeus, they see where one of the probes hit and splattered on the side of the mountain. They choose a landing site and descend to the surface.

Chapter 47, Shards Analysis

The observation that Dr. van der Berg makes about Acting-Captain Lee's excellent use of resources at hand to make *Galaxy* beach as well as it could is a nod to the capabilities of humans under crisis. The other notable detail is the splattering of the probe against Mount Zeus. Whatever the material, it must be as hard as diamond. The mention of Chris Floyd's grandfather, Dr. Floyd, foreshadows a meeting between the two. The humorous and historic air traffic control banter adds a nice touch of light irony to the bold venture.



Chapter 48, Lucy

Chapter 48, Lucy Summary

Chris Floyd and Dr. van der Berg leave *William Tsung* and examine shards of a glass-like material scattered around the area. Dr. van der Berg sends a message to Ganymede to relay to Earth, LUCY IS HERE. Floyd is puzzled about the strange material, and Dr. van der Berg points him to Mount Zeus, a two quintillion (2×10^{17}) carat single diamond.

Chapter 48, Lucy Analysis

Dr. van der Berg uses the code word, LUCY, to indicate that Mount Zeus is one very large diamond, just as he has always suspected. The code word references the Beatles song, *Lucy in the Sky with Diamonds*. His hypothesis confirmed, Dr. van der Berg seems to shed years of age, probably a double reaction. Not only is he right, but he also holds millions of dollars worth of diamond in one hand.



Chapter 49, Shrine

Chapter 49, Shrine Summary

Dr. van der Berg sets up scientific equipment and talks with Chris Floyd about how the news of the diamond mountain will impact the stock market. Dr. van der Berg stands to make good money from the results. Upon arriving at the wreck of the *Tsien*, they notice that an artificial lake had been constructed around it and that the wreck had been picked clean in some kind of salvage effort. They land and lay the wreath near the artificial lake, and then fly onward to the Great Wall.

Chapter 49, Shrine Analysis

Intelligent life that recognizes the value of metal must exist on Europa, as evidenced by the artificial lake and picked clean carcass of *Tsien*. The life must also require water in some way, possibly for transporting the metal scavenged from the spaceship. Dr. van der Berg and Chris Floyd place the wreath, thus making the site a shrine for the crew of *Tsien*.

The brief mention on how the diamond market works describes it as a highly artificial market. The supply is strictly controlled to keep the prices up, and flooding the market outside the controls will bring the prices crashing down. The De Beers Group, founded in 1888, remains the largest supplier of rough diamonds in the world, and this influence seems to have continued until 2061. Dr. van der Berg is wise to consider the shards he takes from the vicinity of Mount Zeus to be collector's items. Since pieces of diamond from a European mountain are extremely rare, their value ought to be far beyond their worth as gemstones.



Chapter 50, Open City

Chapter 50, Open City Summary

Upon arriving at the Great Wall, Dr. van der Berg and Chris Floyd recognize the wall as a gigantic monolith. The monolith serves as a weather break for a village of igloos and canals, indicating that the inhabitants are amphibious. As they drop lower to take a closer look, Chris sees a man standing in the village. Chris brings the craft down to a landing and says hello to his grandfather, but Dr. van der Berg cannot see the apparition.

Chapter 50, Open City Analysis

The presence of the village confirms that intelligent life exists on Europa. The creatures have left the village for some reason, but the evidence of their advanced culture remains. Dr. van der Berg naturally wants to get a closer look, but Chris lands, mesmerized by the startling appearance of his grandfather, Dr. Floyd, who is physically on board *Universe*. Something paranormal is happening, because Dr. van der Berg cannot see what Chris is seeing. The presence of the huge monolith might have something to do with the phenomenon, tied in with Dr. Floyd's dream of the smaller monolith from Chapter 42.



Chapter 51, Phantom

Chapter 51, Phantom Summary

Chris Floyd talks with his grandfather through telepathy. His mouth moves, but he does not say anything. Dr. van der Berg watches on and wonders if Chris is crazy. Chris ends the conversation, and to Dr. van der Berg's relief, talks sanely about the need to leave. Too much fuel had been used for the landing, so Chris charts another course to the equator, where *Universe* will be able to pick them up.

Chapter 51, Phantom Analysis

Signs of recent activity indicate that the intelligent life on Europa has at least one wheeled vehicle. Dr. van der Berg takes note of hieroglyphs and other details about the village, but just what is being discussed between Chris and his phantom grandfather cannot be known at this time. Yet the way Chris behaves after the conversation confirms that it was an intelligent conversation, even as the sense of other intelligences looking on strikes Dr. van der Berg.



Chapter 52, On the Couch

Chapter 52, On the Couch Summary

While on their way to their equator destination, Chris Floyd explains the conversation with his grandfather's apparition for Dr. van der Berg. Dr. Floyd told Chris that the Europeans needed to stay away, due to a poison that accompanies the humans. Dr. van der Berg speculates that the poison is probably the oxygen that *William Tsung* generates from the reactor. Chris assumes that his grandfather is dead and communicated with him through the monolith somehow, similar to how Bowman had communicated with his grandfather. Satisfied with the explanation, Chris asks about Mount Zeus, and Dr. van der Berg agrees to tell the story.

Chapter 52, On the Couch Analysis

The story almost crosses the line between science fiction and fantasy with the telepathic communication between Chris Floyd and his grandfather. However, the monolith has special powers that can be explained scientifically rather than depending upon magic. If Bowman's consciousness survived his death and can express itself through the monolith, so might Dr. Floyd's consciousness after death, assuming that he is truly dead.



Chapter 53, Pressure Cooker

Chapter 53, Pressure Cooker Summary

Dr. van der Berg explains that a 1981 paper in *Nature* magazine proposes the possibility of an enormous diamond being at the center of giant gas planets, such as Jupiter. Pressure from the enormously thick atmosphere compresses carbon in the atmosphere into a solid diamond core, according to the theory. When Jupiter ignited into Lucifer, a tremendous implosion occurred and probably cracked apart the round diamond core into mountain-shaped fragments. One of these fragments must have fallen on Europa.

Chapter 53, Pressure Cooker Analysis

The straight exposition about how Mount Zeus came into existence satisfies the science side of science fiction. The premise that mountains of diamond can result from the formation of suns from gaseous giant planets might have been the impetus for the book. It is the central event that brings humans onto the surface of Europa to discover that intelligent life lives there, and that oxygen is poisonous to the life forms. Humans were warned away from the planet to protect the indigenous life, not because Europa posed any great danger to humans.

The idea that forbidden worlds are so because of danger to humans is common in literature. The edge of the Earth concept once kept mariners close to shore, and other places were supposed to harbor monster. The plot twists this around, where humans are dangerous to the forbidden world. Another twist is that simply discovery a diamond mountain will impact the diamond market negatively, at least for a while. If a diamond mountain were to be accessible long enough, the diamond market would cease to exist. The gemstones would be as common as rhinestones and useful only in manufacturing. The gemstones might retain a little value for the intrinsic beauty, but probably not much.



Chapter 54, Reunion

Chapter 54, Reunion Summary

While waiting for rescue from *Universe*, Chris Floyd hears from his grandfather, Dr. Floyd, who is very much alive aboard the speeding spaceship. Chris is relieved but puzzled over the conversation with a phantom. Dr. Floyd guesses that the phenomenon has something to do with the monolith, similar to how Dave Bowman came through it. Although bored with the wait, Chris and Dr. van der Berg are rescued before the boredom turns acute.

Chapter 54, Reunion Analysis

Chris Floyd becomes tightly bonded with his grandfather once Chris realizes that he is still alive. Few other stimuli work as well for creating strong family ties than a brush with death, even if only imagined. Another possibility about the communication is that the image of Dr. Floyd might have been created by the monolith to relay the message that humans are harmful to Europeans, and Dave Bowman could have had a hand in this. This makes sense, because Dr. Floyd is not aware of the Europeans, but the monolith is. The monolith must also be aware of Dr. Floyd, possibly through Bowman's awareness.



Chapter 55, Magma

Chapter 55, Magma Summary

Dr. Paul Kreuger watches a video taken by Dr. van der Berg's equipment that monitors Mount Zeus. The video shows the mountain sinking into magma, until it finally disappears. Victor Willis, the commentator on the video, laments the loss of such great riches. Dr. Kreuger says aloud that Willis is an idiot.

Chapter 55, Magma Analysis

All is well for the diamond market. The threat of flooding the market with Mount Zeus diamonds sinks into the European magma, and although the magma might not be able to destroy the diamond, it certainly makes Mount Zeus inaccessible. Victor Willis displays a common journalistic misuse of drama with his lament. He takes the face value of a cataclysmic event without deeper analysis. The sinking of Mount Zeus saves the diamond market and removes a huge temptation from terrorist groups, specifically Shaka.



Chapter 56, Perturbation Theory

Chapter 56, Perturbation Theory Summary

Dr. Kreuger writes a letter to the editor of *Nature* regarding Mount Zeus and the possibilities that the mountain introduces. He refers to the 1981 article that proposes the cores of gaseous giant planets consist of pure diamond. He further proposes that Mount Zeus is a fragment of the core of Jupiter, and that more fragments orbit Lucifer. If the diamond can be mined, the material can be used to promote space travel in the Solar System through the construction of a space elevator.

Chapter 56, Perturbation Theory Analysis

The rescue of the crew and passengers of *Galaxy* marks the climax of the story, along with the sinking of Mount Zeus. Extending the possibilities marks an anti-climax that hints at a sequel story about mining the diamond mountains that must still orbit Lucifer, thus making the entire Solar System accessible to humans.



Chapter 57, Interlude on Ganymede

Chapter 57, Interlude on Ganymede Summary

The famous passengers interact with the colonists on Ganymede. Mihailovich complains about the lack of a quality piano. Maggie M becomes an unwelcome literary expert about the sexual activities among the mythological characters that the Lucifer satellites are named after, including Ganymede. Yva fits in well, because nobody recognizes her. Greenberg becomes involved with the scientific community in a very positive way.

Mystery and intrigue still surrounds the hijacking of *Galaxy*. Dr. Krueger receives negative mail about his *Nature* letter, and a campaign of disinformation seems to be going on, probably by the USSA. Chris and Dr. Floyd discuss their strange communication, which does seem to be explained best as an action of the monolith working with Dave Bowman's consciousness.

Chapter 57, Interlude on Ganymede Analysis

This chapter wraps up loose strings by explaining the immediate fates of the major characters. To be active away from Earth's gravity for long enough means that the Earth will forever be inaccessible. The human body adjusts to life in low gravity, and adjusting back to regular gravity becomes impossible. However, communications and computers can make life away from Earth interesting enough that the exile does not hurt so much. On the other hand, the social interactions for some of the famous passengers start out badly, as they are accustomed to Earth and its ways, not a scientific colony.



VIII. The Kingdom of Sulfur, Chapter 58, Fire and Ice

VIII. The Kingdom of Sulfur, Chapter 58, Fire and Ice Summary

The author describes how life evolved on Europa before Lucifer. A rich ecosphere develops in the ocean, kept liquid by the gravity influences of Jupiter and volcanic vents. The variety of life becomes at least as diverse as in the oceans of primitive Earth.

VIII. The Kingdom of Sulfur, Chapter 58, Fire and Ice Analysis

This purely expository chapter gives the background on Europa before Lucifer and provides the reader with a basis of acceptance that intelligent life evolved with the help of the monolith. The placement of the chapter is a little odd, in that it seems like a prolog or introductory chapter. The main story is already over.



VIII. The Kingdom of Sulfur, Chapter 59, Trinity

VIII. The Kingdom of Sulfur, Chapter 59, Trinity Summary

The trinity, consisting of HAL, Dave Bowman's consciousness, and a strange presence of Dr. Floyd's consciousness while still alive elsewhere, have a conversation. They talk about their odd states of being and the nature of the monolith, which appears to be a very powerful computer. The mission of the computer is to create intelligence, but this costs the lives in the Jovian biosphere, when the planet ignites and becomes Lucifer.

The monolith has great power and complexity, but it has no consciousness. That is what the trinity brings to the machine, which was built by a much greater consciousness. The falling of Mount Zeus on Europa was an unplanned event and could have destroyed Europa. The trinity has much to do before Lucifer burns out, and about a thousand years within which to work.

VIII. The Kingdom of Sulfur, Chapter 59, Trinity Analysis

The larger story of the monolith carries forward with this chapter. Clearly, human consciousness can meld with the monolith and put it to use. However, the consciousness of a living man, Dr. Floyd, can also meld, suggesting that consciousness has a greater level of complexity than is generally understood. Perhaps the notion of the soul is more appropriate for what the trinity has become, souls that can interact with the material world, although the physical bodies have died. Conversely, the trinity could be made up of consciousness, while the living Dr. Floyd retains his soul. The paradox that Dr. Floyd exists as two separate entities stands without explanation, but this does not mean that a scientific explanation does not exist.

The goal of the monolith is to create intelligence wherever possible, but it cannot judge whether existing life should be sacrificed in order to create the intelligence. Nor can it predict the unpredictable in a chaotic and nearly infinite universe. The monolith is not godlike, but its creator seems to be, or if not godlike, then very intelligent and powerful. Humans may not know very much about the Universe or have much power in it, but humans do have curiosity, ambition, and as expressed by the trinity, compassion, the ability to remember the Jovians sacrificed for intelligence.

The trinity idea has deep roots in religion. Two heads are better than one, and three make a very strong alliance, similar to how three beams form a triangular structure of tremendous strength. Thus there is the Father, the Son and the Holy Spirit in



Christianity, and similar alliances in other religions. The trinity of Bowman, Floyd and HAL might be strong enough to master the monolith and bring about what needs to happen, which must be to promote intelligence in the Universe. The trinity might even discover why intelligence needs to happen in the first place, or the trinity might need to challenge the premise.



VIII. The Kingdom of Sulfur, Chapter 60, Midnight in the Plaza

VIII. The Kingdom of Sulfur, Chapter 60, Midnight in the Plaza Summary

The monolith on Earth awakens for the second time in four million years. Lucifer burns out, and the space elevator has been built out of diamond mined from the orbiting core fragments. Something having to do with the promotion of intelligence is about to happen.

VIII. The Kingdom of Sulfur, Chapter 60, Midnight in the Plaza Analysis

This chapter introduces the final book of the odyssey series, *3001 The Final Odyssey*. It also confirms predictions made in the main story regarding the space elevator and the lifespan of Lucifer. The author has received criticism that the odyssey series is disjunctive, but he explains this in the Author's Note.

"Just as *2010: Odyssey Two* was not a direct sequel to *2001: A Space Odyssey*, so this book is not a linear sequel to *2010*. They must all be considered as variations on the same theme, involving many of the same characters and situations, but not necessarily happening in the same universe" (p. vii).

People tend to expect continuity across series books and might react overly negative when encountering this different approach. Arthur C. Clark appeals to the reader to suspend such judgment and to take each book on its own merit. This is another risky approach to fiction, but as the author states on the dedication page, he sold this book for only one dollar. The author is not interested in popularity or profit.



Characters

Dr. Heywood Floyd

Dr. Heywood Floyd takes a trip to Haley's comet in his one hundred and third year of life. He makes a snowball while on the surface of the comet and throws it into space, thus making his own little comet. While en route to Europa to rescue the crew and passengers of the hijacked *Galaxy*, he mysteriously sends a part of himself and communicates with his grandson, Chris Floyd. This part of Dr. Floyd tells Chris to leave Europa.

Dr. Floyd becomes close to Yva Merlin, a well-known actress who at first does not impress him but becomes more approachable, when she and he watch old movies together. Meanwhile, the ethereal Dr. Floyd joins David Bowman and HAL in a trinity that continues working with the monolith and Europa, until Lucifer burns out.

The monolith is part of Dr. Floyd's past. He encounters the monolith before Jupiter ignited into the small star, Lucifer, and comes back to the monolith in a paranormal way to communicate with his grandson. In the end, Dr. Floyd's physical body must die, but his ethereal being survives on.

Dr. Rolf van der Berg

Dr. Rolf van der Berg suspects that Mount Zeus is made of diamond. The hijacking of *Galaxy* inadvertently gives him the means to test his hypothesis by actually visiting the mountain on Europa, the forbidden planet. He collects shards of diamond and places a video camera near the landing site. Later, the video camera records how Mount Zeus sinks entirely into the magma of Europa.

Before his adventures on Europa, Dr. van der Berg invests on the notion that the diamond market will react seriously to the news that Mount Zeus is a big diamond. Between this and his collected diamond shards, Dr. van der Berg becomes a rich man. Additionally, he begins a big controversy by writing a letter to *Nature* that proposes more huge diamonds are still orbiting Lucifer. He also explains that a 1981 article in *Nature* hypothesized that the core of giant gas planets are made of diamond, and the experience with Mount Zeus confirms the idea. An important use of the massive diamonds could be to build a space elevator, thus opening up the entire Solar System to exploration and commerce.

Sir Lawrence Tsung

Sir Lawrence Tsung becomes interested in space commerce and funds the building of *Galaxy* and *Universe*. He is known as an extremely rich man who pays the heavy Chinese fees for having more than one child. One of his children, William Tsung, is



known as the most expensive baby in the world. The shuttle craft of *Galaxy* is named *William Tsung*.

Rupert Chang

Rupert Chang is a crewmember of *Tsien*, a Chinese spaceship that lands on Europa before Jupiter ignites into Lucifer. Rupert discovers that the planet supports life in the ocean, beneath the ice. He broadcasts his observations before he and the entire crew die on the surface, because a European life-form disables *Tsien*.

Captain Smith

Captain Smith is the commander for *Universe*, the spaceship that visits Haley's comet and rescues the crew and passengers of the hijacked *Galaxy*. Captain Smith is a good commander who has an irritable nature but fair mind. He can be convinced that an oddball plan might work.

Captain Laplace

Captain Laplace is the commander of *Galaxy*, the spaceship that approaches Europa closely. The spaceship is hijacked and forced to land on Europa, first in the ocean. Captain Laplace relinquishes the ship temporarily as it drifts in the water and requires seafaring skills. He seems to be a calmer captain than Smith and has the ability to do what is best for his ship, even if this means allowing someone else command it.

Chris Floyd

Chris Floyd is Dr. Floyd's grandson. He flies the shuttle *William Tsung* to Mount Zeus with Dr. van der Berg. From there Chris flies to the wreckage of *Tsien* to lay a wreath and from there to the igloo village. Here he meets the ethereal Dr. Floyd, his grandfather. Chris believes his grandfather to be dead until hearing his voice on the shuttle communications.

Yva Merlin

Yva Merlin is a famous actress who does not have a personality of her own. Dr. Floyd takes a liking to her and possibly becomes her lover. Yva's personality becomes less flat as a result. She enjoys the Ganymede colony, because nobody recognizes her, which gives her freedom from her fans.



Dr. Paul Kreuger

Dr. Paul Kreuger researches the possibility of Mount Zeus being made of diamond, by the request of Dr. van der Berg. Dr. Kreuger finds the answer in a 1981 *Nature* article and transmits the information to Dr. van der Berg. Somehow, terrorists intercept the message and initiate the hijacking of *Galaxy*.

Rose McCullen

Rose McCullen is an agent for some kind of terrorist group, possibly Shaka, and she hijacks *Galaxy*. When the spaceship fails to land near Mount Zeus, Rose kills herself. Her body is later thrown into the European ocean, and a giant shark-like fish tries to eat the corpse, but the fish dies almost immediately.

Second Officer Chang

Second Officer Chang pilots *Galaxy*, when Rose McCullen hijacks the ship. He succeeds in aborting the landing, when surface ice at the landing site breaks up. He later sets the ship down in the European ocean. When the scientific mission to Mount Zeus is planned, he suggests the laying of the wreath at the wreck of *Tsien*.

Purser Frank Lee

Purser Frank Lee takes over the helm of *Galaxy* as it drifts in the European ocean. He demonstrates considerable nautical skill while beaching the spaceship on the shore of an island to be named Haven. He might be the only purser to ever command a ship of any sort.



Objects/Places

Europa

Europa is a former moon of Jupiter and now a satellite of the small sun, Lucifer. Intelligent life evolves on Europa with the help of the monolith.

Haley's Comet

Dr. Floyd visits Haley's comet in *Universe*. The comet provides propellant water for the rescue mission to Europa.

Ganymede

Ganymede is a former moon of Jupiter and now a satellite of the small sun, Lucifer. The Ganymede scientific colony performs a major support role in the rescue of *Galaxy*.

Universe

Universe is the spaceship that visits Haley's comet and rescues *Galaxy*. Dr. Floyd is an important passenger on *Universe*.

Galaxy

Galaxy is the spaceship that approaches Europa but is hijacked to the surface of the planet and becomes stranded. *Universe* comes to the rescue of the crew and passengers of *Galaxy*, one of which is Dr. Floyd's grandson, Chris.

Mount Zeus

Mount Zeus is a huge diamond that falls on the surface of Europa. The fragment of Jupiter core later sinks into the European magma.

European Ocean

The European Ocean breeds life before and after Lucifer. *Galaxy* drifts on the ocean before beaching on Haven.

Haven

Haven is the name given to the European island where *Galaxy* beaches.



Monolith

The monolith is a powerful and sophisticated computer. Its mission is to promote the evolution of intelligence in the Universe.

Igloo Village

The igloo village is home to the European intelligent beings. The monolith acts as a weather break for the village.

Pasteur Space Hospital

Pasteur Space Hospital is where Dr. Floyd recovers from his accident on Earth.

Ethereal Place

The ethereal place is where a portion of Dr. Floyd's consciousness resides with David Bowman and HAL. The three entities make up a trinity that must learn how to control the monolith.



Social Sensitivity

The business of "rebuilding the world, and building new ones" has made exploration and commercial development of space "the moral equivalent of war" for a human race made "one huge, gossiping family" through low cost telecommunication in the world of 2061. After news media satellites attain the high-resolution snooping capacity previously known only to government intelligence agencies, global nuclear war has been negotiated past likelihood, although regional and factional competitions persist.

The reason for telemetric research of the forbidden planetoid Europa—and the hijacking of the space ship *Galaxy* to Europa—is ultimately commercial. Former South African diamond interests seem dimly involved in the economic consequences of determining whether or not Europa's Mt. Zeus is composed of diamond.

Once again, alien cultures affect humans in the universe of 2061. The human race is a danger to more primitive life forms developing on Europa. Still, the humans are far behind the godlike beings that left the monoliths to nurture life in Earth's solar system and elsewhere as put forth in the earlier novels *2001: A Space Odyssey* (1968; see separate entry) and *20/0: Odyssey Two* (1982). While some critics see in Clarke's early novels and stories the premise that the universe is too much for humans to cope with, in 2061, Clarke poses a main character whose consciousness inexplicably transcends the human state even before the character himself dies. Brought together with the conscious minds of David Bowman and the HAL computer, Heywood Floyd is moved from the role of inquirer after knowledge to the role of a kind of intermediary between human life and the other life forms humans may yet encounter as the scope of human activity expands through the solar system and beyond. The novel implies there may even come some contact with the godlike but still unseen beings that planted human life on earth long ago, and which left highly advanced machines to tend the expected evolution of civilization. This motion from human to superhuman state with concurrent involvement of technology argues for a theme of progress through intelligent expansion and wise use of technology.



Techniques

Clarke builds this novel with characters sketched lightly, involved in various actions spread across the solar system.

Intriguing or innovative aspects of setting, the details of times and places, are often summarized en route to the next event. The main character does not change significantly through conflict with a human antagonist, or through conflict with the environment, but Floyd is changed by unseen forces because of what he has learned throughout his life.

The "conflict" Floyd bespeaks is that of human civilization expanding its frontiers, not the change of an individual person responding to a personal crisis.

The personal experience Clarke has in telecommunications, aeronautics, and undersea activities helps him to keep his representative detail of space travel and the conditions on various planets and their satellites quite plausible. The story moves quickly to its end through many brief episodes and character sketches.



Themes

Themes

The novel carries common themes of Clarke's science fiction: exploring the place of humans in the universe; learning to extend the life span of an individual human being; using technology to improve the quality of life for society encountering extraterrestrial life forms, both primitive and superior to humans; adapting lifestyles and even evolving into transformed beings with more extensive powers in the context of travel to new environments in the solar system and galaxy.

Human Curiosity and Ambition

Human curiosity and ambition brings the race into the Solar System. From the early exploratory voyages that revealed the existence of the monoliths to the scientific colony on Ganymede, both curiosity and ambition push humans ever outward. Scientists best exemplify the curiosity, and entrepreneurs, such as Sir Lawrence Tsung, best represent the ambition. The end results consist of spaceships that run on water and human entities in an ethereal space who strive to control a large monolith. Negative results come of these traits as well. Shaka represents the violence that can come from ambition, while overly curious humans can impact other life in deadly ways, such as when the intelligent Europeans must flee from the oxygen poison generated by the reactor of *William Tsung*. Another example of human impact is the taming of the Moon into a fueling station for spaceships.

One of the interesting contrasts is the difference between life that originates in an environment that does not contain enough oxygen to support aerobic metabolism versus aerobic life. Since anaerobic metabolism involves slower chemical reactions, the movements of the creatures are slower. This major difference points to the reason why aerobic humans have a high ambition level, and thus become a greater influence in the Solar System. A similarity is that both types of life have about the same diversity and follow parallel evolutionary paths, so what works for survival in one environment will likely work elsewhere.

Discovery of the first monolith on the Moon could never have happened without human curiosity and ambition. As a result, humans join together against a potential common enemy and discover more about what might have sparked the intelligence in the first place. The true natures of the monolith and its creator have yet to be determined. However, human curiosity and ambition are bound to find out.

Alien Life

In this book life exists elsewhere than on Earth. While a Jovian moon, Europa supports life in an ocean covered by ice. The ocean provides all the necessary building blocks for



anaerobic life forms, while the ice protects the life from the vacuum of space. As a satellite of Lucifer, life flourishes on Europa, and with the help of the monolith, rapidly develops an intelligent species. In addition, life existed in the atmosphere of Jupiter before it ignites into Lucifer.

These speculations are based on science, although the monolith is an element of unfounded speculation. As far as humans know, no other intelligence exists in the Universe. However, simply because humans have not yet discovered something does not mean that the something does not exist. Arguing a negative is a logical impossibility. Things can only be proven to exist. Therefore, the only way to find out if alien life forms exist is to look for them.

Science fiction depends on the existence of alien life most of the time. Whether the alien life is benign or malignant is a primary question to answer, and in this story, the alien life is malignant only out of human misunderstanding. Had the crew of *Tsien* understood that light attracts European life forms, the tragedy could have been averted. Ironically, human presence is more dangerous to European life than the other way around. An implied question is whether the monolith fully understands what it is doing. Why destroy all of the Jovian biosphere in favor of a short-lived intelligent species on Europa? The creator of the monolith might be malignant due to this single-mindedness.

Chaos and Chance

The best laid plans of humans and computers are often thwarted by a random event. The primary random event in this story is the falling of Mount Zeus onto the surface of Europa. Only by chance did the planet survive the impact. Had the Jovian core fragment been larger or the planet less plastic, a cataclysmic disaster would have resulted.

The actions of the terrorists in hijacking *Galaxy* is certainly planned, but the crew and passengers are taken completely by surprise. This chaotic action is followed by several events of chance. The drifting spaceship avoids deadly ocean vortexes by chance. The successful beaching of the ship is a combination of luck and skill. The best that humans can do in these situations is to increase the odds of success, such as taking on ballast water and using sea anchors.

Improvisation while under pressure is a characteristic of human intelligence. This requires a fast mind, which also requires a metabolism based on the use of oxygen. Anaerobic life cannot deal with chaos and chance nearly as well, and as such must be limited to how far the intelligence can go. Humans explore the Solar System. The Europeans have neither the time nor the ability to do the same.



Style

Points of View

Points of view shift from character to character throughout the story. Two major points of view are from Dr. Floyd and Dr. van der Berg on *Universe* and *Galaxy*, respectively. The omniscient point of view is also often used during exposition, sometimes as an audience member observing the action, other times as a narrator in lecture mode.

The trinity presents a point of view that transcends the usual sense of the term. The trinity exists within time and space, yet nobody else can see the members unless they somehow allow it. An omniscient point of view easily solves this problem, or in the case of Chris Floyd, Dr. Floyd makes himself visible to him in an undefined manner, yet invisible to Dr. van der Berg. A required explanation comes forth, as Dr. van der Berg's point of view gives the impression that Chris has lost his mind.

The point-of-view shift happens often enough to keep the chapters relatively short. One way of handling this is to use blank space or asterisks to indicate shifts within a chapter, but the author constructs the story with the stronger method of separate chapters, mostly, and this ties into how the story shifts scenes and builds suspense as well.

Setting

The settings are generally on board a spaceship or on the surface of a space body. The cave exploration on Haley's comet brings the setting beneath the surface, and the exposition about the European ocean while still a Jovian moon brings the setting within water. Two minor settings are the Moon hospital and the Ganymede scientific colony.

The space body settings are generally complex and awe-inspiring. Some, like Haley's comet, involve surrealistic scenes in low gravity. The ocean of Europa sports massive fish with the odd addition of parrot beaks, and of course Mount Zeus takes on a natural wonder scale. The *Galaxy* setting becomes turned on its side, when it beaches on the island called Haven, an unusual juxtaposition.

Setting descriptions tend to be short and pointed. The author sparks the reader's imagination rather than going into every little detail, which results in images that become more complex with time. As with optical illusions, literary illusions seem greater than they are, because the imagination fills in gaps. Meanwhile, the story moves at a better clip with just enough setting description, rather than bogging down in annoying detail.

Language and Meaning

The author uses lyrical language when describing Haley's comet, Europa and how life developed on this planet. Few words are used to depict complex images, which



showcases a remarkable talent. The author includes all five senses in the descriptions, including the impressions that key characters have of an event or phenomenon. Dialogs reveal the characters' personalities and are consistent throughout, although a bit sparse on direction. Few technical terms are inventions, which lends an air of authority to the science part of the fiction.

Technical terms, such as muon, a subatomic particle similar to the electron, are left to the reader to research. The author demonstrates possibilities and assumes enough knowledge of science in the reader to comprehend. The language never talks down to the reader, as some science fiction tends to do. This could also leave some readers out of the comprehension loop. Fortunately, enough background information is given for important plot elements, the diamond mountain for example.

Structure

The novel is structured as two plots that intersect, the visit to Haley's comet and the hijacking of *Galaxy*. The hijacking draws *Universe* to Europa, and the rescue brings all the characters together on Ganymede. A mysterious object is used, Mount Zeus, that is desired and feared. Romance is not a very important plot element, but is hinted at with the relationship that develops between Dr. Floyd and Yva Merlin. Generally, the plot is an adventure/rescue story that involves a mysterious object. Social and political commentaries and observations hang off the plot, such as how each of the important guests aboard *Universe* interacts with others.

The final part of the novel works as a prolog, an epilog and an introduction to a sequel. Including a prolog toward the end of a novel is highly unusual, whereas introducing the next sequel is very common.

Other unusual structural traits include very short chapters, minimal expositions, and terse character development. The novel is designed to be taken in short bursts rather than lengthy reading sessions, with chances to ponder between events and ideas. Otherwise, the plot follows a typical adventure/rescue form, with one exception.

The protagonist seems to be the entire human race, and the antagonist seems to be the creator of the monolith, who happens not to be present in the book. The human race survives despite itself, while the monolith keeps making trouble. Granted, the terrorists are antagonists to the crew of *Galaxy*, but the conflict is short. A greater conflict exists between the human race and the monolith, which is a manifestation of its creator.



Quotes

"It had often been said that the only thing that could unite Humankind was a threat from space. Whether Lucifer was a threat, no one knew; but it was certainly a challenge. And that, as it turned out, was enough." Chapter 3, p. 13

"Like most families, it was not always a peaceful one, but its disputes no longer threatened the entire planet. The second - and last - nuclear war saw the use in combat of no more bombs than the first: precisely two. And though the kilotonnage was greater, the casualties were far fewer, as both were used against sparsely populated oil installations." Chapter 3, p. 15

"Afrikaans is one of the world's best languages in which to curse; even when spoken politely, it can bruise innocent bystanders." Chapter 11, p. 54

"It is a good principle in science not to believe any 'fact' - however well attested - until it fits into some accepted frame of reference. Occasionally, of course, an observation can shatter the frame and force the construction of a new one, but that is extremely rare. Galileos and Einsteins seldom appear more than once per century, which is just as well for the equanimity of humankind." Chapter 14, p. 62

"He brought up his arms and launched the snowball toward the stars. It was so small, and so dark, that it vanished almost at once, but he kept on staring into the sky. "And then, abruptly - unexpectedly - it appeared in a sudden explosion of light as it rose into the rays of the hidden sun. Black as soot though it was, it reflected enough of that blinding brilliance to be easily visible against the faintly luminous sky. "Floyd watched it until it finally disappeared - perhaps by evaporation, perhaps by dwindling into the distance. It would not last long in the fierce torrent of radiation overhead; but how many men could claim to have created a comet of their own?" Chapter 17, pp. 78-79

"Only Time is universal; Night and Day are merely quaint local customs found on those planets that tidal forces have not yet robbed of their rotation. But however far they travel from their native world, human beings can never escape the diurnal rhythm, set ages ago by its cycle of light and darkness." Chapter 26, p. 113

"Rolf van der Berg felt he had become enmeshed in some vast and tenuous web of interplanetary intrigue; as a scientist, accustomed to getting - usually - straightforward answers to the questions he put to Nature, he did not enjoy the situation. "But he could hardly claim to be an innocent victim. He had tried to conceal the truth - or at least what he believed to be the truth. And now the consequences of that deceit had multiplied like the neutrons in a chain reaction, with results that might be equally disastrous." Chapter 28, p. 124

"As it passed between Earth and Sun, the thousand-kilometer tail of incandescent carbon was easily visible as a fourth-magnitude star, showing appreciable movement against the constellations of the morning sky in the course of a single hour. At the very



beginning of its rescue mission, *Universe* would be seen by more human beings, at the same moment, than any artifact in the history of the world." Chapter 34, p. 158

"Mount Zeus is a single diamond, approximate mass one million, *million* tons. Or, if you prefer it that way, about two times ten to the seventeenth carats. But I can't guarantee that it's all gem quality." Chapter 48, p. 214

"Before his eyes, Mount Zeus was sinking. spurts of molten sulfur rocketed skyward around it at dazzling speed, forming parabolas of bright, electric blue. It was like a ship going down in a stormy sea, surrounded by St. Elmo's Fire. Not even Io's spectacular volcanoes could match this display of violence." Chapter 55, p. 242

"In many places, fires burned in the abyss as rivers of incandescent lava flowed for scores of kilometers along sunken valleys. The pressure at this depth was so great that the water in contact with the red-hot magma could not flash into steam, and the two liquids coexisted in an uneasy truce." Chapter 58, p. 257

"Suddenly, almost as swiftly as it had been born, Lucifer began to fade. The night that men had not known for thirty generations flooded back into the sky. The banished stars returned. "And for the second time in four million years, the monolith awoke." Chapter 60, p. 268



Key Questions

Literary critics often enjoy Clarke's science-based speculations for the future of technology and its influences on human life, but will remark that his characters are often not as lively or as well developed as his futuristic predictions.

Interested readers may wish to consult newspaper or magazine accounts of the progress of the United States and Soviet space programs in the years 1960 to 1985 as a way to measure the degree to which Clarke draws on technology already in use and technology yet to be developed at the time 2061: *Odyssey Three* was written.

1. Is Dr. Heywood Floyd an interesting main character? Does he show growth and change in his personality, or does Clarke mainly expose portions of the man's personal history without really developing him as an individual?
2. The main character is described as a man 103 years old with the body of a 65 year old. Is he too old to be a "hero" in a science fiction novel in a modern society that has given great attention to youth in recent decades?
3. What is Dr. Floyd's assigned mission? Does he succeed in fulfilling the assignment?
4. Western tradition has often advanced the premise that "the truth shall make you free." American culture has long valued "freedom of the press." Who are the writers and journalists in 2061?

Do they work to discover "truth" that leads to some improvement in, or maintenance of, "freedom" for their society?

5. In what situations are "environmentalists" involved? Are their activities and demands constructive or pertinent in the story? Why or why not?
6. In Ancient Greek drama, playwrights sometimes resolved the conflicts in a plot by having a god or goddess dropped into the action by a hoist or boom device to tell the other characters how the situation would be resolved. Critics ancient and modern have often objected if they believe the plot of a story is resolved with a "deus ex machina" device—without much prior warning a discovery is made about someone or something, or the arrival of a new character or a known but minor character quickly solves the problems at hand and ends the story. Is Floyd's contact with Bowman a deus ex machina device, or is it a logical development that serves the novel well in its resolution?
7. Since Clarke wrote 2061, the politics and society of South Africa have shown some significant changes. Is the projec2061: *Odyssey* don of South African diamond syndicate activities into the next century believable?

Why or why not? Does it connect the novel's "future world" well with a modern reader's "known world," or is it a superficial attempt to lace a little "reality" into an unreal world?



8. What instances of contact with alien life forms are given in the novel? What are the responses of the humans? What are the results or consequences for humans—and for the aliens?

9. Clarke sets forth a main character who is 103 years old. Is this character's transformation likely to be more acceptable to readers than if he were twentythree or thirty-three years old, or does his age make any difference in the reader's response to the end of the novel?

10. Although 2061 seems to be the third in a series with numbers beginning the titles and it is subtitled *Odyssey Three*, Clarke contends that he does not really see this third book as a sequel to 2001 and 2010. What specific references to events and characters from the prior two novels occur in 2061? Are the connections enough to tie the three novels closely together, or are they too few and too slight to matter?



Topics for Discussion

Explain how life might have possibly developed on Europa as it exists today.

What is Dr. Floyd's motivation to visit the surface of Haley's comet?

Describe how water can be used as a spaceship propellant.

Speculate on the origin of the light observed in the cave on Haley's comet.

List the laws of physics mentioned in the novel.

What is the significance of the monolith on Europa?

What predictions made in 1987, the publish year of the novel, have and have not come true?

Why does the human race reach for the stars?

Compare and contrast the science of the odyssey series with the science of the Star Trek series.

Why did Sir Arthur C. Clark sell this novel to his editor for only one dollar?

Literary Precedents

Early in 2061, Clarke quotes Alfred, Lord Tennyson's poem "Ulysses," in building his view of a 103-year-old man still anxious to set out to explore new worlds. He also plays on the Beatles' song "Lucy in the Sky with Diamonds" in working out the premise that Jupiter's implosion threw diamond-quality quartz materials into Europa. Other allusions to popular culture traits of the last two decades are occasionally obvious in the text.

Related Titles

In a prefatory comment to the novel, Clarke states he intended to build this work with new data from the planned Galileo probe of Jupiter, but the loss of the Challenger space shuttle so delayed the American space program that he decided to write another view without waiting for results of the Galileo mission. He has used some of the characters and premises about alien life previously set forth in 2001 and 2010, but he does not consider 2061 a direct sequel to the earlier stories—although others do.

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Includes a short biography for the author of each analyzed work.

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