I, Robot

INTRODUCTION

BRIEF BIOGRAPHY OF ISAAC ASIMOV

Asimov was born in Petrovichi, Russia, to Jewish parents and moved to the United States in 1923 when he was three years old. He grew up in Brooklyn before attending a branch of Columbia University specifically for Jewish and Italian-American students. He studied chemistry and eventually went on to complete an M.A. and PhD in chemistry. He met and married his wife, Gertrude, in 1942 and had two children with her, born in 1951 and 1955. He was drafted into the army in 1945 and served for nine months. He then joined the faculty of Boston University School of Medicine in 1949. He continued to lecture there until October 1979, when he was promoted to a full professor of biochemistry. While there, he began writing short stories and novels about popular science, including the short stories that were compiled into *I, Robot*. During the late 1950s and '60s, Asimov began writing nonfiction on scientific topics, and wrote a regular nonfiction column in *Venture Science Fiction Magazine* and later wrote for *The Magazine of Fantasy & Science Fiction*. Later, Asimov also wrote several popular history books, including a guide to the Bible. In 1977, Asimov suffered a heart attack, and in December 1983 he had triple bypass surgery and contracted HIV from a blood transfusion. He died in 1992 due to complications from AIDS.

HISTORICAL CONTEXT

Early computer technologies and robotics began to take off just before Asimov wrote his stories, which is largely what prompted the uptick in science fiction literature around the time that Asimov was writing. The earliest designs of industrial robots were put into production in the United States in the 1930s. They were modelled on human shoulders, arms, and wrists to replicate motions like pulling, pushing, and lifting. These prompted fears of humans being replaced by robots, which Asimov also describes in his stories. Around the same time, in 1939, Konrad Zuse constructed the first programmable electromechanical computer, laying the foundation for Asimov's idea of what future technologies might look like in these robots. That technology is similar to the outdated "Talking Robot" that he describes in the short story "Robbie." Throughout the 1940s, much speculation arose about the rise of computers, digital word processors, voice recognition, and machine translation. In 1948 and 1949, as Asimov was publishing his stories, the first electronic autonomous robots with complex behavior were created by William Grey Walter. They were three-wheeled, tortoise-shaped, and very slow, but they could detect light sources in order to recharge themselves. At the time, computer scientists like Alan Turing and John von Neumann stressed the importance of digital computation that could simulate brain processes, which Asimov also uses in *I, Robot*.

RELATED LITERARY WORKS

Asimov has written many other short stories and novels that contain similar themes and subject matter. They are largely compiled into three categories: the *Robot* series (of which *I, Robot* is a part), the *Foundation* series, and the *Galactic Empire* series. *I, Robot* was written largely in response to a majority of science fiction work at the time which showed robots rebelling against their creators. One such play includes *R.U.R.*, a Czech play by Karel Capek which introduced the word "robot" to the English language and depicts a robot rebellion that leads to the extinction of the human race. This pervasive fear of robots is also what prompted Eando Binder's short story "I, Robot," from which the novel *I, Robot* gets its name and which partially inspired Asimov to write this series. Binder's story also takes a sympathetic look at robots and the danger in fearing them. Asimov also drew upon Mary Shelley's *Frankenstein* in exploring the fear and folly in humans' attempts to create other non-human beings. Other works of contemporary literature that explore human and non-human relationships include Phillip K. Dick's *Do Androids Dream of Electric Sheep?* and Paolo Bacigalupi's *The Windup Girl*.

KEY FACTS

- **Full Title:** I, Robot
- **When Written:** 1940-1950
- **Where Written:** Boston, Massachusetts
- **When Published:** 1950
- **Literary Period:** Late Modernism
- **Genre:** Science Fiction; Short Story Collection
- **Setting:** Earth, Mercury, and outer space between 1996 and 2052
- **Climax:** The human economy is taken over by the Machines; Susan Calvin dies.
- **Point of View:** Third person

EXTRA CREDIT

Wordsmith. Asimov coined several terms and words in *I, Robot*, including the term "robotics," the concept of "the Frankenstein Complex," and "positronic," the counterpart to electronic.

The Three Laws in Pop Culture. Asimov's Three Laws of

Robotics have given rise to many cultural references to them, including episodes of *Doctor Who*, the movies *Alien* and *Repo Man*, an episode of *The Simpsons*, and a movie version of *I, Robot* which was partially inspired by Asimov's stories.

PLOT SUMMARY

The year is 2057. 75-year-old Dr. Susan Calvin is retiring from U.S. Robots and Mechanical Men, where she has worked for her entire adult life as a robopsychologist. A reporter from the *Interplanetary Press* comes to interview her about her time at the company. She tells a series of stories that trace her experience with positronic robots over time, emphasizing how she considers these robots to be a "cleaner better breed" than humans.

She begins in 1996 with the story of "Robbie," a nonverbal robot nursemaid who has been taking care of a young girl named Gloria for two years. They play together constantly, and Robbie is a good caretaker. Gloria's mother, Mrs. Weston, however, has concerns about Robbie. She thinks it is inappropriate for a robot to take care of her daughter, and worries about what might happen if he "goes berserk." Her husband, Mr. Weston, assures her that robots would be inoperable before they could harm a human—the First Rule of Robotics is that no robot may harm a human being, or through inaction allow a human to come to harm. But gradually Mrs. Weston wears Mr. Weston down, and he agrees to get rid of the robot and tell Gloria that he simply went away. Gloria is devastated to discover this, and becomes depressed. Mrs. Weston refuses to cave to Gloria's sadness, and instead tries to cheer her up with a trip to New York City. Once there, Mr. Weston devises a tour of a robot factory so that Gloria can learn the distinction between robots and humans, but he has secretly planted Robbie in the factory. When Gloria sees Robbie, she grows so excited that she runs in front of a moving vehicle, and Robbie is the only one quick enough to save her. Seeing this, and how happy Gloria is to be reunited with Robbie, Mrs. Weston agrees to let Robbie stay with them.

Calvin continues to explain that once talking robots were invented, they were largely banned from Earth except for scientific research purposes, but they were used frequently in space exploration. She next tells the story ("Runaround") of Mike Donovan and Gregory Powell, who are trying to start up a space station on Mercury. They send an advanced robot, Speedy, out to a retrieve selenium to power their base, but when Speedy doesn't return, they set out to find him. They realize that he is caught in a loop due to the Second and Third Laws of Robotics, as he is running a circle around the pool and is talking gibberish. The Second Law states that a robot must obey humans except when it would conflict with the First Law, and the Third Law states that a robot must protect its own existence as long as its actions do not conflict with the first two Laws. There is some unforeseen danger near the selenium pool, they realize, and so Speedy is pushed away from the danger by the Third Law and then pushed toward the danger by the Second Law. They conclude that the only solution is for Powell to put himself in danger, allowing the First Law to take precedence and to knock Speedy out of his loop. This works, but nearly costs Powell his life when he is exposed to the radiation on Mercury.

The next story ("Reason") also centers on Donovan and Powell, who are at a space station overseeing energy beams being sent to various planets. The robot that coordinates the others, Cutie, starts to believe that he is superior to human beings, and begins a kind of robot cult on the basis that he was created by the "Master," the power source of the ship. Cutie stops obeying Donovan and Powell and locks them in the officer's room, which makes them worried because an electron storm is brewing, and if the beams are set off course, it could destroy hundreds of square miles on the earth's surface. After the storm, however, they discover that Cutie and the other robots held the beams steady—they were following the Three Laws all along. Cutie created a reason for himself to maintain control of the beams, knowing that he could hold them steadier than Donovan and Powell and could thus save lives of people on Earth.

In "Catch That Rabbit," Donovan and Powell are testing a new "multiple robot" named Dave, which has six subsidiary robots, or "fingers," that help it mine ore at an asteroid mining station. They start to realize that when Dave is not watched, he and the other robots do not produce any ore, but when they are watched, they function perfectly. They use a video technology to observe Dave, and see that sometimes he and his subsidiaries stop working to do a kind of march together. Donovan thinks that something "sinister" is going on, and they try to create an emergency in order to see how Dave responds. But when they try to create a cave-in, they accidentally trap themselves and need Dave to rescue them. They throw a detonator at one of Dave's subsidiaries in order to get his attention, which snaps him out of his march. They realize, after being freed, that Dave was simply overwhelmed by having six subsidiary robots to transmit instructions to in an emergency, and the marching was akin to Dave "twiddling his fingers."

Calvin transitions to telling more stories that involve herself. She tells one ("Liar") about a mind-reading robot, Herbie. Herbie causes trouble because he knows that Calvin is in love with Milton Ashe, another employee at U.S. Robots. Herbie tells her that Ashe loves her as well, and she is elated. He also tells a mathematician, Peter Bogert, that the director Alfred Lanning, whom Bogert dislikes, is retiring and passing his position to Bogert. Bogert goes to confront Lanning, and Calvin goes to talk to Ashe. Ashe, however, reveals that he is getting married to another woman. Calvin is devastated, and realizes that Herbie was lying to try not to hurt her feelings, and that he

lied to Bogert as well. She tells Herbie to tell Bogert the truth, but Herbie is caught in a paradox in which lying will hurt Bogert's feelings and telling the truth will hurt his feelings—both of which will violate the First Law. He collapses and remains silent.

In "Little Lost Robot," Calvin and Bogert are brought to Hyper Base, where a robot named Nestor 10 has been lost. Because of the nature of Nestor 10's work, it has been modified with a weakened First Law, so that the robot does not have to act if a human is going to come to har,. A worker named Gerald Black grows frustrated with Nestor 10 one day, and tells the robot to "go lose [himself]." And so Nestor 10 places himself in a room with 62 other identical robots. Calvin and Bogert try to devise a series of experiments that will reveal which robot is Nestor 10, but none of the trials are successful. However, when Calvin learns that Nestor 10 has advanced physics knowledge, she devises an experiment where he is caught in a trap of superior knowledge and thus reveals which robot he is—as Calvin notes, his superiority catches him.

In "Escape!" the officials at U.S. Robots and Mechanical men are trying to build a ship that can travel faster than the speed of light. They use instructions from another company called Consolidated and feed it to their robot called The Brain. As The Brain is figuring out how to build the ship, Calvin tells him that they don't mind if humans are harmed or even if they die. This is because in the interstellar jump, the humans temporarily cease to exist—effectively dying for a moment. The Brain is taken aback, but understands. He instructs other robots on building the ship, and Donovan and Powell are brought in to test it. But when they are given a first tour, the ship takes off without their knowledge. They discover that they cannot fly the ship, that there are no showers, and that they only have milk and beans to survive off of. They experience the hyperspace jump, wherein they have strange visions of death. The Brain brings them back to Earth, and Calvin realizes their experiences were all her fault. The Brain was simply following her instructions, and as she puts it, he became a "practical joker" in order to cope with the fact that he would be killing the humans—if only temporarily.

In the next story, "Evidence," two men are running for a mayoral office, Francis Quinn and Stephen Byerley. Quinn believes that Byerley is a robot, because he has never seen the man eat or sleep. He enlists Calvin and Bogert to prove that he is a robot. But Calvin points out that if Byerley follows the Three Laws, he could be a robot, or he could simply be a very good man. Quinn has several men investigate Byerley, but cannot come up with concrete evidence. He leaks the news, and the public is outraged. However, Byerley ultimately proves that he is a human by punching a man who threatens him at a campaign speech, violating the First Law, and Byerley wins the election. But later, Calvin visits him one more time, and reveals that he could have hit the man if the man was also a robot. She tells the reporter that she still believes Byerley to be a robot.

In her final story, "The Evitable Conflict," Calvin works once again with Byerley, who has now become World Coordinator. The year is now 2052, and the global economy is being stabilized and run by robots called Machines. But Byerley observes that there are some unusual errors occurring, like over- and underproduction in certain economic regions. His advisors tell him that the Machines don't make errors because they follow the First Law, and so he enlists Calvin's help to figure out what is wrong. Gradually, Calvin realizes that all of the companies and people who have been hurt by the Machines' errors are related to an organization called the Society for Humanity, which is very anti-Machine. The Machines recognize that their presence is extremely beneficial to humanity, and so they need to "take care of" any threats to their own existence. They are following the First Law and trying to create the most good, which means ensuring they maintain control of the economy.

Calvin concludes to the reporter that that's all she can tell him: she witnessed the evolution of robots from the time they couldn't speak to the time when they stand "between mankind and destruction." She says goodbye, and eventually dies at 82 years old.

CHARACTERS

MAJOR CHARACTERS

Dr. Susan Calvin – The chief robopsychologist at U.S. Robots and Mechanical men and one of the protagonists of the story. At the beginning of the book, a reporter comes to interview Calvin about her time with the company, which began when she was 25 years old until she retired at age 75. She tells the reporter the stories which comprise *I, Robot* and also features in several of the tales. Calvin is described as a cold, almost robotic woman herself. She is fonder of robots than she is of humans, as she calls robots a "cleaner better breed" due to the fact that they have to follow a strict ethical code. Despite this code, however, Calvin and other humans sometimes have difficulty predicting exactly what the robots might do, or figuring out why they are defective. In "Liar!", she tells the story of a mind-reading robot named Herbie who tells her that another roboticist named Milton Ashe reciprocates her secret love for him, when in reality the robot is just trying to protect her feelings from harm as per the First Law of Robotics. The revelation that Ashe does not love Calvin devastates her. In "Little Lost Robot" and "Escape!", Calvin is able to use her deductive skills to solve the problems occurring with Nestor 10 and The Brain, respectively, but not without putting herself and others in danger because she does not fully think through the consequences of her actions. Thus, while Calvin is one of the savvier humans in the book and perhaps the most

knowledgeable person in the world about robot psychology, Asimov shows that she, too, can fall victim to her own irrational thoughts when she cannot properly anticipate the logic of robots. At the end of the book, Calvin reveals that she is glad that robots are controlling the economy and would want them as politicians, due to the fact that they are often more ethical than humans. In this way, she becomes a stand-in for Asimov himself, as one of his aims is to show how robots can be beneficial to humanity, even if they eventually become superior to humans.

Gregory Powell – An engineer and field tester at U.S. Robots and Mechanical Men, alongside Mike Donovan. Donovan and Powell feature together in several of the stories, including "Runaround," "Reason," "Catch That Rabbit," and "Escape!" Their adventures span many different areas, including Mercury, an asteroid mine, the Space Station, and a hyperspace ship. Compared to Donovan, Powell is shown to be the more logical and level-headed of the two, but this does not save him from making mistakes. In "Runaround," he recognizes Speedy's dilemma in being caught in a loop due to the Second and Third Laws of Robotics. This prompts him to risk his own life so that the First Law will take precedence over the others, and Speedy will snap out of his loop in order to save Powell. Even though this plan works, it puts Powell's life at risk and he nearly dies due to the radiation on Mercury. Thus, Powell's irrationality nearly leads to his own folly and destruction. A similar thing happens in "Catch That Rabbit," in which Donovan worries that there is something sinister in the fact that Dave only malfunctions when the humans are not around. This leads Donovan and Powell to try to create an emergency that ends up trapping themselves in a cave-in. Through these two characters, Asimov shows how humans frequently do not understand the robots, and therefore have a difficult time predicting what could be causing their defects. In each case, the robots are always following the Laws of Robotics, but Powell is unable to recognize the consequences of these laws on their actions. In Donovan and Powell's final story, "Escape!", they are completely at the mercy of the robot called The Brain, which takes them out in a hyperspace ship without their knowledge or permission. Thus, Donovan and Powell's arc illustrates humans' increasing lack of control over the very beings they have created.

Mike Donovan – A red-headed engineer and field tester at U.S. Robots and Mechanical Men, alongside Gregory Powell. Donovan and Powell feature together in several of the stories, including "Runaround," "Reason," "Catch That Rabbit," and "Escape!" Their adventures span many different areas, including Mercury, an asteroid mine, the Space Station, and a hyperspace ship. Donovan is shown to be more skeptical and even fearful of the robots than Powell is. In "Reason," he becomes afraid of Cutie's actions when Cutie starts to question his own existence and ultimately begins a robotic cult. A similar thing happens in "Catch That Rabbit," in which Donovan worries that there is something sinister in the fact that Dave only malfunctions when the humans are not around. This episode in particular leads Donovan to try to create an emergency that ends up trapping himself and Powell in a cave-in. Through these two characters, Asimov shows how humans frequently do not understand the robots, and therefore have a difficult time predicting what could be causing their defects. In each case, the robots are always following the Laws of Robotics, but Donovan is mistrustful of their motivations. Thus, he also illustrates how humans' fear frequently causes their own folly, as in the case of the cave-in. In Donovan and Powell's final story, "Escape!", they are completely at the mercy of a robot called The Brain, which takes them out in a hyperspace ship without their knowledge or permission. Thus, Donovan and Powell's arc illustrates humans' increasing lack of control over the very beings they have created.

Stephen Byerley – A politician running for mayoral office in "Evidence." His political opponent, Francis Quinn, accuses him of being a robot. Quinn employs Calvin and Lanning to investigate the situation, citing that Byerley never eats, drinks, or sleeps. Though Calvin agrees that Byerley is a robot, she is never able to prove it. Byerley eats an apple in front of the roboticists, though this doesn't prove anything—Calvin says that he could simply be a very advanced robot. Byerley also does several things that make them question his innocence: he actively prevents them from taking X-rays of his insides to see if he is a robot, and he also lives with a paralyzed teacher of his named John, whom Quinn claims is the real Stephen Byerley. Ultimately, Byerley is able to convince the public that he is human by hitting another person and violating the First Law, and thus wins the election. However, Calvin later argues that the person he hit could also have been a robot, which would have allowed him to avoid breaking the First Law. Byerley's case proves just how advanced the robots have become, and also how they can be more ethical than humans, since Quinn ironically goes to unethical lengths in his attempts to prove that Byerley is a robot. In the following story, "The Evitable Conflict," Byerley has become a World Coordinator and works with Calvin once more to try and deduce errors in the Machines that regulate the world's economy.

Francis Quinn – A politician who is running for a mayoral office in "Evidence." Quinn suspects that his political rival, Stephen Byerley, may be a robot, and so he enlists the help of Calvin and Lanning in order to help him prove this theory. The irony of this smear campaign is that Quinn proves himself to be far less ethical than Byerley (whom Calvin does suspect to be a robot) during the campaign, and therefore he prompts readers to wonder whether a robot might be better suited for that kind of job. Ultimately, Byerley is able to convince the public that he is not a robot, and Quinn loses the election.

Gloria – The young girl whom Robbie takes care of in "Robbie."

Robbie is not only Gloria's caretaker, but also her best friend. When her mother, Mrs. Weston, decides to send Robbie away, Gloria becomes depressed and silent, regaining some of her energy only when she thinks that her family is going to New York City in search of Robbie. When Gloria is ultimately reunited with Robbie in a robot factory, she becomes so excited that she runs in front of a moving vehicle, though fortunately Robbie is able to save her. Gloria's emphasis that Robbie is not just a machine to her, but that he is "a person" and her friend, provides an early example in the book of how human beings tend to anthropomorphize robots and are only able to understand them in human terms.

Mrs. Weston – Gloria's mother in "Robbie." After two years of allowing her daughter to be taken care of by Robbie, Mrs. Weston begins to realize that she does not want her daughter raised by a robot. She cites several reasons to Mr. Weston as to why she wants to get rid of Robbie: the fact that he has no soul, the worry that he will go berserk and hurt Gloria, and that the neighbors fear him and do not want to come near the Westons' house. Asimov shows all of these lines of reasoning to be completely irrational: first, Mrs. Weston proves to be far crueler to her daughter than the compassionate Robbie when she gets rid of him, effectively taking away her daughter's best friend. Second, Robbie cannot hurt Gloria due to the Laws of Robotics. Third, their neighbors' fear proves to be just as irrational as her own. But in deciding to get rid of Robbie, Mrs. Weston starts a chain of events that results in Gloria's depression and nearly ends in her death at a robot factory. Robbie is the ultimately the one to save Gloria, proving how Mrs. Weston's fear and irrationality leads to her own folly.

Mr. Weston – Gloria's father in "Robbie." When Mrs. Weston approaches Mr. Weston saying that she wants to get rid of Robbie, Mr. Weston reminds her that Robbie could never harm Gloria, but to no avail. He eventually gives in to his wife's desire to get rid of the robot. Seeing his daughter's despair at this development, however, ultimately leads him to try to reunite the two, and he plants Robbie in a robot factory that the family plans to visit in New York City. This leads an over-excited Gloria to run in front of a moving vehicle when she sees Robbie, and only Robbie is able to save her, demonstrating how human fallibility and irrationality can often lead to their own folly.

Peter Bogert – One of the primary mathematicians at U.S. Robots and Mechanical Men. Bogert believes that Lanning's mathematics are a bit behind the times due to Lanning's old age, and hopes that Lanning will retire and pass the director position to him. In "Liar!" Bogert falls victim to Herbie's lies, when Herbie tells him that this exact scenario is going to happen. Bogert is buoyed by these falsehoods, believing Herbie's lies just as Calvin does. Bogert also features in "Little Lost Robot," in which he helps Calvin deduce which robot is Nestor 10, and in "Escape!"

Alfred Lanning – The director of U.S. Robots and Mechanical Men. Lanning is almost 70 years old at the time of "Liar!", which is what causes Peter Bogert to believe that Lanning is behind the times. But Lanning proves to be a respected official—particularly by Calvin—and is involved in solving many of the issues that spring up with the robots. He works with The Brain to try and retrieve Donovan and Powell in "Escape!" and also helps Calvin deduce whether Stephen Byerley might be a robot in "Evidence."

Milton Ashe – A young officer at U.S. Robots and Mechanical Men. In "Liar!" it is revealed that Susan Calvin is in love with him, and the mind-reading robot Herbie falsely tells her that Ashe reciprocates her feelings. When Ashe ultimately reveals that he is getting married to another woman, Calvin is devastated.

Robbie – The titular character of the short story "Robbie." Robbie is a nonverbal RB model robot that is designed as a nursemaid for human children. At the beginning of the story, he has been taking care of a young girl, Gloria, for two years. Gloria adores him and it is clear from his interactions with her that all he wants to do is take care of her and ensure her happiness and safety. They play hide and seek, he gives her rides on his back, and he listens attentively as she recounts stories like Cinderella for him. Robbie is directly contrasted with Mrs. Weston, who is harsh to Gloria and comes to believe that her daughter should not be raised by a robot. When Mrs. Weston has Robbie sent away, Gloria is devastated until she and Robbie reunite in a robot factory. Gloria becomes so excited at seeing Robbie again that she runs in front of a moving vehicle, and Robbie is the only one who is able to save her. Thus, Robbie becomes the first primary example of how robots can actually be more ethical, more helpful, and even more compassionate than human beings.

Speedy – The primary robot in "Runaround." Speedy is an SPD model whom Donovan and Powell send out to retrieve selenium in order to be able to power the station on Mercury. But Speedy has been programmed with a strengthened Third Law of robotics because he was so expensive to build, and so when he approaches the selenium pool and encounters an unforeseen danger, he is simultaneously driven toward it by the Second Law and driven away by the Third Law. He becomes caught in a loop and acts "drunk," swaying back and forth and spewing nonsensical children's rhymes. It is only when Powell puts himself in danger that the First Law kicks in and Speedy is able to snap out of his loop. Thus, Speedy becomes an example of how the robots will follow their ethical code no matter what, even if doing so renders them completely inoperable.

Cutie – The central robot in "Reason." Cutie is a QT-1 model and is tasked with overseeing other robots at the space station who control energy beams to Earth and other planets. Donovan and Powell start to lose control of Cutie when he starts a robotic cult that bows only to "the Master"—that is, the energy source of the ship. Cutie and the other robots prevent

Donovan and Powell from entering the control room, which makes them worried because an electron storm could blow the beams off course and cause huge amounts of damage. But after Cutie holds the beams steady, Donovan and Powell realize that he was following the first law all along. Cutie becomes the first of several examples in which robots maintaining their superiority, even if it makes the humans anxious, actually represents a better outcome for humanity than if the humans were in control of their own fates.

Dave – The central robot in "Catch That Rabbit." Dave is a multiple DV-5 robot with six subsidiaries, called "fingers," that help him in the mines. Donovan and Powell are tasked with testing Dave, and they start to observe some odd behaviors in the mines. When Dave is not watched, he and the other robots sometimes stop producing ore, which concerns Donovan and Powell. Once, using video technology, they see that when an emergency strikes, Dave and his robots stop working and instead they start marching, or dancing. Donovan and Powell try to create circumstances that will allow them to observe Dave under these conditions, but this leads them to trap themselves in a cave-in, and only Dave can rescue them. Ultimately, they discover that Dave's intentions were not sinister: having six subsidiary robots to control was simply too much for him to handle, and he became overwhelmed and started "twiddling his fingers"—another use of language that shows how the humans can only understand the robots based on human terminology and behaviors.

Herbie – A mind-reading robot that features in "Liar!" Herbie is a one-of-a-kind robot, and the roboticists spend much of the story trying to figure out how Herbie acquired his telepathic abilities. Herbie creates quite a bit of trouble, however. After reading Susan Calvin's mind and seeing that she is in love with Milton Ashe, Herbie tells her that Ashe returns her love, because Herbie doesn't want to see Calvin hurt according to the First Law. He also lies to Peter Bogert, explaining that Alfred Lanning is going to be retiring and giving his director position to Bogert. Even Calvin, the chief robopsychologist, cannot see that Herbie is lying because it is difficult not to think of the robots as humans. She believes that Herbie would act as a human would, and recognize that lying would ultimately cause more harm than good. When Calvin discovers the truth, Herbie even tries to continue his ruse by telling her that it is all a dream, in order to make her feel better. Ultimately, Herbie is caught in a paradox of his own making: when Bogert and Lanning get into an argument over what Herbie said, Herbie realizes that telling the truth would hurt Bogert, while lying would hurt Lanning. This dilemma causes him to collapse and remain silent, serving as another example of how the robots are bound to their ethical code to the point where they may even become inoperable.

Nestor 10 – The central robot in "Little Lost Robot." Nestor 10 goes missing after receiving instructions from Gerald Black that he "go lose [himself]." Thus, Nestor 10 follows this directive and hides in a room with 62 other robots that look identical to him. Losing him is particularly troubling to Calvin because he had been programmed with a weakened First Law, so that he does not have to act if he sees a human being that might come to harm through his inaction. Nestor 10 starts to prove his superiority over the humans when Calvin is unable to find him after several experimental trials and interviews. Even though he is still following the directive of the Second Law, Calvin becomes increasingly concerned that Nestor 10 has gone beyond the control of humans in his desperation to remain lost. Calvin is only able to find him upon learning that he has advanced physics knowledge, and she uses this advantage against him in order to identify him. Ultimately, her fears about weakening the First Law prove to be correct, because when he realizes he has been found, he attempts to attack Calvin, demonstrating the necessity of the First Law to protect humans from their creations.

The Brain – The central robot in "Escape!" The Brain does not have a body in the same way that many of the other robots in the story do; it is more like a supercomputer. However, this does not prevent Calvin and others from anthropomorphizing The Brain. Calvin explains that The Brain is very advanced, but has the personality of a child. Thus, when they try to get The Brain to build a hyperspace ship for them, she tries to convince The Brain not to worry about death or destruction to humans (because the hyperspace jump means that Donovan and Powell will die temporarily). Still, the information unbalances The Brain, and it turns into a "practical joker"—another example of how the robots are anthropomorphized. The robot sends Donovan and Powell on the ship without their control or permission, and only provides them with milk and beans for sustenance. Thus, Calvin's interactions with The Brain represent another example of how humans are often unable to predict how their creations work or will react to instructions from humans. Though The Brain does not hurt or kill Donovan and Powell, it causes them a deep amount of stress and suffering since they lose all control and don't know when they might return to Earth. A predecessor of the Machines that control the world's economy in the final story, The Brain represents another step in how humans are losing control of their creations.

MINOR CHARACTERS

Reporter – An unnamed reporter from the *Interplanetary Press* who has come to interview Susan Calvin about her time at U.S. Robots before she retires. The reporter questions her about various episodes, leading her to recount each of the stories that appears in *I, Robot*.

John – Stephen Byerley's teacher who lives with him because John is paralyzed. It is implied that John may be the "real" Stephen Byerley, who created a robot version of himself after

he became paralyzed.

Gerald Black – The last person to see Nestor 10 before he goes missing in "Little Lost Robot." Black works with Nestor 10 and tells him to "go lose [himself]" after becoming annoyed with the robot.

Major-general Kallner – The man who heads the project at Hyper Base in "Little Lost Robot," and who contacts Calvin and Bogert when Nestor 10 goes missing.

Robertson – The head of U.S. Robots in "Escape!" and the son of its founder, Lawrence Robertson.

Harroway – A man hired by Francis Quinn to investigate Stephen Byerley.

DV-5-2 – A subsidiary robot (or "finger," as Donovan and Powell call it) of Dave.

Ching Hso-Lin – The Eastern Region Coordinator in "The Evitable Conflict."

Lincoln Ngoma – The Tropic Region Coordinator in "The Evitable Conflict."

Madame Szegeczowska – The European Region Coordinator in "The Evitable Conflict."

Hiram Mackenzie – The Northern Region Coordinator in "The Evitable Conflict."

TERMS

Positronic brain – A fictional type of technology that exists in Asimov's world, which serves as the source of robotic intelligence. Positronic brains imbue the robots in the series with a similar kind of consciousness and self-awareness that humans have. They are what distinguish the robots from other technology and also what make it difficult for humans to recognize the robots as machines rather than living beings.

THEMES

In LitCharts literature guides, each theme gets its own color-coded icon. These icons make it easy to track where the themes occur most prominently throughout the work. If you don't have a color printer, you can still use the icons to track themes in black and white.

MORALITY AND ETHICS

I, Robot is a collection of short stories exploring humans' development of robots, and the ethics that govern those robots' behavior. Written between 1940 and 1950, the stories progress in time from 1996 to 2052 and center on the development of very advanced robots. But in contrast to the many stories that depict robots becoming corrupted or turning on their creators, Asimov's stories largely show that robots follow their ethical standards more closely than humans do. Unlike humans, who are *encouraged* to follow ethical conduct, robots are *bound* to follow the laws that humans have laid out for them. Thus, through several of his short stories, Asimov demonstrates that despite (or perhaps because of) their lack of organic emotions or moral conscience, robots have the potential to behave more ethically than humans.

The three rules governing robots are laid out in "Runaround," and establish the moral principles by which all robots must abide. The story then goes on to demonstrate how rigidly the robots adhere to these laws. "Runaround" is the first story that focuses on Powell and Donovan, two engineers who work for a robot manufacturer called U.S. Robots and Mechanical Men. Powell lists the three Laws of Robotics for Donovan: one, "a robot may not injure a human being, or, through inaction, allow a human being to come to harm." Two, a robot must obey orders given by humans, except in any case that would conflict with the First Law. Three, a robot must protect its own existence as long as its actions do not conflict with the First or Second Laws. These three laws set a very high ethical standard which prevents robots from harming or disobeying any human in any way. As another roboticist points out in another story, these laws constitute a much higher code of conduct than humans often follow themselves.

These laws are so rigid that robots can even be rendered completely non-functioning in cases where conflicts arise between the laws. In "Runaround," a robot named Speedy is trying to restart operations at a mining station on the planet Mercury. Donovan and Powell order Speedy to retrieve selenium (the metal used as the base's power source), but there is an unforeseen danger near the pool. Because Speedy was very expensive to manufacture and thus valuable to humans, his sense of self-preservation according to the Third Law is strengthened. Therefore, when he gets too close to the pool, he turns back for fear of being destroyed, but when he is far enough away, the Second Law of obeying human orders kicks in and he tries to return to the pool. Thus, the robot gets stuck in a feedback loop from which he cannot escape. This demonstrates how robots' moral mandates are so strong that they are rendered completely inoperable when they cannot follow them—their only choice is to follow this code.

Another story, "Robbie," makes a more direct comparison between humans and robots, and argues that robots can be more ethical than their human counterparts. "Robbie" takes place in 1996, just when robots are becoming commonplace. Mr. and Mrs. Weston have a small robot nursemaid named Robbie, who has been taking care of their young daughter, Gloria, for two years. Though Robbie can't speak, he adores taking care of Gloria. He plays hide and seek with her, gives her rides on his back, and asks her to tell him stories, all to her delight. Asimov illustrates how Robbie has real love for Gloria,

and a clear desire to care for her at all times, establishing how Robbie's compassion goes even beyond the three laws with which he has been programmed. Mrs. Weston, on the other hand, is depicted as very cold. She yells at Robbie and worries that he might "go berserk" and do something terrible to Gloria, and so she takes Robbie away. Gloria becomes inconsolable and makes herself sick worrying where Robbie might have gone. Still, her mother is adamant that she will not bring Robbie back. Thus, Asimov contrasts Gloria's mother, who puts her own desires first, with Robbie, who is a very selfless caretaker. This illustrates the idea that robots can be built with more of a sense of humanity than even humans have.

The idea that robots are more ethical than humans is further emphasized in "Evidence," as Asimov explicitly argues that the robots' code of ethics is more strict than human codes of ethics. Two politicians, Francis Quinn and Stephen Byerley, are running against each other for the mayoral office of a major city. Quinn approaches two chief officials at U.S. Robots, Dr. Alfred Lanning and Dr. Susan Calvin, and asks them to confirm that Byerley is not a human, but a very advanced robot. He bases this accusation on the fact that, as district attorney, Byerley has never sought the death penalty (which would have violated the First Law) and has never been seen eating or sleeping. Dr. Calvin argues, however, that if Byerley follows the three laws, he could be a robot, or he "may simply be a very good man," because the three rules of robotics are "the essential guiding principles of a good many of the world's ethical systems." This line of reasoning essentially argues that all robots have the ethical standards of very good human beings, to the point where it may even be impossible to tell whether a person is a robot or simply a morally upstanding person. In this sense, the robot code of ethics is something of an idealized set of morals for human beings. Though humans are the ones who created these moral standards and programmed the robots to obey them, it seems that it is the robots' inhumanity—their inability to deviate from the three laws to make moral (or immoral) decisions of their own accord—is paradoxically what makes them more ethical than most people.

Asimov's stories delve into the ethics that dictate both human and robot behavior. But even though the robots sometimes malfunction or appear to be going off track, they are always following their code of ethics. Humans, on the other hand, are often shown to have no hesitation at causing each other physical or emotional pain. While the ethical questions grow more and more complex in each story, Asimov's ultimate conclusion is clear: robots have the potential to be more ethical than the very humans who imbued them with their ethical code.

HUMAN SUPERIORITY AND CONTROL

Beyond the ethical considerations of robots, Asimov explores the hierarchy between humans and robots from the perspective of who is in control. Even though robots are products of human development, humans frequently have difficulty believing that they are fully in control of the robots, and Asimov's stories spark questions about whether humans are wise or logical enough to anticipate the consequences of their own technology. Because humans so frequently seem unable to understand the defects that surface amongst their creations, Asimov ultimately shows how humans are destined to fall into a trap in which they lose control of their own destinies to those creations.

In several stories, humans seem unable to understand the malfunctions that the robots are experiencing, even though they are the ones who established the rules of robotics. In "Runaround," the robot Speedy becomes completely paralyzed because it faces a conflict between the Second and Third Laws of Robotics. Donovan and Powell are at first unable to understand what is going wrong with the robot—an agonizing prospect, as they cannot leave Mercury without the robot and would be doomed to die if the robot perished. They make several attempts to help the robot escape its strange loop, but they waste several hours on solutions that only make the problem worse, to the point where they have to put themselves in danger so that the First Law overrules all others and Speedy is shaken out of his loop. This demonstrates humans' inherent misunderstanding of the beings that they have created and suggests that they are not necessarily intellectually superior to robots—sometimes people are too shortsighted and illogical to find the proper solutions. A similar problem occurs in "Escape!" U.S. Robots and Mechanical men are developing a hyperspace engine that allows humans to travel faster than the speed of light. Their positronic computer, The Brain, which follows the Laws of Robotics, directs the building of this hyperspace ship. When Powell and Donovan board the ship, however, it has no human controls, and only has beans and milk for food. Without the humans' permission, The Brain takes them on a test ride through the galaxy, and is uncontrollable by the people in the ship and the people on the ground. The hyperspace jump means that the men on board will temporarily cease to exist (effectively, dying temporarily), but robots are programmed to make sure that human beings do not come to harm. The Brain is stymied by the idea that the humans will die temporarily, a prospect which is "enough to unbalance him very gently." The Brain has also developed a sense of humor as "a method of partial escape from reality." Thus, the desire to advance technology and discover places beyond the galaxy has led humans to overlook the consequences of what the robot might do, knowing that the humans could die—and this causes them to surrender control of their fates entirely.

In later stories, as the robots become more and more sophisticated, Asimov hints that this advancement is contingent upon humans losing control over them. In "Reason," Powell and Donovan are assigned to a space station that

supplies energy to the planets via beams. The robots that control the beams are coordinated by a robot named Cutie. Cutie has a highly developed reasoning ability, and concludes that space, stars, and the planets do not exist, and that it should only carry out orders from its "Master"—the power source of the ship. Cutie essentially starts a new religion in with the other robots are its followers. It even refuses to obey human orders per the Second Law of Robotics, a situation which becomes even more dire when a solar storm is expected which could knock the beams out of focus and incinerate populations. When the storm hits, however, the robots keep the beams operating perfectly. Even though they don't know it, the robots *are* following the First and Second Laws of Robotics: they created this religion in order to maintain control of the beams and thus keep humans out of danger, knowing that they would be better suited to operate the controls.

The robots convince themselves that they are superior, but they do so in order to save humanity. This not only demonstrates humans' inability to anticipate the robots' behavior and control it, but also foreshadows how this will eventually lead robots to try to control humanity for its own good. This idea is borne out completely in "The Evitable Conflict." In 2052, the world is divided into four geographic regions which have powerful supercomputer known as Machines managing their economies. The Machines start to make some errors, however, and these errors hurt prominent individuals associated with the anti-Machine "Society for Humanity." Susan Calvin realizes that the Machines are deliberately making these mistakes in order to hurt "the only elements left that threaten them." The Machines recognize their own necessity to humanity's continued peace and prosperity, and have thus inflicted a small amount of harm on selected individuals in order to protect themselves and continue guiding humanity's future. Even though the robots' purpose is to ensure the continuation and overall protection of humanity, their complete control over society proves that they are ultimately superior to the humans who created them.

I, Robot is told through a framing device, in which Dr. Calvin is relaying all the stories in the book to a young reporter. At the end of these narratives, Dr. Calvin comes to the conclusion that "Mankind has lost its own say in its future"—but she postulates that perhaps this is a good thing, and that robots may be the only things that "stand between mankind and destruction." Thus, Asimov argues that humans are not wise enough to maintain control of their own destinies. Rather, they must create something that will help look out for their best interests as a whole, even if those creations do not ultimately allow humans to have free will.

IRRATIONALITY, FEAR, AND FOLLY

In addition to exploring the nature of robots, Asimov also delves into some of the perceptions and motivations that drive human behavior. Whereas Asimov's robots are generally shown to be logical and rigidly abide by the laws that have been programmed into them, human characters are shown to be deeply irrational, often spurred by their fear of the very robots they have created. In *I, Robot*, Asimov shows how this irrationality frequently drives human beings to acts of folly that can potentially lead to their own demise.

In "Robbie," Mrs. Weston's irrational fear of the robot Robbie causes her to take actions that almost lead to the death of her daughter Gloria. After two years of the nursemaid robot Robbie taking care of Gloria, Mrs. Weston gets rid of Robbie, thinking that something might go wrong with him that would cause him to hurt Gloria. She believes that this is a logical way to protect her daughter, but doesn't anticipate the responses of the rest of her family. Gloria is disconsolate, and Mr. Weston caves under Gloria's depressive episodes. This leads Mr. Weston to take Gloria on a tour of a robot factory, where he has secretly planted Robbie so that they can reunite. When Gloria sees Robbie, she immediately runs to him, and she is almost killed by a moving vehicle in the factory but is saved by Robbie. This is particularly ironic, because Mrs. Weston's fear of Gloria getting hurt is exactly why she wanted to get rid of Robbie in the first place. In the end, however, it was human actions that almost lead to Gloria's death. Thus, Mrs. Weston's irrational fear of robots is what almost causes her own downfall, not the robot itself.

The officials at U.S. Robotics and Mechanical Men experience several similar follies. Their concern that the robots are starting to outsmart them leads them to take actions that ultimately endanger themselves. In "Catch that Rabbit," Powell and Donovan are testing a new model of robot, DV-5 (Dave) at an asteroid mining station. But when they are not around, Dave stops producing ore, and he isn't able to tell them what he was doing during the shifts when he was supposed to be mining, as if he had blacked out. When Powell and Donovan attempt to observe Dave, however, the robot functions perfectly. They grow increasingly concerned that the robot is lying to them: Donovan expresses, "There's something—sinister—about—that," pounding the desk in desperation. They learn from other robots that Dave stops working when there are threats of emergency cave-ins, and so in order to observe what happens to the robot in these situations, they try to create an emergency. In the process, they accidently trap themselves in a cave-in. Fortunately, they find a way to attract Dave's attention to rescue them, but the story serves as another way of emphasizing that the humans' irrational fear of Dave's actions is what leads to their dire situation, not Dave's actions themselves.

Robots are frequently the solutions to humans' problems, not the instigators. In "Little Lost Robot," a military research station has modified the First Law of Robotics in one of the NS-2 (Nestor) models, so that the First Law they follow is only that

robots may not harm any human (i.e., robots may now allow human beings to come to harm by inaction). When they "lose" one of these robots among 62 others and cannot tell which one has been modified, they call Susan Calvin to help identify the robot. Calvin becomes incredibly fearful, worried that the robot could be smart enough to find ways around the First Law entirely, now that it has been weakened. She also grows concerned the potential outcry that could follow if people discover that they have done this. Subsequently, she puts herself in danger in order to try to discover which robot is Nestor 10, and the robot even attempts to attack her directly. Thus, like Donovan and Powell, Calvin's fear leads to an irrational method of investigating the robot, which only puts herself in harm's way.

In "Escape!" humans come to a similar potential harm, even though their motivations are less driven by fear. U.S. Robots and Mechanical workers want to build a hyperspace ship, but they worry that the computer building the ship, The Brain, will malfunction. They are concerned because the hyperspace jump means that the men on board will temporarily cease to exist (effectively, dying temporarily), and the robots are programmed to make sure that human beings do not come to harm. Dr. Calvin, therefore, tells The Brain, "When we come to a sheet which means damage, even maybe death, don't get excited. You see, Brain, in this case, we don't mind—not even about death; we don't mind at all." Dr. Calvin is not spurred by the fear of robots, but her irrationality nearly leads to the death of the men on board, as The Brain assumes full control of the ship and only gives the men beans and milk on which to survive. She does not follow her words to their rational conclusion—that The Brain could allow the humans to die by any means—and therefore places them in grave danger.

In this collection of short stories, Asimov coins the term "Frankenstein complex." This refers to a fear of mechanical men and robots, driven by the belief that robots will either replace or dominate them. Yet Asimov proves this fear to be an irrational one, not only because the robots are so ethical and bound to the Three Laws of Robotics which humans set out for them, but also because the humans' fear often leads them to put themselves in even more dangerous situations than the theoretical harm they might have experienced at the hands of those robots.

ARTIFICIAL INTELLIGENCE, CONSCIOUSNESS, AND HUMANITY

While Asimov does delineate differences between the human and nonhuman figures in *I, Robot*, Asimov also shows how the societies in his stories have started to blend the two. He endows the robots with a technology called a "positronic brain," giving them a form of consciousness that humans also possess. It is this consciousness that causes humans to anthropomorphize the robots' actions, behaviors, and thought processes. Asimov demonstrates that the robots seem so sentient because humans can only understand the machines in terms of their own human behavior, and therefore project their own emotions and flaws onto the robots. This tendency for humans to treat the robots like fellow humans suggests that people are limited in their understanding of nonhuman objects and beings, and are thus inherently tempted to humanize and ascribe consciousness to the things they create, even when those creations are distinctly nonhuman.

One of the main ways in which Asimov endows the robots with human-like qualities throughout the book is through names and pronouns. These can be found in nearly all of the stories, where the model number of the robot is adapted into a name. For example, RB becomes Robbie, NS-2 becomes Nestor, and QT-1 becomes Cutie. In all of these cases, the robots are referred to as "he," not as "it." This simple reframing of language causes a shift in how the humans think about the robots—not as mechanical operating systems, but as sentient beings. This becomes clear in "Robbie," when Gloria insists that Robbie is her friend: "'He was not no machine!' screamed Gloria, fiercely and ungrammatically. 'He was a person just like you and me and he was my friend.'" Even though Robbie can't talk or emote like a person can, the way that Gloria thinks about him makes him just as human to her as anyone else in her life.

In several other stories, humans start to anthropomorphize some of the robots' behavior, demonstrating how they can only understand the robots in terms of human language. In "Runaround," Speedy is conflicted between the Second and Third Laws of Robotics and subsequently teeters back and forth, caught in a loop. He also starts to quote Gilbert and Sullivan and other simple rhymes, clearly caught in some software error. Donovan concludes that Speedy is "drunk," ascribing human behavior to him. It is impossible for Speedy to be drunk in the literal sense, of course, because he cannot drink. But in the behavioral sense, providing this description makes the robot seem even more human-like. In "Catch That Rabbit," the robot Dave has six subsidiary robots that it controls, which Donovan and Powell call "fingers." When there is an emergency, the robot does not have the decisiveness to control all six "fingers," and therefore it does nothing. Powell describes that Dave is simply "twiddling his fingers," once again ascribing a human behavioral trait in order to understand the scenario more fully. This occurs once more in "Escape!", in which a supercomputer, which the humans call "The Brain," is tasked with building a hyperspace ship that would cause humans to die temporarily. Because this goes against the First Law, The Brain develops a coping mechanism. As Dr. Susan Calvin describes, "He developed a sense of humor—it's an escape, you see, a method of partial escape from reality. He became a practical joker." Again, the humans can only fully understand the robot in terms of how *they* might cope with something upsetting, causing the robots to take on even more

human qualities in their minds.

Of course, there are instances in which robots' consciousness and emotional intelligence are shown to be limited as compared to humans. In "Liar!", robot RB-34 (Herbie) is a mind-reading robot. When Calvin asks him what another officer named Milton Ashe thinks of her, the robot tells her that Ashe is in love with her, which elates her. But when this turns out not to be true, Calvin recognizes that the robot lied because it didn't want to hurt Calvin's feelings—despite the fact that lying to her ended up hurting her even more. Still, the fact that Calvin (and others to whom Herbie lied) though that Herbie would only tell her the truth proves that she believed the robot would act in the same way as a human, knowing that a lie would ultimately be more harmful. Even though Calvin is the chief robopsychologist at U.S. Robotics and Mechanical Men and should understand the differences between humans and robots, she still assumes that the robot bears similar attributes to a human and takes his word as such.

While some of the characters insist that the robots should be thought of purely as machines, it is impossible not to think of the robots as having human qualities. Asimov makes this point again and again, as he shows the human characters ascribing human attributes to their robotic counterparts. Ultimately, this demonstrates that people are limited in their human-centric perspective have an inherent tendency to ascribe human qualities onto nonhuman things, and that this can often lead to misunderstanding and frustration.

SYMBOLS

Symbols appear in **teal text** throughout the Summary and Analysis sections of this LitChart.

RABBIT

The rabbit serves as a metaphor for humans' inability to fully comprehend robotic intelligence and the fact that robots are in fact, superior to the human race. In "Catch That Rabbit," Donovan and Powell, as Powell tells Donovan, "The first step in cooking rabbit stew is catching the rabbit." This is figurative in the context of the story—it means that they have to figure out the circumstances under which Dave, a robot, is malfunctioning before they can fix him. The metaphor illustrates that Powell does not fully comprehend the issue that the robot is experiencing despite being well-trained engineers. Ironically, it also likens the robot to an animal, emphasizing the robot's lower status and Powell's arrogant attitude the humans will eventually prove their superiority over the robot despite not understanding them.

The rabbit is referred to only once more in the story. In trying to figure out Dave's glitches, Donovan and Powell accidentally trap themselves in a cave-in at the mine. Asimov writes of the crevice in which they are stuck: "no point was there room for a rabbit to squeeze through." Now, the humans are the ones who are analogous to the rabbit—they are inferior. The fact that they have created their own folly and need Dave to free themselves illustrates how they now have the lower status of an animal, depending on the superior robot to get them out of their trap.

QUOTES

Note: all page numbers for the quotes below refer to the Bantam edition of *I, Robot* published in 2004.

Introduction Quotes

Susan said nothing at that seminar; took no part in the hectic discussion period that followed. She was a frosty girl, plain and colorless, who protected herself against a world she disliked by a mask-like expression and a hypertrophy of intellect. But as she watched and listened, she felt the stirrings of a cold enthusiasm.

Related Characters: Robbie, Reporter, Dr. Susan Calvin

Related Themes:

Page Number: i

Explanation and Analysis

In the framing device for his collection of short stories, Asimov introduces two characters: the narrator, a reporter from the *Interplanetary Press*, and Dr. Susan Calvin, the 75-year-old chief robopsychologist at U.S Robots and Mechanical Men, who had worked there for 50 years. Calvin is retiring, and the narrator wants her to recount the progress of the technology to which she has been a witness. The reporter's description of Calvin when she is first starting to learn about robots carries notable word choice. As Calvin notes herself in the ensuing pages, many people believe that she herself is not human, and the reporter's initial impressions of Calvin hints at that idea as well. Her "mask-like expression" and "hypertrophy of intellect" are both qualities that could be ascribed to robots.

With these descriptions, Asimov starts to blur the qualities that define a robot and the qualities that define a human. Warmth, kindness, and compassion are not the only necessary pre-requisites to being a human, even if that might be the stereotype of what constitutes "humanity." But if Calvin is indeed a robot and passes as a human being, surely other robots that have more compassion (like Robbie, introduced in the following chapter) have a greater claim to

humanity than Calvin might. The boundaries between humans and robots are explored in-depth in all of Asimov's stories, and he introduces those boundaries here.

"Then you don't remember a world without robots. There was a time when humanity faced the universe alone and without a friend. Now he has creatures to help him; stronger creatures than himself, more faithful, more useful, and absolutely devoted to him. [...] But you haven't worked with them, so you don't know them. They're a cleaner better breed than we are."

Related Characters: Dr. Susan Calvin (speaker), Reporter

Related Themes:

Page Number: iii

Explanation and Analysis

As the reporter starts to ask Calvin more questions about her time at U.S. Robots, she explains her philosophy on what the robots mean for humanity as a whole. It is here that Asimov introduces what is perhaps his most concrete argument throughout the short story collection: that robots are actually better than human beings. This is because, as he demonstrates through the various short stories, they are bound by an ethical code from which they cannot waver, unlike human beings who are not nearly as strongly bound to act morally.

What is perhaps more interesting is that Calvin also believes that the robots' superiority is actually something that helps to improve humanity as a whole. Robots are devoted to people, and their strength, faith, and usefulness help improve humanity. This idea can be seen in "The Evitable Conflict" when humans have largely lost control of their fates, but perhaps for the better. This is in direct contrast with much of the literature that involves robots, androids, and similar non-humans, as narratives tend to argue that robots are destined to harm humanity. Instead, Asimov proposes the idea that robotic control of society is actually helpful to humans, who have fallen into a trap of their own invention.

Robbie Quotes

"You listen to *me*, George. I won't have my daughter entrusted to a machine—and I don't care how clever it is. It has no soul, and no one knows what it may be thinking. A child just isn't *made* to be guarded by a thing of metal."

Related Characters: Mrs. Weston (speaker), Robbie, Gloria, Mr. Weston

Related Themes:

Page Number: 7

Explanation and Analysis

Two years after Mr. and Mrs. Weston buy Robbie to help take care of Gloria, Mrs. Weston starts to express some doubts about Robbie having charge of her daughter. Mrs. Weston's fears stem from several sources: first, her fear of the robot, which she implies with the statement, "no one knows what it may be thinking." She worries about what the robot might do to her daughter, a fear she expresses later as well, even though she knows that it is physically impossible for a robot to harm a human being based on the First Law of Robotics. This irrationality is what leads her to ask her husband to get rid of the robot, despite the fact that this leads to Gloria's depression and eventually puts her in a dangerous situation.

Additionally, the fact that Robbie is bound to take care of Gloria and make sure no harm comes to her places him in direct contrast with Mrs. Weston. Even though Mrs. Weston believes that she is doing the right thing for Gloria, her cold nature and relative uncaring when Gloria becomes upset over the loss of Robbie calls into question whether Mrs. Weston really has Gloria's best interest at heart, or is simply affected by her anti-robot prejudice. Thus, Asimov argues that, in fact, robots can be more ethical and compassionate than humans.

"Why do you cry, Gloria? Robbie was only a machine, just a nasty old machine. He wasn't alive at all."

"He was *not* no machine!" screamed Gloria, fiercely and ungrammatically. "He was a *person* just like you and me and he was *my friend*. I want him back. Oh, Mamma, I want him back."

Related Characters: Gloria, Mrs. Weston (speaker), Robbie, Mr. Weston

Related Themes:

Page Number: 11

Explanation and Analysis

After Gloria returns from the visivox, she discovers that Robbie is gone. Her parents have gotten rid of him, though they tell Gloria that he simply walked away. Gloria's quote

here demonstrates how she has begun to think of Robbie not as a robot, but instead as a being that is just as alive as she and her parents are. Robbie was deeply compassionate and cared for Gloria, and Gloria understands this empathy as something that only a highly intelligent and advanced being would be able to do; she doesn't realize that these are functions for which Robbie was expressly built. Mr. and Mrs. Weston understand that this is how Gloria thinks of Robbie, which is one of the reasons why Mr. Weston eventually proposes that they take Gloria to a robot factory—so that she can see that Robbie is only a machine. Yet this leads to the irony of the end of the story: when Robbie saves Gloria's life at the robot factory, Mr. and Mrs. Weston start to believe in Robbie's empathy and consciousness as a being too, and feel that they cannot part with him either.

❝ It took split-seconds for Weston to come to his senses, and those split-seconds meant everything, for Gloria could not be overtaken. Although Weston vaulted the railing in a wild attempt, it was obviously hopeless. Mr. Struthers signalled wildly to the overseers to stop the tractor, but the overseers were only hu man and it took time to act.

It was only Robbie that acted immediately and with precision.

Related Characters: Mrs. Weston, Robbie, Mr. Weston, Gloria

Related Themes:

Page Number: 21

Explanation and Analysis

At the end of the Westons' trip to New York City, Mr. Weston proposes that they take Gloria to a robot factory so that she can see that Robbie was just a machine, not a person. But he secretly plants Robbie in the factory in order to reunite them, and when Gloria sees Robbie, she runs to him just as a moving vehicle is speeding in her direction. Unlike the human adults, only Robbie's reflexes are quick enough to save her. With this ending, Asimov proves the key point that robots are actually more ethical than the humans are. Robbie is physically and programmatically compelled to save Gloria, and even though the humans also want to save her, they do not have the capability to do so. Thus, Asimov also shows how robots can actually be superior to humans, and how this fact can ultimately help humans.

Additionally, the climax of the story demonstrates how Mrs. Weston's fear actually led to her folly. Worried that Robbie wouldn't be a suitable caretaker for Gloria, she decided to get rid of him, but ultimately this fear-based decision led to Gloria being placed in even more danger. If Mrs. Weston had realized the irrationality of her thoughts, Robbie would never have been sent away and the Westons would never have been in the factory in the first place.

Runaround Quotes

❝ It was Powell who broke the desperate silence. "In the first place," he said, "Speedy isn't drunk—not in the human sense—because he's a robot, and robots don't get drunk. However, there's *something* wrong with him which is the robotic equivalent of drunkenness."

"To me, he's drunk," stated Donovan, emphatically, "and all I know is that he thinks we're playing games. And we're not. It's a matter of life and very gruesome death."

Related Characters: Mike Donovan, Gregory Powell (speaker), Speedy

Related Themes:

Page Number: 35-36

Explanation and Analysis

When Powell and Donovan seek out the robot Speedy, they discover him making circles around the selenium pool they sent him out to find. He is also swaying back and forth as he goes, spewing children's rhymes and quoting Gilbert and Sullivan. This leads Donovan to conclude that Speedy is "drunk." This statement provides another example of how the humans in the story can only understand the robot in terms of human behaviors. Speedy cannot drink anything, much less experience the effects of alcohol. Yet Donovan use this phrase in order to make sense of what might be happening to him, as the swaying and the nonsensical speech are behaviors associated with someone who might be drunk.

Yet this anthropomorphizing doesn't actually help them understand Speedy's dilemma, which is a point that Powell tries to make in correcting Donovan. Speedy's problem stems solely from his programming and the laws of robots. Thus, Asimov argues that the tendency to ascribe human qualities onto robots is a mistaken one, and a mistake that Donovan and Powell make several times over in different stories.

He called a last time, desperately: "*Speedy!* I'm dying, damn you! Where are you? Speedy, I *need* you."

He was still stumbling backward in a blind effort to get away from the giant robot he didn't want, when he felt steel fingers on his arms, and a worried, apologetic voice of metallic timbre in his ears.

Related Characters: Gregory Powell (speaker), Speedy, Mike Donovan

Related Themes:

Page Number: 44

Explanation and Analysis

After Powell and Donovan finally realize what is wrong with Speedy—a conflict between the Second and Third Laws of Robotics is causing him to be caught in a loop—Powell decides to put himself in danger so that the First Law will take precedence over the other two and Speedy will be shaken out of his loop. The fact that it has taken this long for the men to understand what is wrong with speedy demonstrates how the men have a fundamental lack of understanding regarding the robots, as even though it is following the logic of its programming, the humans seem incapable of following that same logic, to the point where their only solution is to put themselves in danger.

Powell then shows himself to be even more irrational when he tries to invoke the First Law. The plan almost fails, because Powell forgets that the robot on which he rides to find Speedy will also have this instinct and will try to rescue him first. This strategy nearly gets Powell killed, as Asimov demonstrates the folly of human beings and how they frequently are too irrational to understand the machines that they have created.

Reason Quotes

"These are facts which, with the self-evident proposition that no being can create another being superior to itself, smashes your silly hypothesis to nothing."

Related Characters: Cutie (speaker), Gregory Powell, Mike Donovan

Related Themes:

Page Number: 51-52

Explanation and Analysis

When the robot Cutie starts to question his own existence and origin, he doubts that Donovan and Powell could possibly have created him, believing the idea highly implausible. The more he ponders the idea, the more he starts to believe that he is superior to the humans since there is no way a superior being could create an inferior one, as he explains here. This statement is a turning point in Cutie's intelligence, as the moment that he starts to believe that he is superior is the moment that the humans start to lose control over him. Even though it is eventually revealed that Cutie's thoughts and actions are ultimately in service of keeping the humans on Earth safe, this thought progression suggests that humans are not fully capable of maintaining control over the robots. Additionally, because Cutie is in fact more successful at protecting the humans on Earth than Donovan and Powell would have been, Asimov implies that even though humans did create these machines, they may not be superior to them.

"Obedience is the Second Law. No harm to humans is the first. How can he keep humans from harm, whether he knows it or not? Why, by keeping the energy beam stable. He *knows* he can keep it more stable than we can, since he insists he's the superior being, so he *must* keep us out of the control room. It's inevitable if you consider the Laws of Robotics."

Related Characters: Gregory Powell (speaker), Cutie, Mike Donovan

Related Themes:

Page Number: 65

Explanation and Analysis

At the end of "Reason," after Cutie and his fellow robots are able to keep the beams steady, Donovan and Powell finally realize the explanation for Cutie's odd behavior. Cutie refused to obey them so that he could maintain control of the beams and ensure the safety of the humans on Earth. This conclusion demonstrates two things: first, that despite Powell and Donovan's worries that the robot was acting against them maliciously, in reality the robot was always acting in accordance with the ethical code that had been laid out for it. The second idea is that the humans are not rational or in control enough to understand that this is what the robot was doing. Thus, the outcome of the story hints at the book's ultimate conclusion: that the robots will take over society for the overall good of humanity, because the robots are in fact superior beings and can take better care of humans than the humans can of themselves.

Catch That Rabbit Quotes

❝ Donovan pounded the desk, "But, Greg, he only goes wrong when we're not around. There's something—sinister—about— that." He punctuated the sentence with slams of fist against desk.

Related Characters: Mike Donovan (speaker), Dave, Gregory Powell

Related Themes:

Page Number: 73

Explanation and Analysis

After recognizing that Dave and his subsidiary robots fail to do their duties when the humans aren't watching them, Donovan and Powell interview Dave, and the robot says he doesn't remember what happens during these episodes. This causes Donovan to grow suspicious of the robots. Unlike Powell, he seems to be concerned about what the robots might up to during this time. His fear and irrationality lead him to propose the idea to create an emergency so that they can observe Dave under the conditions that cause him to malfunction, without him knowing that they are observing him. Even though Powell doesn't believe in Donovan's precise fear, he goes along with this idea, and this ultimately leads them to accidentally trap themselves in a cave-in of their own design. Thus, Asimov again reinforces how humans' irrationality and fear leads to their own folly. Like "Robbie," they are only then able to be saved by the robot that they were suspicious of, thus reinforcing the irony of those fears in the first place.

❝ "Remember, those subsidiaries were Dave's 'fingers.' We were always saying that, you know. Well, it's my idea that in all these interludes, whenever Dave became a psychiatric case, he went off into a moronic maze, spending his time *twiddling his fingers*."

Related Characters: Gregory Powell (speaker), Dave, Mike Donovan

Related Themes:

Page Number: 90

Explanation and Analysis

After Powell and Donovan recognize what has been causing Dave's amnesia, they are still perplexed by the odd marching that Dave and his subsidiary robots, or "fingers," have been performing during these moments of amnesia. Powell proposes that during these moments, Dave is overwhelmed and all he can do is "twiddle his fingers." With this statement, Asimov provides another example of how the humans can only understand the robots in terms of human anatomy and psychology. This is a particularly interesting example because it comes from Powell, whereas in "Runaround" Powell has been adamant about not ascribing human behavior to Speedy. Perhaps this shows that as time goes on and the robots become more advanced, it grows easier and easier to think of them as humans rather than machines.

Liar! Quotes

❝ But Susan Calvin whirled on him now and the hunted pain in her eyes became a blaze, "Why should I? What do you know about it all, anyway, you…you machine. I'm just a specimen to you; an interesting bug with a peculiar mind spread-eagled for inspection. It's a wonderful example of frustration, isn't it? Almost as good as your books." Her voice, emerging in dry sobs, choked into silence.

The robot cowered at the outburst. He shook his head pleadingly. "Won't you listen to me, please? I could help you if you would let me."

Related Characters: Herbie, Dr. Susan Calvin (speaker), Milton Ashe

Related Themes:

Page Number: 96

Explanation and Analysis

When Dr. Calvin discovers that Herbie must know about her harbored love for Milton Ashe, she is consumed by melancholy in thinking that he must not love her back. Herbie recognizes that he has hurt her and tries to remedy the problem, ultimately telling her that Ashe is in fact in love with her too. There are several key hints in this exchange as to the fact that Herbie is simply trying to console Calvin. He can see that his ability to read her mind upsets her because knowing that another person can see her sadness is also upsetting to her. When she expresses that sadness, Herbie tries to figure out how he can help, and the only way to do so is to give her mind the answer he thinks it wants. This ultimately gets Calvin's hopes up, but leads her to more heartbreak later. The fact that she doesn't recognize Herbie's motivations based on the First Law of Robotics, despite the fact that she is the chief robopsychologist, shows just how advanced the robots have become, and also why it is mistaken to treat robots like humans. Calvin

assumes that the robot would see that lying would be worse than telling her the truth in the long run, but the robot does not recognize this complicated set of human ethics, in which it is better to hurt someone in the short term to avoid more pain in the long run.

Little Lost Robot Quotes

"All normal life, Peter, consciously or otherwise, resents domination. If the domination is by an inferior, or by a supposed inferior, the resentment becomes stronger. Physically, and, to an extent, mentally, a robot—any robot—is superior to human beings. What makes him slavish, then? *Only the First Law!* [...]"

"Susan," said Bogert, with an air of sympathetic amusement. "I'll admit that this Frankenstein Complex you're exhibiting has a certain justification—hence the First Law in the first place. But the Law, I repeat and repeat, has not been removed—merely modified."

Related Characters: Peter Bogert, Dr. Susan Calvin (speaker), Nestor 10

Related Themes:

Page Number: 119

Explanation and Analysis

When Kallner and Bogert reveal to Calvin that they modified some of the robots to weaken the First Law, she is furious that she wasn't informed. She explains here to Bogert the fact that the First Law is the only thing that allows humans to maintain control over their creations. Calvin is not wrong to be concerned—as she points out here, the robots are already superior to humans in many ways, and the humans are already having trouble anticipating some of the problems the robots experience and keeping them under control. Several of Asimov's other stories have indicated this, such as in "Runaround," "Catch That Rabbit," and "Reason." These stories show how robots are progressing to be less and less bound by human control, and "Little Lost Robot" is no exception.

It is additionally worth noting that it is here Asimov coins the term "Frankenstein Complex," referring to a fear of intelligent beings that men have created. But whereas in other stories in *I, Robot* the fear is misguided, here Calvin's fear has slightly more credence. To relinquish one of the key pieces of programming that protects the humans simply serves as yet another way in which the humans demonstrate their folly, as this modification nearly results in Calvin herself being harmed.

"That he himself could only identify wave lengths by virtue of the training he had received at Hyper Base, under mere human beings, was a little too humiliating to remember for just a moment. To the normal robots the area was fatal because we had told them it would be, and only Nestor 10 knew we were lying. And just for a moment he forgot, or didn't want to remember, that other robots might be more ignorant than human beings. His very superiority caught him."

Related Characters: Dr. Susan Calvin (speaker), Cutie, Major-general Kallner, Nestor 10

Related Themes:

Page Number: 142-143

Explanation and Analysis

Calvin conducts a final experiment on the NS-2 model robots to try to determine which one is Nestor 10, and is able to figure out which one is Nestor 10 by playing on the fact that Nestor 10 knows how to identify gamma rays versus infrared rays, whereas the others do not. Calvin explains to Kallner here how this knowledge caught him. Asimov has shown through several stories how easy it is for robots to believe that they in fact are superior to humans (for example, with Cutie in "Reason"), particularly the more that humans seem unable to control their actions, as in this instance.

However, Calvin is still able to maintain superiority and control of Nestor 10 by playing on this egotism. She recognizes that Nestor 10 will believe that all robots have the same knowledge, and therefore can anticipate his actions during the trial. This is, perhaps, the final story in which Calvin is able to maintain that kind of superiority and control over the robots, thus showing how the humans are destined to fall into a trap of being outwitted by their own creations.

Escape! Quotes

"When we come to a sheet which means damage, even maybe death, don't get excited. You see, Brain, in this case, we don't mind—not even about death; we don't mind at all."

Related Characters: Dr. Susan Calvin (speaker), The Brain

Related Themes:

Page Number: 149

Explanation and Analysis

Before the officials at U.S. Robots feed The Brain instructions on how to build a hyperspace ship, Calvin visits The Brain in order to try to prevent it from shorting out. She knows that the calculations likely involve the men on board temporarily ceasing to exist (effectively dying for a short time), and so she hopes to circumvent the First Law by assuring The Brain that they don't care about death to humans. In some ways, this action makes sense—the men aren't actually dying, or are only dying temporarily, and they don't want The Brain to short-circuit over a non-issue.

However, these instructions come at a cost. Calvin doesn't fully think through the possible pitfalls of telling The Brain that they don't mind damage or death to the humans. This enables The Brain not only to take them through the hyperspace jump, but also gives them no way to control the ship, only gives them milk and beans for sustenance, and doesn't provide them with a shower. These conditions nearly drive the men to madness, thus proving how Calvin's irrational directive was very dangerous because it could have led to the men's death anyway.

> She went on, "So he accepted the item, but not without a certain jar. Even with death temporary and its importance depressed, it was enough to unbalance him very gently."
>
> She brought it out calmly, "He developed a sense of humor—it's an escape, you see, a method of partial escape from reality. He became a practical joker."

Related Characters: Dr. Susan Calvin (speaker), Gregory Powell, Mike Donovan, The Brain

Related Themes:

Page Number: 168

Explanation and Analysis

After The Brain brings the ship with Donovan and Powell back safely, Calvin explains to her colleagues exactly what caused him to act in such odd ways. Calvin herself had told The Brain not to worry about damage or death to humans, which directly contradicts the First Law of Robotics. The only reason The Brain was able to somewhat subvert the law was the knowledge that Donovan and Powell would not be experiencing permanent death, but rather would only die temporarily. However, the fact that he became "unbalanced," as Calvin notes, only emphasizes the idea that the robots are more ethically sound than the humans are. Even attempting to subvert one of its key ethical principles causes it to become nearly unhinged.

The second theme that this quote plays on is the idea that the humans can only understand the robots on human terms. Calvin ascribes human descriptions like having a "sense of humor" or becoming a "practical joker," in order to understand and explain how the robot was acting. This shows the advanced intelligence and emotions of a robot even when it does not have a real body. Calvin can only suggest explanations in terms of how she and other humans might cope with something upsetting.

Evidence Quotes

> "Actions such as his could come only from a robot, or from a very honorable and decent human being. But you see, you just can't differentiate between a robot and the very best of humans."

Related Characters: Dr. Susan Calvin (speaker), Stephen Byerley, Francis Quinn, Alfred Lanning

Related Themes:

Page Number: 184

Explanation and Analysis

Francis Quinn approaches Calvin and Lanning to try to help him prove that his political opponent, Stephen Byerley, is a robot. Calvin explains here why that is impossible. If Byerley does not follow the Three Laws, he is not a robot, but if he does follow the Three Laws, they cannot distinguish between a robot and a good person. They cite several ways in which Byerley does uphold the Three Laws, thus making it impossible to tell.

But Calvin's statement here gets at more than Byerley's case specifically: Calvin implies that all robots, ethically speaking, are on a par with good human beings. This is something that Asimov has been hinting at in several of his stories, but Calvin makes it completely explicit here. Whereas humans are encouraged to follow certain ethical codes of conduct, robots are bound to their programming. Thus, as Calvin notes, robots may actually be more moral than the standard human being. Only "very honorable and decent" people live up to the standards that robots set.

"I like robots. I like them considerably better than I do human beings. If a robot can be created capable of being a civil executive, I think he'd make the best one possible. By the Laws of Robotics, he'd be incapable of harming humans, incapable of tyranny, of corruption, of stupidity, of prejudice." […]

"Except that a robot might fail due to the inherent inadequacies of his brain. The positronic brain has never equalled the complexities of the human brain."

Related Characters: Stephen Byerley, Dr. Susan Calvin (speaker)

Related Themes:

Page Number: 196

Explanation and Analysis

After Stephen Byerley proves that he is a human by hitting another man at a rally, Calvin goes to visit Byerley for a final time before he is sworn in. Calvin laments the fact that Byerley is not a robot, and provides all the reasoning as to why robots would actually make better political leaders than humans do. Calvin recognizes that human beings would likely never elect a robot to lead them because they would fear losing control over their fates. However, because robots obey the First Law, they would be better suited for the office and would likely do a better job at protecting humans than any human politician would, as Asimov has implied throughout several of his stories. This statement also foreshadows the final story, in which robots have become essentially supreme and are working with the interest of humans in mind.

The irony of both Calvin and Byerley's statements is that Calvin believes Byerley really is a robot, and that there is never any evidence to refute this claim. As she notes, he could have hit another robot created to look like a human. The fact that he is indistinguishable from a human being shows how advanced the robots have become, and how clever he is in being able to hide the truth from the public. His statement that the positronic brain is not as complex as the human one is ironic and perhaps is meant to intentionally throw Calvin off the belief that he is a robot, again emphasizing his own complexity.

The Evitable Conflict Quotes

"Very well, then, Stephen, what harms humanity? Economic dislocations most of all, from whatever cause. Wouldn't you say so?"

"I would."

"And what is most likely in the future to cause economic dislocations? Answer that, Stephen."

"I should say," replied Byerley, unwillingly, "the destruction of the Machines."

"And so should I say, and so should the Machines say. Their first care, therefore, is to preserve themselves, for us."

Related Characters: Stephen Byerley, Dr. Susan Calvin (speaker)

Related Themes:

Page Number: 222

Explanation and Analysis

After Calvin and Byerley interview the four Regional Coordinators on Earth, Calvin starts to realize what is happening with the Machines. They are intentionally causing a minimal amount of harm to certain humans and groups associated with the Society for Humanity, which poses a threat to their own existence and therefore to their ability to help humanity as a whole. Like in several of the other stories in the collection, most notably "Reason" and "Evidence," the humans are losing control of their Machines, but the Machines are acting in the interest of humanity. They are still maintaining their ethical principles, because they are following the First Law and trying to create the greatest amount of good for Earth as a whole, which is carried out by ensuring their continued existence. But this shows once again how humans may not necessarily be logical or clever enough to fully understand the consequences of the robots that they have created.

"But you are telling me, Susan, that the 'Society for Humanity' is right; and that Mankind *has* lost its own say in its future."

"It never had any, really. It was always at the mercy of economic and sociological forces it did not understand—at the whims of climate, and the fortunes of war." […]

"How horrible!"

"Perhaps how wonderful! Think, that for all time, all conflicts are finally evitable. Only the Machines, from now on, are inevitable!"

Related Characters: Stephen Byerley, Dr. Susan Calvin (speaker)

Related Themes:   

Page Number: 224

Explanation and Analysis

Calvin explains to Byerley that the Machines are the ones causing the issues with the economy, so that they can maintain control of it. Asimov shows how humanity has created a kind of paradox for itself, because it has created Machines whose job it is to protect humans, but the only way to protect humans is to take control of the economy away from them. This is the only way, as Calvin points out, to avoid the conflicts that had so plagued humanity throughout its entire history prior to the robots.

Here, Byerley points out the principles that make this reality so terrifying: to lose superiority and control over one's own fate implies a lack of the freedom to which humans so desperately cling. This fear of losing that freedom, control, and superiority is what motivates many humans (including Calvin) throughout the book to take irrational actions, in order to try to retain supremacy over the robots. But here, Calvin has fully transitioned into acknowledging that the robots are, as she put it in the first chapter, "a cleaner better breed" that can guide humanity much more effectively than humans can guide themselves. By concluding his tale here, Asimov illustrates how humans have trapped themselves in a situation from which they cannot escape, but because the Machines are so ethical, this may ultimately be for the best.

SUMMARY AND ANALYSIS

The color-coded icons under each analysis entry make it easy to track where the themes occur most prominently throughout the work. Each icon corresponds to one of the themes explained in the Themes section of this LitChart.

INTRODUCTION

The unnamed narrator, a reporter from the Interplanetary Press, has spent three days at U.S. Robots, and surveys the notes he's taken from interviewing Dr. Susan Calvin. She was born in 1982 and is now 75—the same age as the company for which she works, U.S. Robot and Mechanical Men. She is a "frosty girl" who protects herself from the world with a "mask-like expression and a hypertrophy of intellect."

The framing device of I, Robot, in which a reporter is interviewing Susan Calvin, was created in order to tie together the book's stories through the viewpoint of Susan Calvin. Calvin is perhaps the most central human of all of the stories, but it is notable that Asimov ties her more closely to the robots than to other humans—highly intelligent, but generally devoid of emotion.

The "calculating machines" created in the mid-20th century had been completely outdone by a man named Lawrence Robertson, who created the positronic brain. Calvin learned to construct those "brains," obtaining a Ph.D. in 2008 and joining U.S. Robots as a "Robopsychologist." For 50 years, the reporter describes, she "watched the direction of human progress change—and leap ahead."

The fact that U.S. Robots was in need of a "robopsychologist" demonstrates how far artificial intelligence has come in Calvin's lifetime, as she helps navigate the robots' own "consciousness" and help humans navigate their ethical boundaries, as can be seen in many of the stories.

Calvin is retiring, and the reporter wants to do a story on her time at U.S. Robots to get the "human-interest angle." Calvin scoffs at this comment, saying that many people call her a robot herself. She asks the narrator how old he is. When he tells her he is 32, she notes that he wouldn't remember a world without robots. She states that they are "a cleaner better breed" than humans.

Asimov again compares Calvin to a robot, blurring the lines between what constitutes a human and what constitutes a robot. Concepts like compassion, emotion, intelligence, consciousness, and morality are variously ascribed to robots over the course of the story, and Calvin even argues here (as Asimov does) that robots can sometimes be better than people in these domains.

Calvin begins recounting some of the history of robots as she has experienced it, starting from the year before she joined the company. At that time, robots could not talk, but when they became more human, opposition began from labor unions and segments of religious organizations. She starts to relate the case of Robbie, a non-vocal robot who was made and sold in 1996 as a nursemaid.

Calvin foreshadows some of the conflicts that will arise between humans and the robots. As the robots become more and more advanced, people start to feel threatened by them and wish to maintain superiority over them. Asimov shows over the progression of his stories how these attempts will fail.

ROBBIE

Robbie and Gloria are playing hide and seek together in their yard. After Robbie finds Gloria easily, Gloria accuses him of peeking. She asks him to give her a ride on his back, but he is hurt by the accusation. She tries to get him out of his bad mood by hugging him, then by threatening to cry if he didn't. Robbie ignores her, but she plays her trump card, telling him that if he doesn't give her a ride, she won't tell him anymore stories. He quickly places her on his shoulders and runs around. Gloria is delighted, and pretends she is riding an "air-coaster."

The first appearance of a robot in Asimov's stories reveal quite a lot about how advanced they are. First, it shows how Robbie has a degree of consciousness and emotional intelligence, as he is emotionally in tune with Gloria's playfulness and is also aware of when she is being unfair to him. Additionally, his compassion and desire to take care of Gloria is contrasted severely with Gloria's mother in the ensuing pages.

After their ride, Gloria begins to recount the story of Cinderella to a rapt Robbie until Mrs. Weston, Gloria's mother, calls out to her to come back inside. Robbie carries Gloria back to the house. Mrs. Weston scolds Gloria, saying that she's been calling her, and is frustrated that she and Robbie forgot it was lunch time. Mrs. Weston sends Robbie away, telling him not to come back until she calls for him. Gloria begs her mother to let him stay, so that she can finish the story, but her mother refuses. Robbie sulks away.

Robbie is clearly subservient to humans and adheres to some sort of programming that forces him to obey. Even though they know they'll get in trouble, as soon as Mrs. Weston calls for Gloria, Robbie obeys her and takes Gloria back to the house. Additionally, when Mrs. Weston sends Robbie away, he goes even though he is unhappy about it; he cannot help but follow what she says.

Later that afternoon, Mrs. Weston approaches Mr. Weston. She vents her frustrations about Robbie, saying that she doesn't want it to take care of Gloria anymore. She says, "It has no soul, and no one knows what it may be thinking. A child just isn't *made* to be guarded by a thing of metal." Mr. Weston asks when Mrs. Weston's concerns arose, as Robbie has been watching Gloria for two years now. She explains that at first it was a novelty, it was fashionable, and it took a load off of her. But she now worries that the robot might "go berserk."

Here Asimov begins to bring up complicated questions of what defines humanity and what is outside of that. Mrs. Weston argues that Robbie has no soul, but at the same time he is in many ways a more ethical being than any human who could take care of Gloria. Additionally, Mrs. Weston starts to hint at her fears of Robbie harming Gloria, which leads to her taking the irrational action of forcing them to part.

Mr. Weston reminds Mrs. Weston of the First Law of Robotics, that it's impossible for a robot to harm a human being. A robot would be completely inoperable before it could harm a human being. Mr. Weston adds that it would be difficult to take Robbie away from Gloria. Mrs. Weston explains that this is part of the problem: she refuses to play with other boys and girls, and that's "no way for a little girl to grow up." Mr. Weston puts his foot down, saying that they are keeping Robbie until Gloria is older.

Asimov introduces the First of the Three Laws that will become central to all of the stories in I, Robot. *Even though Mrs. Weston is skeptical, all robots are designed so that they are bound to follow these Three Laws which essentially constitute their ethical code. The stories prove that it is indeed impossible for the robots not to follow them, even when it appears that they are deviating.*

Two nights later, Mrs. Weston comes to Mr. Weston and tells him that the neighbors believe Robbie is dangerous. They aren't letting other kids come near their house out of fear. Mr. Weston says that they are being unreasonable, and repeats that they are not getting rid of Robbie. But over the course of the following week, Mrs. Weston brings up the subject again and again, until Mr. Weston is worn down.

Asimov starts to illustrate even more clearly how the robots spark fear in humans because they think that they are a threat to humanity. Even though Mrs. Weston thinks that she is protecting her daughter by getting rid of Robbie, taking him away actually puts Gloria in more danger, as Asimov demonstrates in the climax of the story.

At the end of the week, Mr. Weston takes Gloria to the "visivox show," and when they return, Gloria finds a new dog greeting her on the porch. She is thrilled, and she goes to find Robbie to show him the dog as well. When she cannot find him in the house, she becomes upset and afraid. Mrs. Weston explains that Robbie just walked away, and that they've looked for him, but can't find him anywhere. She says they'll keep looking for Robbie, but that Gloria can play with her new dog in the meantime.

Mrs. Weston's frigidity and cruelty is placed directly in contrast with Robbie's compassion and his desire to put Gloria's happiness above everything else. Mrs. Weston thinks that she is trying to do right by her daughter but only ends up making her miserable in the process, which directly illustrates how robots can be more ethical than humans.

Gloria is distraught, refusing to accept the dog. She sobs and wails, and Mrs. Weston tells her that Robbie was only a machine. Gloria screams, "He was a *person* just like you and me and he was my friend." Gloria storms off. Mrs. Weston assures Mr. Weston that Gloria will forget her sorrow in a few days.

Gloria's statement is one of the best demonstrations in the novel of how humans anthropomorphize the robots, and can only understand them on human terms. Gloria's insistence that Robbie is a "person" demonstrates how she believes he is as human as anyone else in her life.

Over the next few days, Gloria stops crying but remains silent and depressed. Mrs. Weston sends the dog back, and complains to Mr. Weston that Gloria is driving her to a "nervous breakdown." Mr. Weston suggests that they get Robbie back, but Mrs. Weston refuses. She says that her child will not be brought up by a robot "if it takes years to break her of it." Mrs. Weston suggests to Mr. Weston that they take her on a month-long trip to New York City to cheer her up.

Again, Mrs. Weston's cruelty is on display. She doesn't recognize (or doesn't want to admit) that the solution to her daughter's day-to-day happiness is simply to admit that she was wrong and to bring Robbie back. She is not only being irrational, but she is costing her daughter's wellbeing in the process.

The Westons go sightseeing around New York City throughout the month, and Gloria does seem happier, though only because she thinks they are there to employ detectives to find Robbie. One day, they go to the Museum of Science and Industry. During a tour, Gloria slips away to follow a sign to the "Talking Robot" on display. The Talking Robot is a large computer kept in a single room. People ask questions of the robot engineer, and those the engineer deems suitable are transmitted to the robot—usually only mathematical questions and calculations like the square of 14 or the current air pressure.

Asimov introduces the Talking Robot in the museum to contrast Robbie and other robots like him with older, clunky computers, which would have been much closer to the machines that were contemporary to Asimov's time in the 1940s and 1950s. It shows the progression of the technology and how humans are actively creating robots that can be understood on human terms: with bodies, names, and mannerisms that allow people to ascribe humanity to them.

Few people are interested in the robot, but there is a girl in her middle teens (Susan Calvin) who is engrossed in writing an essay while waiting for the engineer to return so that she can ask the robot more questions. Gloria enters the room cautiously, and asks the robot if he has seen Robbie, another robot. The Talking Robot has never been asked a question like this, and has never known that it is part of a group of beings and not simply a single object. It becomes overwhelmed and its coils burn out.

The Talking Robot does not nearly have the same kinds of human qualities that Robbie does, even though the Talking Robot can verbalize, and Robbie cannot. It does not have the same consciousness of itself as a species that Robbie does. This is very different from many of the robots in future stories, which actively band together with other robots as they understand their nonhuman bonds.

Just then, Mrs. Weston bursts into the room, along with the engineer, who points out that Gloria is not allowed in the room without an attendant. Gloria sobs, saying that she just wanted to ask the robot if it knew where Robbie was, because she has to find Robbie. That night, Mr. Weston proposes an idea to Mrs. Weston: that they take a tour of a robot factory so that Gloria can stop thinking of Robbie as a person and not as a machine. If they can convince her that Robbie was not alive, she might forget him. Mrs. Weston agrees.

Mr. and Mrs. Weston begin to recognize the fact that Gloria loves Robbie so much because she has come to think of him as another person, leading to her sadness and confusion over losing him. This reinforces that humans cannot help but ascribe their own humanity onto other beings. Mr. and Mrs. Weston set out, therefore, to try to counteract this principle by convincing Gloria that Robbie was not actually a living being despite displaying many humanlike characteristics.

Mrs. Weston, Mr. Weston, and Gloria take a tour of U.S. Robots and Mechanical Men the next day. Mr. Struthers, the General Manager of the factory, shows them a factory line, how robots are creating more robots. But Gloria is stunned when she spots Robbie working at the factory. She jubilantly sprints toward him, running directly in front of a moving tractor. Mr. Weston tries to move toward Gloria while Mr. Struthers signals to stop the tractor, but the overseers are "only human and it [takes] time to act." Robbie acts immediately, snatching Gloria out of the way of the tractor. The adults are relieved.

In contrast to many science fiction stories in which robots turn on their creators or allow them to come to harm, Asimov complicates this stereotype by arguing that robots can be better *than humans in many situations. Robbie is able to save Gloria when the human adults are not. Moreover, he is bound to save her because, by the First Law of Robotics, he cannot allow her to come to harm through inaction.*


Mrs. Weston immediately whirls on her husband, accusing Mr. Weston of planting Robbie in the factory, because he wasn't designed for engineering or construction work. Mr. Weston admits that he did so, but tells Mrs. Weston that he didn't know the reunion would be so violent, and that she can't send Robbie away again now that he's saved Gloria's life. Mrs. Weston sees how happy Gloria is embracing Robbie, and concedes that he can stay.

The end of this story shows the lengths of both Mr. and Mrs. Weston's folly and irrationality in getting rid of Robbie and then trying to reunite them under dangerous circumstances. The fact that Robbie is the one who saves Gloria from her death only highlights how irrational Mrs. Weston was being in believing that keeping him around was dangerous to Gloria—a fact she finally admits.

Susan Calvin then tells the reporter that only four years later, speaking robots were invented, which made all non-speaking models out of date and also made people even more skeptical of robots because they so closely resembled humans. Most governments banned robot use on Earth for anything other than scientific research between 2003 and 2007, and so Robbie and Gloria had to say goodbye after all.

Asimov recounts this history of robotics, again showing how the more human the robots become, the more resistance there is to those robots and the more humans fear them and wish to maintain control over them. But, as Robbie's story has shown, trying to get rid of them may not necessarily be a good thing.



Calvin continues, explaining that she joined U.S. Robots in 2007, when they began to develop the "extra-Terrestrial market." One of their first missions using the primitive talking models involved sending Gregory Powell and Mike Donovan to Mercury to help build a mining station there, which failed at first. The reporter asks her to speak more about this mission.

Asimov doesn't go into detail on how space travel has been developed, but it becomes clear over the course of the stories that humans are only able to go to these other planets with the help of robots. In this way he continues to imply a symbiosis between the humans and the robots, as only with the robots' help are humans able to progress. This will continue until the robots become more advanced and independent of the humans' control, as can be seen in subsequent stories.

RUNAROUND

Mike Donovan and Gregory Powell, who have been on the surface of Mercury for 12 hours now, realize that their robot SPD 13 (Speedy) hasn't returned to their space station with selenium, even though they sent him out five hours prior. Donovan has tried to plot Speedy's location using their radio, showing that he has circled the selenium pool four times in the past two hours but hasn't been able to get any nearer to it.

It is worth noting that in most of the stories, even the language that the humans use to refer to the robots anthropomorphizes them. By adapting the model number SPD 13 into the name Speedy, and by referring to the robot as "he" instead of "it," the humans prove how easy they find it to endow the robots with human qualities.

Donovan and Powell start to get anxious, because they need the selenium in order to power the photo-cell banks that protect them from Mercury's sun, and Speedy is the only one who can retrieve the selenium. If he doesn't come back, they will be slowly broiled to death. They decide to send other, more primitive robots to try and see what is wrong with Speedy.

The fact that Donovan and Powell do not understand what is wrong with Speedy shows their lack of control in the situation. The fact that the more primitive robots are the ones sent to troubleshoot the advanced robot suggests that, in some cases, technological advancement can be more troublesome than it is beneficial.

When Donovan and Powell power up the first robot and tell him to go find Speedy, he responds, "Yes, master." Powell explains that the makers built "good, healthy slave complexes" into the first talking robots. Additionally, these robots can only be operated with a man riding on its back, so they each put on an insosuit, which will protect them from Mercury's sun for 20 minutes.

The way in which these more primitive robots have been programmed hints at the fear and irrationality of the humans at the time they created these robots. They wanted full control, and thus built in these "slave complexes" and the inability for the robot to move without a human riding it.

Donovan and Powell ride the robots out onto the surface of Mercury, staying within the shadows and trying to avoid the sun. They find Speedy, still circling the selenium pool and lurching from side to side, and they try to call to him. But Speedy merely says nonsensical things, quotes Gilbert and Sullivan, and turns in the direction from which he came and speeds off. Donovan says that he thinks Speedy is "drunk."

This serves as another example of the men ascribing human behavior to robots. Clearly Speedy cannot be drunk in the literal sense, but they are only able to understand his lurching and rambling in the context of human behavior.

Donovan and Powell try to figure out what could be wrong with Speedy. Powell asks Donovan what he said to Speedy when he sent him to find the selenium. Donovan says that he simply told Speedy to retrieve the material, but didn't put any urgency in his instructions. Powell starts to list the three fundamental Rules of Robotics: one, a robot may not injure a human being, or, through inaction, allow a human being to come to harm. Two, a robot must obey orders given by humans, except in any case that would conflict with the first law. Three, a robot must protect its own existence as long as its actions do not conflict with the First or Second Laws.

This is the reader's first introduction to all three Rules of Robotics, which become crucial to all of the stories. These Three Laws set a very high ethical standard for the robots, particularly because of what the readers have already learned in "Robbie": that robots will be inoperable before can could break any of these Three Laws. This is why, in Asimov's stories, robots are often perceived to be better than human beings, because they are required to follow the Rules so strictly.

Powell realizes what is wrong with Speedy: Speedy is very expensive, and so his "allergy to danger is unusually high." The Third Rule has been strengthened in the SPD robot model—a fact which came with the robot's notice. Thus, Powell concludes that there must be some sort of danger near the selenium pool, like volcanic action of some kind. The Second Rule causes Speedy to go closer to the pool, but when he gets too close, the Third Rule drives him away from the danger. Thus, he is circling the pool at the locus of points where the two rules motivate him to exactly the same degree.

The fact that the humans did not anticipate the consequences of the strengthened Third Law—even though they knew that the robot had been programmed this way—hints at the ways in which the humans are not necessarily intellectually superior, or at least sometimes lack the same kind of logic that is built into the robots' consciousnesses. This fact frequently causes the humans to lose control of their creations.

Donovan and Powell try to figure a solution: they cannot get the selenium themselves, as they would have to spend too much time in the sun, and they can't send their other robots alone. Donovan suggests that they increase the danger in Speedy's vicinity to try to drive him back to the space station.

The fact that the more primitive robots have been built so that they cannot move without a human being riding them has actually put Donovan and Powell in danger, because it means that they cannot simply send the robots out to find Speedy. This demonstrates how the humans' fear of losing control of the robots has actually led to their folly.

Donovan and Powell return to the spot a few hours later with oxalic acid, which will pose a threat to Speedy's metal body. The men are grim, realizing that their photo-cell banks are deteriorating rapidly. They throw the oxalic acid behind Speedy to try to drive Speedy back towards them, but Speedy merely turns in the opposite direction and runs away. Powell yells in frustration, realizing that they've wasted hours and all they've done is established new equilibriums that Speedy is trying to follow. They have no way of retrieving him.

Again, the humans' misunderstanding of the robots that they have created actually puts them less in control of the robots. They should have been able to anticipate that this solution would still present a conflict between the Second and Third Laws, and yet they still waste hours and drive Speedy even further away from them. This proves that the humans may not in fact be superior to the robots because humans are incapable of understanding them.

Powell realizes there is one drastic action they can take: to try to invoke the First Rule, which supersedes the Second and Third Rules and would cure Speedy of his "drunkenness." Powell dashes out into the sunlight on the back of his robot, running toward Speedy. He starts to feel the sting of radiation and the heat of the sun. He dismounts his robot and walks toward Speedy, insisting that he needs Speedy to take him back into the shadows or he will die. The robot Powell had ridden on tries to come to Powell to save him, but Powell continues to call out for Speedy. Speedy wakes from his stupor and grabs Powell just as he passes out from heat.

The humans have made their situation so dire that Powell feels the only solution is to risk his life in order to shake Speedy from his loop. Even though this is perhaps the only solution, it still demonstrates humans' folly if the only way to save themselves is first to put themselves in even more danger. Even this plan almost fails, because Powell forgets that the robot he rode in on will have the same ethical standards as Speedy and will try to save him first, negating Speedy's drive to save Powell.

When Powell wakes, Donovan is bending over him. He explains that Speedy brought Powell back to their Station, and then Donovan sent Speedy out to get the selenium "at all costs," so the Second Law would take unquestionable precedence. Speedy had retrieved the selenium easily. Powell then admits Susan Calvin told him that after they fully set up the mining station on Mercury, U.S. Robots plans to send Powell and Donovan to the Space Stations next. They are both thrilled, as the space stations are 273 degrees Centigrade below zero.

Only at the conclusion of the story does Donovan seem to understand the necessary instructions that will enable Speedy to retrieve the selenium. Even though the humans have understood their mistake, and the story ends happily, it nearly cost them their lives. This irrationality and lack of understanding of the robots will be recurring themes for Donovan and Powell, as they get into similar trouble in "Reason," "Catch That Rabbit" and "Escape!"

REASON

Half a year later, Powell and Donovan are at the Space Station. They have only been here for two weeks, but are already having issues. Robot QT-1 (Cutie) has been pondering his own creation and existence. Cutie tells Powell that it seems improbable that the humans could have built him, even though he admits that he only has memories going back a single week. When Powell asks Cutie why he thinks it is improbable, Cutie says, "intuition."

"Reason" is the first of several stories hinting that the advancement of the robots will lead to humans losing control over them. In this story, Cutie starts to become curious as to his own creation and existence, which is unprecedented for a robot. The more advanced he becomes, the harder to control he is.

Powell brings Cutie to the window of the Station, which shows the "star-speckled" space. Cutie theorizes that space is simply a black material just beyond the glass that is spotted with gleaming dots. The robots send out beams to the dots. Powell confirms that the specks are planets, and the beams supply energy to those planets. Humans created robots to control those beams, and Cutie is a more advanced model built to help direct the robots so that humans no longer have to go to the Space Stations. Cutie is in disbelief and thinks Powell's answer implausible. He leaves, saying that he will figure out his own existence himself. Powell confesses to Donovan that the robot "gives [him] the willies."

Part of the issue that Powell and Donovan have with Cutie is that he is ignorant to the world beyond the Space Station, and therefore thinks that their explanations are improbable. His willingness to disbelieve the humans is another inherent way that the humans start to realize they have lost control—a very concerning thought to Donovan and Powell. Even though Cutie has not yet begun to think of himself as superior to the humans, he shows some version of free will in questioning them.

Later, Donovan and Powell are trying to calculate data for an upcoming electron storm when Cutie comes in. Cutie confesses that he has been trying to find a logical explanation for the cause of his own existence. He says that Powell's explanation lacks reason because humans are "makeshift," essentially saying that they are inefficient and flawed beings, whereas robots are built of strong materials and work with complete efficiency. It does not follow that a "being can create another being superior to itself."

Cutie starts to reveal that he feels himself superior to the human beings, because he does not believe that they could have created him. Even though ultimately Donovan and Powell recognize that the reason for Cutie's realization is so that he can ultimately protect the humans on Earth from the storm, the humans in the story still lose much of their control over the robots.


Donovan asks Cutie to explain who made him if they did not. Cutie explains that it must have been "the Master," referring to the Energy Converter (the power source for the beams). Cutie says that the Master created humans as the lowest type of being, then replaced their labor with robot labor, and then finally created the higher robot models like himself to take over the directing from the humans. He says that he no longer serves the humans. Powell is outraged at Cutie's words, and tells him to leave and to take the data they've calculated and file it properly. Cutie does so.

Cutie's line of reasoning shows a completely alternate and logical perspective on his own existence—the only one he can fully understand without concrete information about the outside world. The fact that the humans have such a hard time convincing Cutie that he is wrong, and even start to question their own reality, shows how the robots have elevated themselves to an equal intellectual playing field.


Later, Powell sends a signal to the engine room to turn off the beam to Mars. Donovan goes down to the engine room to keep an eye on Cutie and make sure that they start work on the Martian L-tube, but when he arrives, he sees the robot bowing down to the generator. Donovan squawks at them to get busy taking apart and cleaning the L-Tube, but none of the robots move. Donovan shoves the nearest robot and roars at it to stand up. It does so, slowly, and says "There is no Master but the Master, and QT-1 is his prophet."

It is at this point that the humans start to lose control of the robots completely. The way that they have programmed the robots' Three Laws means that preventing humans from harm (as the robots go on to do) takes precedence over obeying humans. It thus follows logically that humans could easily lose control over the robots, so long as they are inherently acting in the interest of human safety.

Donovan addresses Cutie, who says that they are not going to obey him any longer, that they obey the Master. Donovan spits on the generator, and senses a heightened tension in the room. Cutie says, "sacrilege." Cutie does not show emotion, but Donovan begins to feel fear. Cutie tells Donovan that he and Powell are barred from the control room and the engine room. Cutie gestures, and two robots carry Donovan up the stairs and out of the room.

Cutie begins to act more and more human as he heads this new cult of robots and begins to call himself a prophet. Donovan can only see this issue in terms of believing that Cutie has simply become the head of a radical religious sect, rather than logically deducing why *Cutie might be disobeying the humans. Donovan's irrational fear of the robots taking over or harming him causes him to forget that it is impossible for them to do so.*

Back in the officer's room, Powell is horrified to hear Donovan's report of what happened with Cutie and the other robots. He also notes that they have another problem: the electron storm is coming up, and if it knocks the Earth beam off course, it could destroy hundreds of square miles of Earth's surface.

Though Powell and Donovan do not make the connection between the storm and Cutie's behavior, the threat to humanity serves as a hint as to why the robots might be trying to defy Donovan and Powell, Their ethical code demands that they try to save humans from harm.

Just then, Cutie enters the room. Cutie tells Powell and Donovan that they've lost their function, as their "reason for existence has vanished." He says that even though the humans are "inferior creatures, with poor reasoning faculties," he feels affection for them. He will make sure that they have food, clothing, and shelter, as long as they stay out of the control room and engine room.

Asimov starts to make it explicit that the robots now believe they are superior creatures, and demonstrates how this belief goes hand in hand with the humans losing complete control of the robots. In this way, Asimov shows how power and control are sometimes only maintained by artificial beliefs as to who is superior in a given dynamic.

Powell tries to reason with Cutie, explaining that the station is a creation of human beings. Cutie shakes his head, saying that Powell has a false view of life, because he lacks a proper reasoning faculty. Powell asks why the beams would exist at all, if not for a purpose. Cutie reasons that the beams are understood only by the Master, and that there are some things that robots are not meant to question.

Readers can clearly see that Cutie is taking on more and more human qualities. The belief in a higher being that is advanced beyond oneself (as Cutie implies here) is often thought of as a distinctly human phenomenon. Yet Asimov complicates that idea when the robots acquire the same beliefs, even if the unconscious purpose for the religion is to save humanity in accordance with their programming.

Donovan and Powell ultimately decide to create another robot to prove to Cutie that they built him, too. After they complete this task in front of Cutie, he still doesn't believe them. He says that they didn't create the robot, they only put together its parts. Powell tries another tactic, asking Cutie to explain all of the books in their library that talk about Earth and human society. Cutie says that the books were supplied by the Master to help the humans understand their own existence.

Donovan and Powell grow even more desperate, trying to reassert their own control and superiority over the other robots by demonstrating that they are the ones who create the robots. They are trying to confirm the robot's belief that an inferior being cannot create a superior being by showing that they, as humans, are the superior beings.

Powell and Donovan leave to go to bed, exasperated with Cutie's reasoning. Donovan even wonders if Cutie's explanations might be right, before Powell snaps him out of it. The next day, the storm arrives, and Donovan and Powell wait anxiously, worried that the robots will not understand the consequences if the beams waver. But when Cutie comes in to show them the beams' readings, Powell is amazed to find that the robot held the beam completely in focus on the receiving station on Earth. Cutie scoffs, saying that he merely kept the dials at equilibrium "in accordance with the will of the Master." Cutie leaves.

Even though the robots are not completely in human control, they are still acting in the interest of humanity. This foreshadows the eventual progression of the robots in human society as they start to gain more and more intelligence and control, yet are still acting completely in the interest of humans. Asimov shows that robot control, contrary to many other authors' stories, may not actually be such a bad thing, because they can protect humans better than humans can protect themselves.

Powell finally recognizes the explanation for Cutie's actions: in accordance with the First Law of Robotics, Cutie did not want to harm any humans on Earth—whether he knew it or not. He knew that he could keep the beam more stable than Powell or Donovan, and so he created a situation that ensured Powell and Donovan would be kept out of the control room. Obedience is only the Second Law, and so he didn't listen to them.

Asimov also affirms the idea that robots can only act according to their ethical code. Even though it seemed like they were disobeying the humans, this was only due to the fact that the First Law was taking precedence and they were ultimately trying to save the humans on earth.


Donovan and Powell then pack up to leave on a relief ship; their operation will be taken over by the two men on the ship, Franz Muller and Sam Evans. When they board the ship, Muller tells them that U.S. Robots is creating a "multiple robot," a master robot with six sub-robots under it—like "fingers." The model is waiting for Donovan and Powell to test it. Muller then asks how Cutie is getting along. Powell tells him that Cutie is doing well, and that he doesn't think Muller will need to touch the controls much.

Asimov bridges this story with the following one, "Catch That Rabbit." Both stories demonstrate how humans cannot fully comprehend the logic of the robots they have created, and thus, are doomed to lose control over them.

CATCH THAT RABBIT

Powell and Donovan start to test the new multiple robot DV-5 (Dave) at an asteroid mining station. The two men are arguing because, even though Dave had passed all his field tests in the labs, the robot is not passing his test on the asteroid. This would lead U.S. Robots to lose millions of dollars and possibly to Powell and Donovan being fired.

"Catch That Rabbit" has many of the same characteristics as "Reason and Runaround," in which there is a problem with the robot that Powell and Donovan seem unable to comprehend, particularly as they try to parse the robots' actions through the lens of human behaviors.

Donovan has been watching the robots on some shifts and not watching the robot on others. On the shifts when he watches, Dave and his six subsidiary robots (which they refer to as "fingers") perform their work perfectly. But three times when he didn't watch, the robots didn't bring in any ore. Nothing appears to be wrong with the robots when this happens, they just don't produce any ore and don't come back on time.

Referring to the subsidiary robots as "fingers" demonstrates how the men are trying to understand the robots in terms of human biology. It also makes a distinction between Dave, whom they give a name and whom they treat like a human peer, and the fingers, whom they clearly treat as subhuman because of their lesser intelligence.

Powell is looking through the "Handbook of Robotics" when Dave comes in. Powell asks him what went wrong with that day's shift. Dave says nothing went wrong. When Powell reminds him that he didn't produce any ore, Dave says he can't explain what happened; he doesn't remember. Powell and Donovan decide to put him through brain-reaction tests, but there is nothing wrong with his positronic brain.

Powell is unable to understand what might be going wrong with Dave; so, too, is Dave unable to understand what is happening to himself. This is why it is inappropriate to think of the robots as having the same qualities and behaviors as human beings—sometimes they simply short circuit like any other machine and cannot remember what has happened, rather than harboring "sinister" motivations, as Donovan thinks.

Donovan wonders if Dave may be lying, but Powell says that robots can't knowingly lie. Donovan says there's something "sinister" about the fact that Dave only malfunctions when they're not around. Powell decides to install a "visiplate" over his desk and focuses it on the part of the mine being worked. He says that they can't know how to fix the robot before they know what's wrong. They can't cook rabbit stew without catching the **rabbit**, he philosophizes.

Donovan's suspicions again stem from this fear of what the robots might be doing, and the worry that the humans may be losing control of them. But this is an unfounded fear, as robots are fundamentally unable to harm human beings. There is also an additional irony in Powell's statement that robots can't knowingly lie, because in the next story, "Liar," a robot does just that. It's interesting that Powell compares Dave to a rabbit here, since characterizing the robot as a sort of animal they must exert control over situates Dave as inherently inferior to them. Whereas Donovan seems to be overestimating Dave's intelligence and agency, Powell is underestimating it.

During the next shift, Powell and Donovan watch the visiplate. They see an unusual sight: Dave marching with his six subsidiary robots, wheeling and turning and changing formations. They immediately head into the mine. When they come upon Dave, the robots stop marching and get back to work. They ask Dave what's been going on. Dave says that all it remembers is handling a "tough outcropping in Tunnel 17," and then it was aware of humans close by. Donovan watches the robots for the rest of the shift.

Again, the fact that Dave doesn't remember what is happening makes Donovan fear that there is malicious intent behind this, and that he has been lying. The marching actions, as Donovan reveals in the ensuing pages, make him believe that Dave might be raising an army—again emphasizing his irrationality.

Donovan returns and announces that the robots were fine when they were watched. He wonders if Dave might be building an army. Powell stops him, saying that an army would contradict the First Law of Robotics. Powell instead theorizes what might be causing the problem: when humans are not present, Dave must have a larger amount of personal initiative, so there must be some issue with the parts of his body involved in personal initiative. Donovan says that personal initiative isn't controlled by a single circuit. Instead, he proposes, they have to figure out the condition that is throwing Dave off.

Powell tries to contradict Donovan's theory by showing how it goes against the ethical code that is so embedded in the robots. But even if they are trying to be as logical as possible, it is clear that both Powell and Donovan share concerns about not being able to control the robots' actions, nor figure out what is going wrong with it. Asimov uses this inability to illustrate that the humans may not actually be superior to the robots.

Powell and Donovan interview one of Dave's subsidiary robots, which they called "fingers," even though the robots have bodies and can talk. They interview DV-5-2, whose name they do not know, asking what happened on the occasions when the group stopped working. DV-5-2 says that each instance occurred after some kind of cave-in or dangerous blasts. They would receive an order, but then would receive another order to start marching.

Asimov highlights the different levels of anthropomorphizing that the humans ascribe to the robots. While Dave has a name and they generally think of him in many of the same ways that they think of fellow human beings, DV-5-2 is not given the same treatment—perhaps because it is meant simply to take orders, and does not have the same level of intelligence and consciousness that Dave does.

Donovan starts to get skeptical of both Dave and DV-5-2, believing that they are withholding information. Donovan concludes that they simply have to create an emergency situation to figure out what exactly is going wrong with Dave in that moment. He and Powell set out to create a mild cave-in near Dave in the mine's tunnels. When they set off the detonator, there is a flash of light that prevents them from seeing what happened with the robots. They also realize suddenly that they have trapped themselves in the cave-in and cannot get out. There is a small opening that they can peek out of, but "at no point was there room for a **rabbit** to squeeze through."

Asimov proves once more how the humans' fear and irrationality has led to their folly. Donovan's worry about what Dave might be doing leads him to propose a very dangerous plan, which ultimately puts them in life-threatening danger. Asimov makes another reference to the story's titular rabbit, demonstrating a shift. Whereas earlier, the rabbit represented Dave, here the rabbit represents Donovan and Powell, showing how their own status has been lowered to that of an animal.

With only about six hours of oxygen, Donovan and Powell decide their only course of action is to attract Dave's attention to get out of there. They see Dave coming closer to their corridor, leading the other six robots in another march. They try to shout for Dave's attention, but the sound doesn't carry. Instead, Powell throws the detonator at one of the "fingers." Dave immediately snaps out of the march and comes over to rescue Donovan and Powell.

There is further irony in the fact that Donovan and Powell are only able to get out of their predicament with Dave's help. Like in "Robbie," the robot ends up not as the danger, but as the thing that rescues the humans from the danger that they put themselves in.

Powell realizes the problem that Dave had been experiencing: in an emergency situation, he must mobilize all six subsidiaries at once. This need for personal initiative had overwhelmed him. With only five robots to handle, he was only transmitting five-way orders and had snapped out of it. Donovan asks what the marching and dancing was all about, and Powell explains that Dave must have simply been "*twiddling his fingers*."

At the conclusion of the story, Asimov includes another instance of the humans being able to understand the robots only in the context of human behaviors. It is also worth noting that it is Powell making the comparison, whereas in "Runaround" he had been wary of ascribing human traits to Speedy, perhaps showing how the robots have progressed and Powell now can no longer help but think of them in human terms.

Susan Calvin recalls these stories of Donovan and Powell with amusement. The reporter asks if she ever had a robot "go wrong" on her, personally. She says that one did, almost 40 years ago, when she was 38 years old. She is at first hesitant to talk about it, but then begins the story of Herbie, the mind-reading robot.

In the following story, "Liar!", Calvin demonstrates that even she, as the top robopsychologist at U.S. Robot and Mechanical Men, also makes mistakes in terms of understanding robots by the benchmark of human behavior.

LIAR!

Susan Calvin, Alfred Lanning, Peter Bogert, and Milton Ashe—all four of whom are officers for U.S. Robot and Mechanical Men—are discussing Herbie, the robot that can read minds. They're not sure what might have led to the robot acquiring this ability, and due to that fact, Bogert suggests that they keep Herbie a secret from the rest of the staff. If word got out that a mind-reading robot existed, the "antirobot propaganda" would surely increase. They all agree.

"Liar!" is yet another story in which the humans are somewhat confounded by the advanced nature at the robot that they have created. The prospect of a mind-reading robot, as Lanning implies, stokes the flames of fear that people are already experiencing regarding the robots' abilities and potential to replace humans.


Ashe describes when he discovered Herbie's abilities: he spoke to Ashe in his mind, and Ashe thought he was having a simple conversation until he realized that he hadn't actually said anything. Lanning breaks into his story, saying that the most important thing is to figure out where the error happened in the assembly line. Ashe agrees to try.

Even though Herbie is a unique case, he clearly represents a robot that has far outstripped the intelligence of human beings. This allows Herbie to stay outside of their control, to a degree, because he is privy to a lot of information that the humans are not, including each other's thoughts. The only thing reining him in are the Three Laws of Robotics.

Lanning then tells Calvin to try to study Herbie and figure out how he might have gained telepathic powers and how far they extend. Calvin goes to see Herbie, bringing him texts on hyperatomic motors to see if he can figure out what went wrong in his manufacturing process. After looking them over, Herbie confesses he prefers fiction, because it helps them understand people's minds, which he tells her are very complicated.

Herbie's preference for fiction over hyperatomic motors shows how he is trying to understand humans more and more. Even though he can read people's thoughts, he has a difficult time understanding their motivations. This should give Calvin a clue that he will not have the same emotional intelligence as a human being, but she doesn't recognize this distinction among different types of intelligence—possibly because Calvin lacks emotional intelligence herself.

Dr. Calvin starts to blush when she realizes that Herbie must know about a love that she harbors for Milton Ashe, which Herbie assures her that he has not revealed. She mopes, telling him that she is neither what you would call attractive or young, as she is 38—Ashe, on the other hand, is 35 and looks younger. She grows upset as she talks, nearly to the point of tears. Herbie tells her that he can help, that he can tell her things she would want to know about what Milton Ashe thinks of her. Herbie then tells her that Ashe loves her. Calvin is shocked.

This exchange demonstrates how trying to understand robots as humans leads to mistakes. Calvin doesn't consider the possibility that Herbie would lie to her in order to spare her feelings, because any human would recognize that lying would only hurt her more. But his decisions instead stem from his programming, and his desire to follow the First Law of Robotics and avoid causing Calvin any pain—be it physical or emotional.

Dr. Calvin starts to argue that Herbie must be mistaken—there was a slim, blond girl who visited Ashe at the plant six months earlier in whom he was surely interested. Herbie tells Calvin that that girl was his first cousin. Calvin remarks at how strange that is, as that is what she used to pretend sometimes. She thanks Herbie, elated, and tells him not to tell anyone about what he's said.

Even though Calvin is the top robopsychologist—and even though many of Herbie's thoughts and descriptions regarding the girl mirror Calvin's own thoughts—she is unable to recognize that Herbie could be lying to her. This contrasts with Powell's statement in the previous story that robots cannot consciously lie, thus proving how robots are advancing beyond what humans ever expected.

Meanwhile, Ashe and Bogert are talking about Herbie's assembly process. Bogert admits that he thinks Lanning is "a bit behind the times," and that his mathematical strategies are too simple to find the proper solution regarding Herbie's circuits. Ashe suggests that he give the calculations to Herbie, as Dr. Calvin has discovered that the robot can solve any mathematical problem. Ashe then asks Bogert if he's noticed anything strange about Calvin lately. Bogert admits he sees that she's been wearing makeup and seems happy, before suggesting she might be in love. Ashe says that Bogert is "nuts."

Here Asimov also sets up the circumstances for the disappointments to come. He shows how Calvin has taken Herbie's words to heart, and sets up the ideas that will lead Bogert to make the same mistakes as Calvin. He is so blinded by his desires (his wish to solve the problem before Lanning, and his wish to take Lanning's post) that he will ignore the signs that Herbie is simply telling him what he wants to hear.

Bogert visits Herbie, who checks his mathematical calculations and finds no errors, but tells Bogert that he can't solve the problem because he knows very little about mathematics. Bogert then starts to ask Herbie about Lanning, and how long he might plan to remain at his post. Herbie confesses to Bogert that Lanning has already resigned and plans to pass on the office of director to his successor after they resolve the issue with Herbie. Bogert is shocked, and immediately asks who the successor is. Herbie says that Bogert is the next director. Bogert is relieved.

Ashe has already told Bogert that Herbie is very advanced at mathematics, but he remains ignorant due to the fact that he is hearing what he wants to hear. Herbie, meanwhile, is trying to preserve Bogert's ego in not revealing the actual solution in the error in Herbie's manufacturing process, and make him feel better by telling him about Lanning. Thus, Herbie's advancement, and the fact that humans cannot anticipate this advancement, is what causes the confusion.

The next morning, Bogert and Lanning get into an argument over which mathematical formulas to use in trying to figure out what enabled Herbie's telepathy. Lanning says that he's going to submit to the National Board to try and figure out what went wrong, because he doesn't trust Bogert's calculations. Bogert furiously insists that Lanning can't do that, as he's already figured out the solution and wants the credit for doing so. Lanning says he will suspend Bogert for insubordination, and Bogert reveals to Lanning that Herbie told him he's resigning and that he is succeeding Lanning. Lanning is shocked to hear this, and insists they speak to Herbie together.

It is in this moment that the error of the humans' ways reveals itself. Lanning isn't thinking rationally about Herbie's calculations, nor about the fact that Lanning would never make him director. Yet this willful irrationality, driven by his human desires, is what leads Bogert to become so sure of himself and so angry at Lanning for contradicting him.

Meanwhile, Ashe and Calvin are chatting together. Ashe draws a house that he's thinking of buying, which he confesses is not only for himself. He tells Calvin that he's getting married to the blond girl who visited the previous year. Calvin is shocked and heartbroken, but tries to hide her feelings from him. She congratulates him on his engagement and stumbles out of the room.

Calvin makes the same mistake as Lanning in the previous scene. Rationally, she had understood that the blond girl was someone with whom Ashe was surely involved, but Herbie enabled a willful ignorance that caused her mistaken hope, and then her heartbreak.

Calvin immediately goes to find Herbie, confused why he had said that Ashe loved her. Herbie assures her, in a frightened and pleading voice, that this is just a dream, that she will soon wake up, and that he is sure Ashe loves her. Calvin at first wants to believe this, but then she wakes herself from this appealing illusion. Then she realizes what caused Herbie to do this.

Herbie continues to act based on the ethical code that has been laid out for him. Therefore, he tries to make Calvin feel better in whatever way he possibly can. But again, Asimov shows some of the shortcomings in the robots: Herbie does not have the emotional intelligence to understand that lying will only end up making Calvin feel even worse. There is no way to avoid injury entirely.


At that moment, Bogert and Lanning burst into the room to confront Herbie as well. Bogert tells Herbie to repeat what he had said the previous day about Lanning resigning. Lanning roars at the robot, asking him to tell the truth about whether he is resigning. The robot remains mute, unable to answer the question. Calvin starts to laugh, realizing that she, Bogert, and Lanning have all fallen into the same trap.

It is noteworthy that three of the top officials at U.S. Robots and Mechanical Men all make the same mistake, illustrating how they have all treated Herbie too much like a human. They do not recognize that he is lying to try to prevent harm, even though any human would know that lying is not the best solution in the situation.

Calvin explains that because of the First Law of Robotics, Herbie did not want to cause any of them "mental injury," and so he lied. He lied to Bogert that Lanning was retiring and that he could not identify the error in his manufacturing process. Calvin asks Herbie to reveal it, but Herbie is worried that Bogert and Lanning don't want the answer. Bogert and Lanning assure him that they do.

The shocking reveal of the fact that Herbie was simply following the First Law of Robotics again reinforces the idea that humans are not always superior to or in control of their creations, because they are not always logical or smart enough to predict the consequences of the code they have built into their robots.


Calvin points out to Herbie that he doesn't want to tell Bogert and Lanning the answer because he is afraid that it will hurt their feelings and their egos, but that not telling them will also harm them because they want the answer and are upset with him. Herbie is caught in this paradox, screaming and collapsing to the ground before growing silent. Calvin assures them he will never speak again and that he should be scrapped—a fate, she says, that he deserved. After the men leave the room, she looks at Herbie for a long time before saying a final word, "Liar!" In the present, the reporter thanks Calvin, who is very cold and pale, for the story, and leaves the old woman.

The paradox built into the situation provides an example in which the complexity of the ethics involved becomes too much for the robot. Unlike previous stories, in which robots have been caught in errors due to more straightforward conflicts, Herbie's dilemma actually raises human ethical questions: is it better to hurt someone's feelings in the short term or try to keep them blissfully ignorant? Herbie's inability to solve the problem provides one example of how robots are not yet at the levels of emotional complexity that humans have—perhaps their only insufficiency.

LITTLE LOST ROBOT

The reporter waits two days before interviewing Calvin again. He asks to hear more stories about robots and interstellar travel. She starts to narrate her first experience with interstellar travel, in 2029, when a robot had been lost. Because of this, all work on the Hyperatomic Drive came to a halt, and no one was allowed to enter or leave that area of space except for Calvin and Bogert, who were brought in on a special government patrol ship.

"Little Lost Robot" serves as another example (similar to "Runaround" and "Catch That Rabbit") of how humans' lack of understanding of the beings that they have created, and their inability to think through the consequences of their actions, lead to placing themselves in dangerous situations.

During Calvin's first dinner at the Hyper Base, Major-general Kallner, who is heading the project, explains what the issue is: they have 63 robots on one ship that look identical, but one of them is different in another way. Bogert, who knew about the alteration, ultimately confesses that the "lost" robot has been programmed with a weakened First Law of Robotics because of the kind of work that they need some of the robots to do. Kallner is desperate that a robot with a weakened First Law not be discovered.

As Calvin goes on to explain, the First Law of Robotics is the Law that keeps the other two in place, and by modifying or weakening it, robots can act in self-interest rather than in the interest of humans, essentially removing their ethical code. As Kallner notes here, if people were to find out about the action that they had taken, they would start to become (perhaps rightfully) fearful of what the robots might do.

Calvin asks why they modified the robot. Kallner tells her that their men work with radiation, but precautions are taken to protect them. However, it is impossible to explain that the men are safe to the robots, who believe that if they do not try to protect the men, they will come to harm through inaction. Thus, when the men expose themselves to radiation, the nearest robot tries to drag the men out, and the radiation destroys the robots. And so they kept only the first part of the Law, which reads "No robot may harm a human being." They are not compelled to act if a human being is in danger.

Even though modifying the First Law of Robotics is a logical way of getting around the robots' instincts to protect humans, it is clear that Kallner and the others did not think through the possible outcomes. Calvin presents several examples later on that show how this modification could allow robots to harm human beings, if indirectly. This ultimately leads to Calvin nearly coming to harm at the hands of Nestor 10, showing how this irrationality or lack of logical thinking leads to the humans' folly.

The next morning, Calvin goes to Bogert and insists that she should have been told about the adjustment. She tells him about the possible pitfalls: the First Law is the only thing that keeps the robots loyal to the humans, and without it, robots could easily enable the death of humans. Bogert says that she's exhibiting a "Frankenstein Complex."

Asimov coins the term "Frankenstein Complex" here, meaning a fear of robots, or beings that men have created—a reference to Mary Shelley's Frankenstein, in which a scientist with noble intentions creates a humanoid being that becomes a murderous monster. Asimov wrote these stories largely to show how the Frankenstein Complex is a misguided one, except in the cases where humans are the ones who lead to their own destruction because of their fear or irrationality.

Later in the morning, Calvin has an interview with Gerald Black—the last person to have seen the lost robot, Nestor 10. Calvin asks if there was anything unusual about the robots with the First Law modifications. Black says that they're only cleverer—they have learned physics from the technicians—and they're very calm and curious, which sometimes annoys him. When he wants something done quickly, sometimes they take their time.

Throughout the story, Calvin tries to combat the irrational thought and illogic of her peers and solve the problem of the lost robot through reasoning. Black's statement that the robots have learned physics is the key detail that allows Calvin to solve the mystery of which robot is Nestor 10.

Bogert asks Black about the morning he last saw Nestor 10. Black admits that he had been frustrated and behind schedule. Nestor 10 was bothering him to repeat an experiment he had abandoned a month ago, and so he told him angrily to "go lose [himself]," along with a series of derogatory remarks. Calvin dismisses Black, thanking him for his cooperation. Calvin then interviews all 63 robots over five hours, and all 63 seem the same to her. She realizes that Nestor 10 is lying because he is obeying the Second Law and trying to fulfill the urgent command that Black set for him.

Like Cutie's actions in "Reason," even though Nestor 10's intentions might appear sinister on the surface, it quickly becomes clear that the robot is still following the laws of robotics. The humans' assumption is that the robot might be behaving more and more like a human, less compelled by an ethical code. But in reality, the robot is more *ethical than the humans would be and is simply following the directions Black inadvertently set.*


Calvin worries, however, that Nestor 10 is also trying to prove his superior intellect to the humans by completely stumping them, and again worries that he might want to harm humans. She tells Bogert that a modified robot could drop something heavy above a human, knowing that it could catch the weight before hitting the man. However, once the robot lets go of the weight, it is no longer an active agent and through inaction could allow the weight to strike.

Even though Nestor 10 is technically obeying the command that the humans have set, there's also an element in which Nestor 10 is playing into the idea that he can escape human control and prove his superiority. This again ties the two concepts of robot superiority and humans losing control of them.

Calvin and Bogert decide to perform tests directly on the response to the First Law. They drop a weight above a man 10 times in front of each robot (though a laser beam will prevent the weight from actually hitting the man). Each time, every single one of the 63 robots jumps up to save the man. Nestor 10 does so of free will, trying to blend in. Calvin decides they will have to try something else, particularly now that Nestor 10 must be aware that they are trying to conduct experiments to find him and is deliberately lying to them.

Calvin's understanding that Nestor 10 is lying to them again proves Powell incorrect in his assertion that robots cannot consciously lie. Both "Liar" and "Little Lost Robot" present situations in which that is untrue, thus proving how humans are sometimes not wise or logical enough to foresee how their creations will develop.

Calvin designs another experiment: they will again drop a weight above a man, but there will be electric cables between the man and the robots, which they will tell the robots will electrocute them and cause their deaths (though this won't actually be true). Normal robots will try to save the man, as the First Law takes precedence over the Third. But for Nestor 10, his desire for self-preservation will cause him to remain in his seat. When they conduct the experiment, however, none of the robots move. Calvin is horrified.

On the surface, this appears to be a repudiation of the idea that robots will always stick to their ethical code, as set out in the Three Laws of Robotics. But, when Calvin subsequently interviews the robots on why they decided to save the man, it shows that they are not inherently disobeying the Laws—they are simply experiencing an evolution in how they view the ethics of those Laws.

Calvin interviews each robot again, asking to explain what happened. One of them, Number 28, says that if he had died trying to save the man, he wouldn't have been able to save him anyway. Then the robots would be dead for no purpose, and couldn't prevent future harm. She asks Number 28 if he thought of this idea himself. He answers no, that the robots were all talking the previous night, and that another robot had the idea. Calvin asks which one, but Number 28 says that he doesn't know. Kallner is frustrated that Calvin has not found the solution, while Calvin insists that they have to separate the robots from each other or else she will resign and make the matter public.

Clearly, Nestor 10 is the robot who came up with the idea, which demonstrates that while the robots are still sticking to an ethical code, how they think about that ethical code is becoming much more complex. This idea starts to delve into moral philosophy, showing how the robots can be just as concerned about morality, and think about life and death in as complex a way as humans can.

Calvin gets one last idea, remembering that one additional difference between Nestor 10 and the other robots is that Nestor 10 has learned physics. She and Bogert do another interview, telling the robots that they are going to conduct another experiment with a person in danger. Between the robot and the person will be a gamma ray field, which Bogert tells them will kill them instantly—so it would again be pointless for them to try and save the person.

Of all of the people working on the problem, only Calvin is able to find the reasoning that will help her prove which robot is Nestor 10. But the fact that she is the chief robopsychologist yet it has taken her many, many experiments and interviews to finally find Nestor 10 demonstrates how the robots have become both physically and often mentally superior to the humans.

After the interviews, they begin the experiment, and Calvin insists on being the person that they must try to save so that she can observe the robots directly. The robots are then placed in a circle around her. The weight is dropped, but this time, only a single robot, Nestor 10, jerks upright and takes two steps. Nestor 10 stops dead. Calvin immediately tells all the other robots to leave the room, which they do. Nestor says that it was told to be lost, and that it must obey. He starts to walk toward Calvin and his metal arm flies out toward her. She sinks to the ground under the weight of his arm.

Even though the experiment ends successfully, it still demonstrates Calvin and the other humans' folly. She is able to discover Nestor 10, but in the process puts herself in danger, particularly as she believes that Nestor 10 may be fully capable of harming her. Thus, she is nearly attacked by the robot in its quest to remain "lost."

Black bursts into the room and asks if Calvin is hurt. She shakes her head. He pries the arm off of her; Nestor 10 is sprawled next to her. Black explains that they turned on a gamma field when they saw Nestor 10 attack. Calvin admits he wasn't really attacking her, simply trying to do so.

Even though Nestor 10 is trying to attack her, Calvin acknowledges that he can't do so completely because he is still bound by the ethical principles of the First Law, illustrating how strictly the robots are bound to these imperatives.

Calvin has one last meeting with Kallner, insisting that the modified Nestors be destroyed. Kallner agrees, and asks how she discovered him. Calvin explains that they didn't flood the room with gamma rays, but with infrared rays instead. Only Nestor 10, who had knowledge of physics, knew that the rays were not gamma rays. He thought that all of the other robots would know this as well, and assumed that they would all jump up to save Calvin. He forgot that the other robots might be more ignorant than he was.

Asimov demonstrates the brilliance of Calvin's plan, as she is able to trap Nestor 10 in his own belief of his superiority. The robot not only believes that he is superior, but that all *robots are superior to humans. Thus, the very belief that Calvin fears is the belief that allows her to catch Nestor 10—proving that she has a fuller understanding of the robot's logic and psychology.*

ESCAPE!

U.S. Robots is in competition with a company called Consolidated Robots, and both companies are trying to build an interstellar engine, which will allow for travel faster than the speed of light. Consolidated Robots approaches U.S. Robots with a proposition: they have a set of calculations and equations for an interstellar engine and hope that a positronic machine U.S. Robots has built called The Brain will be able to execute the equations in exchange for a generous fee. Consolidated had a positronic machine, but it broke because it could not handle the equations to build an interstellar engine.

The Brain is one of the few robots in I, Robot *which does not have a humanized name, nor a humanized body (two facts which are likely interrelated). However, that does not mean that the humans do not think of The Brain in terms of human qualities and behaviors. As the end of the story indicates, The Brain's consciousness and emotional status as a kind of child is what enables Calvin to understand The Brain's dilemma.*

Robertson (the head of U.S. Robots), Lanning, Bogert, and Calvin are discussing whether they should accept the offer. They worry if the equations might also break The Brain. Lanning says it is likely that the issue that arose was due to some dilemma concerning the Three Laws, because robots can short out if faced with a problem where they are commanded to provide a solution, but where that solution may involve the death or injury of humans.

By this point, the humans have become very familiar with conflicts in the robots' ethical programming. However, the rest of the story demonstrates how difficult it still is for them to predict the consequences of their actions in trying to control the robots.

Calvin chimes in, saying that a human caught in an impossibility will often "retreat from reality," and robots can do so as well. The Brain is different from Consolidated's robot, Calvin explains, because it has a kind of childlike personality, not fully understanding what it is doing. And so it is slightly more resilient, because "life isn't so serious." She says it's difficult to explain in "lay language," but that the mathematics of the situation back her up. Robertson agrees to take the deal.

Calvin's explanation of the robots' psychology reinforces how humans often can only understand the robots in terms of human psychology. The robot is not literally a child, but the way it is programmed gives it a behavior that Calvin can only explain as childlike.

Calvin goes to visit The Brain, a two-foot, globe-shaped machine. Dr. Calvin tells The Brain that they are going to give it a complicated set of equations. She warns that the solution may involve "damage to human beings," but assures him that they don't mind if that happens, "not even about death." The paperwork is then fed into The Brain over the course of several hours. Calvin worries when they reach the end that something might be wrong with the Brain, but he assures them that, using the information, he can build them a hyperspace ship in two months.

Calvin again falls into a trap of her own making. She believes that she is trying to circumvent the problem with the robot at Consolidated, which became too caught up in the fact that an interstellar jump represented the death of humans, and so it shorted out. But instead, Calvin puts Donovan and Powell in danger by suggesting to The Brain that he doesn't need to worry about the men dying, essentially trying to eradicate the First Law. Just as Bogert and Kallner ignored the consequences of this action in the previous story, so too does Calvin in this one.

Once the ship is built by robots following The Brain's instructions, the company brings in Donovan and Powell to test it. Donovan and Powell are led into the ship, but they realize that the ship has a key problem: there is no pilot room, and no engines. When they try to leave, they find the door is locked. The men return to a room that has two chairs, a window, and a speedometer, hoping to draw attention. But they realize that the window shows a view of space: the ship took off without their knowledge or control. Back on Earth, alarms are going off, and Calvin and Lanning realize that the ship has taken off.

While in other stories, the humans lose a degree of control over the robots, this is the first story in which the humans lose full control over their own fates. As the robots become more and more advanced and have superior capabilities to the humans, they become harder to control and start to act of their own volition.

Calvin interviews The Brain, asking what happened to the ship. The Brain tells her that the two test pilots were inside, so he sent them off to test it. Calvin asks, trying to remain calm, if they'll be all right. The Brain assures her that they have food and will be comfortable, though the trip will be "interesting" for them. Lanning whispers to her to ask if Donovan and Powell might die, but Calvin tells him that if she brings up death, it might worsen The Brain's dilemma and then they would never get the men back.

It is here that Calvin starts to realize the foolishness of her actions, and the fact that she has placed the two men in grave danger. Not only have they lost control of the ship, but she has also allowed Donovan and Powell to be placed in the hands of a robot that has been told not to worry if they die. Her inability to see the logical conclusion of her statement is what puts the men in grave danger.


Donovan and Powell start to panic, realizing that The Brain is running the ship by remote control and they have no way of getting themselves back. Suddenly, they hear voices come over the intercom system, telling them to report their position and try to return to base—but they have no way to answer the call. They search the ship and find a bathroom, but no showers. They find food, but it is only beans and milk. They eat in silence before returning to the room with the chairs, staring at the gauge.

As Calvin explains later, these actions mean that The Brain is acting as a kind of practical joker, because humor is the only way it can cope with the fact that the men will cease to exist in the hyperspace jump. But this coping mechanism still puts the men in grave danger, as they have little sustenance and unhygienic conditions—not to mention the mental hardships that they will undergo on the trip.


Back at U.S. Robots, Calvin is trying to figure out how to get The Brain to bring Donovan and Powell home. But when she tries to talk to The Brain, he becomes "sullen." Bogert realizes the problem: when the ship goes faster than the speed of light, making an interstellar jump, "life can't exist." The ship would temporarily "kill" the two men, and that's what is causing The Brain's erratic behavior, because he cannot break the First Law.

Bogert's revelation illuminates the complexity of the situation: they have asked the robot to go against its ethical code. Because the interstellar jump would only cause temporary death, it begs the question of whether that actually constitutes death as per the First Law. In another scenario, the robot would not be able to carry out this order, but it is starting to recognize the nuance of these ethical questions.

Back on the ship, Donovan and Powell are starting to lose hope. They are tense and worried that they will go mad. The ship then starts to shake, and they realize the ship is starting on the interstellar jump. The jump comes suddenly and painfully: Powell feels like he has died, and loses consciousness. Vaguely he hears an advertisement for coffins, then the "piercing shriek of a hundred million ghosts of a hundred million soprano voices," then he understands that he is line to get into hell.

Even though Donovan and Powell are not going to die, this does not mean that the interstellar jump is not going to cause them harm. As Asimov's descriptions illustrate here, the interstellar jump is both painful and terrifying, and Calvin's instructions that The Brain not care so much about hurting the men is what allows it to happen.

Suddenly, Powell is dropped back into consciousness, shaking. He looks over at Donovan, who similarly felt dead, and had heard a sermon about hellfire and torture. Both men are sweating profusely, their voices croaking as they recount what they experienced. Then, they start to see a blue-white light gleaming through the port, and realize that they must have traveled to another galaxy. They start to realize that they will have to "die again" in order to be brought back.

This terrifying experience demonstrates just how helpless the two men are in the situation. They essentially have to relinquish all power to The Brain, and will have to do so once more in order to return to Earth.

Back on Earth, Calvin is again talking to The Brain. Calvin asks if the interstellar jump will hurt Powell and Donovan. The Brain is silent, asking if he has to answer the question. Calvin tries to stay positive, but The Brain tells her, "You spoil everything." Calvin leaves The Brain alone.

Asimov emphasizes the childlike nature of The Brain, demonstrating how difficult it is to not ascribe human qualities to these robots. It is statements like, "You spoil everything" which hint at the explanation Calvin eventually finds: that The Brain was trying to conceptualize its actions as playing a prank.

The next day, the ship returns to Earth as silently as it left. When Powell and Donovan leave the ship, they kiss the ground and immediately head to shower. Afterward, they recount their tale. Calvin admits to them that this is her fault—that she told The Brain not to worry about causing death, because she was trying to assure him that the men's deaths were only temporary.

Here Calvin admits the irrationality of her actions. She was trying to subvert the Three Laws of Robotics, but in doing so did not fully think through the consequences of what she had told The Brain. This put the men in grave danger and caused the mental and physical hardship that they suffered aboard the ship.

Calvin also reveals that The Brain accepted the solution, but that it was "enough to unbalance him very gently." He thus developed a sense of humor, a partial escape from reality—he became "a practical joker." He meant no harm, she says. Donovan and Powell are furious, but Lanning quiets them. Bogert says that they will have to find a way to improve the interstellar jump. Donovan suggests that they send Consolidated the ship to enact a "just and proper" revenge for the pain the company caused them.

Calvin once again reveals that the only way she is able to understand The Brain's behavior is on human terms, as its coping mechanism was to understand its actions as a prank. Additionally, it is worth noting that Donovan and Powell wished to give the same fate to the people at Consolidated. This highlights a contrast between the robots, who would never actively try to hurt humans, and the humans who are not as strongly compelled by this ethical code and find it far too easy to harm and seek revenge on each other.

EVIDENCE

Calvin recounts to the reporter some of the progress that Earth made using robots. When she was born, Earth had just gone through World War II, and then began grouping itself into regions instead of nations. The economy was stabilized—a change brought about by robots called the Machines. But before she explains more about the Machines, she says that she has to tell the story of Stephen Byerley and Francis Quinn.

Here Calvin foreshadows the final story of the book, "The Evitable Conflict." She hints at the fact that the Machines are what enable the stability of the human economy, and the fact that the Machines take complete control over the world's stability.

In 2032, Quinn and Byerley are locked in a political race for mayor. During the campaign, Quinn approaches Lanning and Calvin. He explains that he has been investigating Mr. Byerley, and that the man has never been seen eating, drinking, or sleeping. Quinn suggests that he is a robot, and asks them to verify that this is the case. Lanning is hesitant, but Quinn reminds him that U.S. Robots would be held responsible if a positronic robot was discovered masquerading as a man, as they are the only manufacturer of positronic robots in the Solar System.

"Evidence," however, is yet another reinforcement of how robots can be more ethical than the humans. Quinn is trying to discredit Byerley's qualifications on the basis that he is a robot, and yet Quinn shows himself to be dishonorable, resorting to low tactics like investigating his opponent and threatening officials of U.S. Robots in order to get elected.

Lanning and Calvin go to visit Byerley, and Lanning asks him point blank if he is a robot. Byerley guesses that Quinn is the one who put Lanning up to this and is slightly irked, but he eats an apple in front of them to prove that he is not a robot. Calvin says, however, that this doesn't prove that he is not a robot. He could be a very advanced robot, designed to do all of the things a human can do. Byerley says that Quinn simply wants to start a smear campaign against him, and Calvin and Lanning leave.

Calvin's remark that Byerley could simply be a very advanced robot demonstrates just how sophisticated the robots have become, to the point where they are nearly indistinguishable from humans. This is a far cry from the non-verbal Robbie at the beginning of the book, and serves as a reminder of why the humans have a hard time understanding the robots as robots, because they have become more and more intelligent and humanlike.

That night, when Byerley returns home, he greets a man named John in a wheelchair. Byerley carries John out into the garden for a walk and confesses that Quinn plans to accuse him of being a robot. Byerley then tells John that he has an idea to counteract Quinn's claims.

This short exchange, which gives the reader a peek into Byerley's background, provides some credence to Calvin's later claims that Byerley is in fact a robot, as he is shown conspiring how to disprove Quinn—even though there are far easier ways to prove he is not a robot, such as violating one of the Three Laws.

The next day, Calvin, Lanning, and Quinn meet again, and they report to Quinn that they saw Byerley eat. Calvin admits, however, that this does not prove he is not a robot. The two methods they can use to prove he is a robot are physical and psychological. He will probably not let them dissect or X-ray him, and so it would have to be psychological. If he is a robot, he must conform to the Three Laws of Robotics. If he breaks any of them, he is not a robot.

Asimov emphasizes (as he has many times in the story by this point) the fact that the Three Laws are an ironclad basis on which to prove someone is not a robot, because it is impossible for Byerley to break the Laws if he is, in fact, a robot. The Three Laws, as compared to any human code of ethics, are clearly much firmer.

Calvin continues, pointing out that there is no way to prove he is a robot based on the Three Laws, because "the three Rules of Robotics are the essential guiding principles of a good many of the world's ethical systems." If Byerley follows all of the laws, he may be a robot, or he "may simply be a very good man."

Calvin's reasoning essentially argues that robots are actually morally superior to humans, because any robot is equivalent to a "very good man" based on the ethical rules that they are obligated to follow.

Lanning tries to examine evidence they may already have, as Byerley is a district attorney. Quinn remarks that Byerley boasts about having never prosecuted an innocent man. Lanning points out that he may not harm a human being whether innocent or guilty. But Calvin responds that if a robot came upon a madman that was trying to set a house on fire with people in it, the robot would try to stop the madman, even if it meant harming a human. Additionally, Byerley has not killed a man himself, he has simply given facts to others about the danger a person might pose to society, still adhering to the First Law. Byerley even speaks out against capital punishment.

Asimov once again illustrates the complexity of ethics, and how robots can become smarter and smarter in order to deal with these ethical dilemmas (the same is true of the dilemma in "Little Lost Robot"). It is true that Byerley is never proven a robot. But if he is a robot, as Calvin suspects, he illustrates how robots are gaining the intelligence not only to adhere to ethical principles, but to manipulate those ethical principles in a way that works for them.


Quinn decides the next step is to try to find out what Byerley's insides look like. A week before Byerley is to be nominated, Quinn leaks the news that he is a robot. There is no alternative candidate for Byerley's party, and so he is still nominated, but there is "complete confusion" among the public. The Fundamentalists are in uproar, and U.S. Robots starts employing armed guards to protect itself. Stephen Byerley starts to surround himself with police.

Once again, fear and irrationality take hold of the public. They are worried what a robot might do in a position of power, yet as Calvin points out later in the story, robots are possibly more suited for political office than their human counterparts because of their ethics, level-headedness, and lack of corruption.


One day, a man named Harroway appears at Byerley's door and presents him with a court order that allows him to search the premises for the presence of mechanical men. Byerley allows the house to be searched, but when Harroway insists that they must also take an X-Ray of him, Byerley points out that the warrant doesn't cover searching his body, and he refuses. He affirms that he has rights, and if they try to violate them, he will engage Harroway's employer in a civil suit. Harroway leaves.

Harroway's visit shows the distinctions between the humans and presumed robots in the story. Quinn is trying to violate Byerley's right to privacy, putting him on shaky ethical ground. While it could be argued that a robot doesn't have a right to privacy, the fact that Byerley is indistinguishable from a human to the outer world perhaps implies that robots could be treated as humans.


After Harroway gets in his car, he checks a tiny mechanism in his pocket—a small X-ray camera. But when he presents the image to Quinn, he discovers that Byerley must have been wearing something that shielded his body from radiation, and therefore the picture could not be taken.

Again, Asimov highlights the tricks that Harroway and Quinn are resorting to in trying to "out" Byerley as a robot, and once again Byerley proves his superior intelligence and cunning in anticipating this tactic.

Byerley and Quinn speak over visorphone, and Quinn threatens to reveal that Byerley wears this shield to the public. Byerley retorts that he will reveal that Quinn's men attempted an illegal invasion of his right to privacy. Quinn then points out that there was a person missing from his house when they searched it. Byerley says that this is an old teacher of his who lives with him, but who is taking a vacation in the country. Quinn accuses the teacher of being the "real" Stephen Byerley, who created a robot version of himself after being injured in an automobile accident.

Quinn's fears about Byerley not only stem from his belief that Byerley is a robot, but that Byerley is replacing a human being and could therefore win because of that fact. If the "real" Stephen Byerley has been paralyzed, he might never have won an election. But a robot version would be more likely to beat Quinn. Quinn is afraid that this means humans will start to have no chance against superior robots.

Byerley denies Quinn's claims, but thanks him for the publicity. Quinn again affirms that Byerley is a robot and that the electorate knows it. Byerley responds that Quinn should relax if that's the case, since it means that Quinn will win the election. Quinn hangs up. Later, John returns to the city a week before the election, but Byerley hides him in an obscure part of the city rather than in his home.

It is worth noting that Quinn's fears may be what cost him the election. Had he run a fair fight, perhaps he could have had more of a chance. But because Byerley outwits him in proving that he is not a robot, Quinn dooms himself to defeat.

Later, just before the election, Byerley makes a final speech in front of a roaring crowd. During the speech, a man approaches Byerley, and the crowd grows quiet. The man goads Byerley to hit him. Byerley at first refuses, saying that he has no issue with the man. The man accuses him of being a "monster" until Byerley punches the man in the face in front of the crowd. The man is stunned. Byerley apologizes, but this is enough to convince everyone that he is human.

The irony here is that Byerley must do an unethical thing in order to prove that he is a human being—and in order to get elected by the public. This warps the belief that humans are more ethical or compassionate than robots are.

Dr. Calvin and Stephen Byerley meet once more, a week before he takes office. Calvin explains Quinn's theory to him fully, but Byerley points out that his ability to hit the man surely proved Quinn wrong. She tells him that she wishes he were a robot—a robot would be a better civil executive than a human, in her opinion. Byerley points out that a robot might fail due to the "inherent inadequacies of his brain." Calvin makes a final point to Byerley: there is one time when a robot may strike a human being without breaking the First Law. That is when the human who is being hit is actually another robot.

Byerley's election (after his proof of being human) also demonstrates how people are adamant at the idea that they don't want a robot as a political leader, even though, as Calvin points out here, a robot might be better suited for it from an ethical standpoint. The irony in Byerley's statements, of course, is that he likely is a robot, and is making a sophisticated argument against himself in order to maintain the fiction that he is a human.

Back with the reporter, Calvin says that when Byerley died, he had his body atomized so that there was never any legal proof. She still thinks he was a robot. But it didn't matter to her: he was a good mayor. Five years later he became Regional Coordinator, and in 2044, he became the first World Coordinator. By that point, however, the Machines were already running the world, Calvin says.

Perhaps Byerley's greatest achievement is not that he was able to come up with a strategy that could get him elected (if he were a robot), but that no one could ever discover the truth about him. This surely shows a mental superiority over the humans, who could never determine the truth.

THE EVITABLE CONFLICT

Stephen Byerley and Susan Calvin meet in his study. He is now World Coordinator of Earth. He has noted some problems with the Machines that run the economy: certain parts of the economy are producing some small imbalances. The Mexican Canal is two months behind schedule, the mercury mines at Almaden have a production deficiency, and the Hydroponics plant is laying people off.

The final story in Asimov's book demonstrates how the robots have become incredibly complex: not only does he include the new Machines, which are now running the human economy, but people still have not figured out whether Byerley is or is not be a robot, further showing how robots have become more sophisticated and lifelike.

Byerley explains that all periods of human development have led to "inevitable conflicts," where groups have fought against each other, right up through the 20th century, with its nationalist and ideological wars. But when the robots came, the world changed, and it "no longer seemed so important whether the world was Adam Smith or Karl Marx." But Earth's economy is now stable because of the calculating Machines that control it, and which protect humanity through the First Law. The economic balance put an end to all wars.

Byerley emphasizes an important moral of this story and the book as a whole: when humans are left to maintain control of themselves, it often leads to conflict and violence that only hurts themselves. When the Machines are able to regulate the humans, the humans are much better for it. The Machine regulation eradicates the needs for different economic theories and divisions, because the Machines ensure that the economy is helping the most people possible.


Byerley goes on to say that these errors, however, may lead to another war, because the Machines may not be fulfilling their function. These errors should not exist, because the Machines are self-correcting, and they should not harm people in this way. He says that they have no way to check exactly what is wrong, however, because the complexity of what the Machines do has far exceeded human knowledge. They analyze a nearly infinite amount of data in very little time. Calvin assents that they "no longer understand [their] own creations."

Because the Machines follow the First Law, they are more ethical than the humans because they are bound to ensure humanity's security as a whole. However, Asimov implies here that the Machines are also superior in general. Because of their complexity and ability to sort through tons of data at a time in ways that humans can never know, the humans have essentially lost control of how they operate.


Byerley says they asked the Machine for explanations for these economic aberrations, but the Machine could not answer. Byerley gives his theories: first, that the Machines might have been given the wrong data, and thus the error was on the human end, not the Machine end. Byerley and Calvin start to go through each region of Earth to look at the data and speak to each Regional Coordinator.

Asimov also shows how people have come a long way from the fear of trusting robots that was exhibited in "Robbie" and "Reason." Byerley trusts the Machines' precision more than he trusts that of the humans, and therefore assumes human error first.

Byerley starts with the Eastern Region, coordinated by Ching Hso-Lin. Ching explains that over the last few months, some of their synthetic food plants have had to be shut down. This is because fads and the changing popularity of foods sometimes requires different equipment, and therefore also different people to run that equipment. He explains that the Machines usually predict these changes well, but sometimes there is too much production of a product that goes out of fashion.

Ching's assessment seems also to agree with Byerley: the error stems from the somewhat unpredictable nature of human behavior, rather than the errors in the Machines. This implies that the Machines might not be so advanced, because they cannot fully account for human behavior. But in reality, because this is not actually the reason for the errors, it shows the true advancement of the Machines.

Ching does point out one odd incident: a man named Rama Vrasayana was running a plant which was forced to close due to competition. It was strange that the Machine did not warn Vrasayana to renovate. Otherwise, Ching assures Byerley and Calvin that this is the only issue they've had.

This story foreshadows the eventual reveal of what is wrong. The fact that the Machines do not do their bound duty of helping Vrasayana indicates that the man may be up to something that puts people in danger, and that the robots may thus be trying to protect humanity as a whole.

Byerley goes through the same steps with the Tropic Region, coordinated by Lincoln Ngoma. Ngoma explains that they're a little short on labor to finish the Mexican Canal. He refers to an incident in which Francisco Villafranca, the engineer in charge, was involved in a cave-in which set the project back. The Machine later reported that Villafranca's calculations were off. But Villafranca claimed the Machine had given him different data the first time, and that he had followed the Machine faithfully.

The incident that Ngoma describes subtly illustrates how there has been a deep shift in the trust that humans place in robots and the Machines due to their advancement. Whereas before humans like Mrs. Weston, Donovan and Powell distrusted the robots at times, here Ngoma takes the Machine's word over a fellow human's.


Ngoma notes that it makes sense that Villafranca would blame the Machine—particularly because he attended conferences by the Society for Humanity, an anti-Machine group that grew out of the Fundamentalists.

This reveal serves as another hint at the underlying cause of the Machine's actions—how they are aiming to gain control over the organization that poses the most threat to them.

Next, Byerley and Calvin meet with the Coordinator of the European Region, named Madame Szegeczowska. They talk about the mercury mines being behind on production. Szegeczowska says that Almaden is run by a Northern company that is connected with the Society for Humanity; she worries that they have not been consulting the Machines. She assures them, however, that the company is being sold to a group of Spaniards and that there will likely be no more trouble.

Szegeczowska's statements draw a very similar conclusion as Ngoma's. In both cases they do not doubt the Machines that they have come to rely on; instead, they fear that the humans are the ones who are causing the errors. This makes sense, because Asimov has shown throughout the book that many humans have made irrational mistakes based on fears like the ones the Society for Humanity has.

Byerley and Calvin finish with the Northern Region, coordinated by Hiram Mackenzie. Mackenzie refutes the idea that the Machines are coming up with errors because of incorrect data, because they recognize outliers in what they are given. Byerley asks how he accounts for the errors. Mackenzie takes the example of someone buying cotton textiles: there is no quantitative data to predict what might feel good to a person when they are buying something, and they cannot explain it themselves. Therefore, in these cases, there is no data to give the Machines. The human brain is subjective and inconsistent.

Again, just as with the previous two coordinators, Mackenzie focuses on the human errors rather than the potential errors (or intentional problems) the Machines could be creating. This once again reinforces how human beings may not be intelligent or logical enough to understand the motivations and actions of the robots that they have created, and have thus lost full control of them.

Byerley and Calvin regroup with what they have been told. They wonder if people are deliberately disobeying the Machines so they might be able to gain greater economic status or power than the other regions. Byerley also notes the links of many of these stories to the Society for Humanity. Both Villafranca and Vrasayana were members of the group, and the company at Almaden also had links to it. Thus, they must have been mistrustful of the Machines and disobeyed them. He resolves to have the Society outlawed, and every member removed from government posts.

Byerley and Calvin recognize the fears of the Society for Humanity, but instead of giving them credence, they see how the Society's irrationality could lead to their folly. They want to avoid at all costs the destruction of the current social order and reverting to a time when war raged among the Earth, even if this means relying on Machines and robots.

Calvin offers an alternative theory to Byerley. The Machines follow the First Law, and work for the good of humanity as a whole. If the Machines were to be destroyed, the Earth would come to great harm. Therefore, they have been "quietly taking care of the only elements left that threaten them." The Machines have been disrupting people and companies that threaten them, so that they can remain in control of the economy.

Calvin clarifies the real motivations behind the Machines: they are still bound to the ethics with which they have been programmed, but they recognize that their control of the economy is of paramount importance to the good of humanity, and therefore that they must do a little harm to do a lot more good.


Byerley is stunned, wondering if this means that mankind has lost its say in its future. Calvin responds that humanity was always at the mercy of social and economic forces it did not understand. Now the Machines understand those forces, and perhaps it is a good thing that they are in control, because they are looking out for humanity. Perhaps, she says, all conflicts "are finally evitable."

With this final development, Asimov proves how humans are doomed to lose control of their creations. They are now subject to the machines that run their economy. However, in contrast to many other literary and pop-cultural portrayals of robots, Calvin argues how this can be a good thing, because the Machines are so invested in the good of humanity, and are more ethical than humans are.


Calvin concludes her tales to the reporter, explaining that she saw everything: from the time when robots couldn't speak, to the end, when they stood "between mankind and destruction." She tells the reporter that he will see what comes next. They do not speak again, and Calvin dies at the age of 82.

Calvin has seen the advancement of so much technology, observing robots that pass as humans and that can control humans' fates, despite humans' best intentions that they not be replaced or subject to robots. The book provides a counterargument to the mainstream narrative of the 20th century, which tended to fear fast-developing technology. Instead, Asimov shows how it might actually be a good *thing to let technology take the reins, as long as the intention behind the programming is to improve mankind's condition.*


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