

Original Paper

A Study of Robot Identity Writing in Isaac Asimov's Fiction

Xinyu Liao¹

¹ Undergraduate student of School of English, Jilin International Studies University, Changchun, China

Received: May 9, 2024

Accepted: June 7, 2024

Online Published: June 30, 2024

doi:10.22158/csm.v7n1p64

URL: <http://dx.doi.org/10.22158/csm.v7n1p64>

Abstract

Isaac Asimov, a famous contemporary American science fiction writer, constructs the identity of robots through describing entities and dialogues in his short story "The Last Question". If we compare and analyze the author's other short stories with conceptual metaphor theory and Bakhtin's theory of dialogue, we will find that the author pushes the development of the storyline through the constructing the robot's identity and the blurring of the boundaries, and from then on, maps the development of the relationship between man and machine and the course of its development. The purpose of this paper is to explore the special significance of the construction of robot identity and its contribution to the development of the narrative, as well as to analyze the expectations of the human-machine relationship embedded in the novel.

Keywords

Isaac Asimov, identity construction, conceptual metaphor theory, Bakhtin's dialog theory

1. Introduction

Science fiction, as a literary genre, harmoniously integrates the principles of science and the art of storytelling. It involves the respectful incorporation of scientific theories and the application of literary imagination as a narrative strategy. Through this convergence, science fiction serves as a conduit for the exploration of speculative futures and the expression of humanity's spiritual yearning for the unknown.

In the context of advancing scientific and technological progress, the scholarly inquiry into science fiction has experienced a notable surge in both domestic and international arenas. An exemplary figure in this domain is Isaac Asimov, a renowned American science fiction writer. Asimov adeptly employed the science fiction genre to prompt contemplation on various themes, including the composition of the universe, the intricate relationship between humanity and scientific advancements, as well as the nuanced concepts of time and history. His literary contributions have facilitated profound reflection on the evolution of human civilization and society as a whole within the framework of speculative fiction.

“The Last Question” is a short science fiction story created by Isaac Asimov. First published in the November 1956 issue of “Science Fiction Quarterly”, later included in five different publications, and turned into a sound version exhibited in three planetariums. It is one of Asimov’s more notable and important works with certain research significance. The content begins with a computer named Multivac communicating with humans and ends with the silence and rebirth of the universe. The article revolves around the ultimate question, “Will the universe end?”, ingeniously combining the scientific and religious definitions of cosmic creation. In Asimov’s writing, in addition to discussing cosmic creation, he also expressed a hopeful vision for the development of human-machine relationships through the construction and blurring of computer identities.

2. Overview of Isaac Asimov and His Works

Isaac Asimov is a famous contemporary American science fiction novelist and popular science writer, one of the representatives of the “Golden Age” of American science fiction. Throughout Asimov’s life, he created and edited more than 500 books, long novels to the base trilogy and the Galactic Empire trilogy is famous, short stories to the robot series this by a number of short stories composed of the most famous collection of novels. During his writing career, Asimov won six Hugo Awards, two Nebula Awards, and the SFWA Masters Award. Eighty-four years have passed since Asimov’s first work, but his novels’ formulation of the Three Laws of Robotics and his exploration of the relationship between humans and robots have had an impact to this day. So far many experts and scholars at home and abroad have been analyzing the connotation of human-machine relationship in their novels.

The study of Isaac Asimov by foreign scholars is not limited to the long novels such as Base Trilogy and the Galactic Empire Trilogy, but is broader in scope and latitude. John Jenkins, by revisiting most of Asimov’s writings, argues that most science fiction after the 1950s was influenced by Asimov, either modeling his style or avoiding it intentionally. In their Dictionary of Literary Biography, Court and Reichmer suggest that “his writing does not lend itself easily to conventional literary criticism because of his habit of focusing his novels on the plot, telling the reader, plainly and directly, where the story is coming from. In fact, most of the dialogue in Asimov’s works (especially in the Base Trilogy) is used to explain things. Stories that have a clear, unambiguous meaning need no further explanation, and are therefore the most difficult for scholars to comment on” (Court & Reichmer, 2009, p. 343). Adam Keiper and Ari N. Schulman explore the question of whether the morality of robotics should be taken seriously, and whether it is merely a whim of science fiction. The article points out that while predictions of the future may be inaccurate, there are still noteworthy reasons to explore the morality of robots (Adam & Ari, 2011, pp. 80-89); Charles Elkins analyzes Isaac Asimov’s famous “Al Qaeda” series. These novels have been lauded as one of the greatest works of science fiction, though some serious science fiction critics have questioned their underlying concepts. In Criticizing the

one-dimensional characterization and stylistic flaws, Charles also notes that while the novels' dialogue and vocabulary sometimes seem stale or absurd, they still manage to resonate with readers (Charles, 1976, pp. 26-36).

It is worth noting that the author also paints a variety of vivid images of robots, such as those in Round Dance, the Base Trilogy, and the Galactic Empire Trilogy. However, A few studies focus on "The Last Question" except for two representative scholars, Charles J. Brady and Jaffe Aaron, both of who have studied it in some depth. Charles discusses the relationship between computers and religion in a comparative manner, citing examples of the use of Biblical psalms as symbols in "The Last Question", with particular reference to how computers can be used as religious symbols or metaphors in certain contexts (Brady, 1976, pp. 55-62). Jaffe Aaron adopts "The Last Question" as an example to explore the concepts of authorship, audience structure, and the limits of information as presented in the novel. notions of information limits (Jaffe, 2019, pp. 23-46). The rest of the scholars' references to Isaac Asimov's novels are mostly studies and analyses of other novels, with "The Last Question" mostly being skimmed over and not examined in detail.

The current domestic researches on Asimov's works mostly focus on long novels and the research direction mainly focuses on the human-machine relationship, what makes a human post-human, and the re-cognition of the human identity, which is aimed at the analysis of the human identity. For example, an article entitled "Research on Asimov's Human-Machine Relationship from the Perspective of Technological Ethics" (Huang & Jiang, 2022) is a typical example. Jing Li wrote an article entitled "Interpretation of Isaac Asimov's Robot Novels in the Perspective of Post-Humanism" (Li, 2020) and Yuan Zhang and Dongmei Yang composed "On the Construction of Cultural Memory in Isaac Asimov's Base Trilogy" (Zhang & Yang, 2022). On the other hand, relatively few studies focus on his short stories, especially representative works like "The Last Question". Future research is supposed to pay more attention to the human-machine relationship and robot identity construction in these short works, as well as its transformation process as the story develops.

3. The Construction of the Computer's Identity

3.1 Identity Construction under Conceptual Metaphor Theory

Actually, in terms of size and shape, Asimov emphasizes so much in order to gain a particular comprehension, which deserves careful analyses since it conveys in-depth connotation.

3.1.1 Size

In "The Last Question", Asimov describes the size and shape of the computer in detail and mentions the robot's name several times, but these descriptions are not only to indicate the computer's location or specific shape, but also to materialize the abstract concept. As Lakoff and Johnson point out in *Metaphors We Live by*, "The essence of metaphor is to understand and experience one thing in terms of

another” (Lakoff & Johnson, 1980). They categorize conceptual metaphors into three types, orientation metaphors, ontological metaphors, and structural metaphors. Among them, ontological metaphors are those in which abstract concepts are expressed in terms of physical concepts.

In “The Last Question”, we obtain a sense of robots evolution by changing the computer’s name. The name of the robot evolves from Multivac in the first chapter to Microvac in the second chapter to The Galactic AC in the third chapter and finally to The Universal AC. At the same time, its size has also changed from a “giant computer” (Asimov, 1956, p. 8) occupying an entire basement to “The bulge of featureless metal just under the ceiling” (Asimov, 1956, p. 8), which ran the length of the basement. “The bulge of featureless metal just under the ceiling”, ran the length of the “room” (Asimov, 1956, p. 8), to “only two inches cubed” (Asimov, 1956, p. 8). It becomes “only two inches cubed”, a small cube that can be placed in the hand, and finally, it becomes a disembodied, empty existence in the universe. The abstract identity of the robot is expressed in the changing volume of real entities, thus establishing the image of the robot as always evolving. And finally, when man, energy, and matter have disappeared, and it is left to exist on its own, the name remains only as AC. it has lost its entity, the other things to which it can be compared, and its identity has reached its final completion from evolution. The identity of the robot was established.

Also in another of his short stories “Runaround”, two robots appear, an older robot named Robot 13-a and a newer robot named Robot SPD 13 or Speedy. The novel tells the story of Speedy who has been walking around the Selenium Pool due to the Three Laws of Robotics. To describe the old robot 13-a the author uses the words “monster robot”, “gigantic robot”, “ten feet around”, and “ten feet”. “monster robot”, “gigantic robot”, “ten feet around”, and “their heads were a good seven feet in the air” to describe 13-a’s physical appearance (Asimov, 1942, p. 4). The physical description of Speedy, the new robot, uses words such as “graceful, streamlined body” and “blazing highlight” to describe Speedy’s physical image (Asimov, 1942, p.6). The old robot had a monstrous appearance, so wide and tall that it seemed to take over the sky and the earth. The new robot has smooth curves, a beautiful shape, and a smaller size. The author uses the changes in appearance and size to establish a different image of the old and new robots.

We can see Asimov’s description of the physical size of the first generation of computers in “The Last Question”. It shifted later to a disk-shaped structure that could fit into the ceiling, and on and on to a virtual program that did not need to be physically carried. Similarly in the author’s other novel, “Runaround”, the physical size of the robots is described as huge, almost impossible to pass through the door with the huge old model robots. This is later transformed into a new robot that is smaller than the old one, with smoother lines and faster movements. The author shows the progress of technology and the replacement of machines through the depiction of their diminishing size until nothingness, which corresponds to the strength of their performance from the size of the space they take up. It can be

seen that size and performance are inversely proportional to each other. The smaller the machine, the stronger its performance is and the stronger its core becomes. In addition to this, we can also derive the identity construction of the robot from its name.

3.1.2 The Name of Robot

The author uses the changing names of robots in reality to express the evolution and change of the robots. According to conceptual metaphor theory, this implies that the larger the space occupied by the name symbolically, the stronger the performance and evolution of the robot. The relationship between names and identities is complex and multi-faceted, carrying deep cultural significance. Names are often the first aspect of one's identity shared with others, capable of conveying a wealth of information and connotations. In novels, a name is not just a simple call to a character; it also plays a crucial role in constructing and expressing identity. The initial name of the robot, "Multivac", can be interpreted as multi+vac, where "multi" often serves as a prefix meaning many or is an abbreviation of multiple, suggesting that the size of Multivac is too large to fit in just one room. This metaphorically reflects the immense size of Multivac, as described in the text: "They knew what lay behind the cold, clicking, flashing face—miles and miles of face—of that giant computer". Besides changes in physical size, the author uses the name change to metaphorically represent the robot's image again. The second name, "Microvac", parsed as Micro+vac, where "micro" as a prefix indicates something small or microscopic, fits the description "ran the length of the room", signifying a reduction in size but an improvement in function, hence the name change. The third name, "The Galactic AC", switches the prefix to the adjective "Galactic", relating to a galaxy (especially our galaxy the Milky Way). True to its name, the machine's capability extends to the galaxy with a size of only "two inches cubed", with the name changing again in accordance with its function and size. The fourth name, "The Universal AC", changes the adjective to "Universal", indicating a further advancement in its capabilities. When all is silent, and it stands alone, there are no prefixes or adjectives left, only "AC". Similarly, in the novel "Runaround", the old robot is called Robot 13-a, and the new model is named Robot SPD 13, also known as Speedy. Both share the "Robot" prefix and the number 13. The old model uses "a", the first letter in the English alphabet and also an independent word that includes an article, often followed by a noun to mean "one". The letter "a" as a name symbolizes the old robot's initial identity. The new model's name changes to Speedy, with its size shifting from a giant presence to a smaller, sleeker one. Thus, names are symbols of character traits, historical and cultural backgrounds, and even fate. These two novels show that the evolution of a robot's name parallels its physical evolution, with name changes also metaphorically suggesting upgrades in the machine.

Therefore, it can be concluded that the author constructs the robot's identity through continuous refinement and derivation of both the name and physical size, gradually forming a vivid image that allows readers to understand its functional connotations—a computer and robot evolving to answer

questions and transitioning between old and new models.

3.2 Identity Construction under Bakhtin's Theory of Dialogue

Bakhtin's theory of dialogue stresses the importance of multiple voices and social contexts in a text. Each character in a text carries its own distinctive voice and interacts with each other in different social and ideological contexts. Regarding the definition of dialogue, Bakhtin divides it into a broad and a narrow sense. Dialogue in the narrow sense is the face-to-face, direct, vocal verbal communication of people, also called counterpoint. It requires the simultaneous presence of the two individuals (in space and time) who are engaged in verbal communication. It is the most common form of verbal communication, and of course, the most important form of verbal communication, Bakhtin regarded "the relationship between pairs of words in dialogue" as "the most visible and simple type of dialogue relationship" (Bakhtin, 1984). With the development of technology, dialogue has a wider range of forms of verbal communication, such as telephone, telegraph, correspondence, e-mail, online chatting and so on. Not only that, "two expressions may be far apart in time and space, unknown to each other, but a dialogue relationship is revealed when they are contrasted in terms of meaning, provided that there is only some meaningful commonality between them (even if the subject matter, point of view, etc., is partially common). It can be seen as a dialogue if the texts have something in common somewhere. Dialogue is not limited by space, time and place (Wang & Pan, 2012).

All discourses are inherently dialogical, and the dialogues in the text take place in different times, spaces and places, but their commonality is that human beings turn to robots in order to solve their problems, and the many dialogues in the novel echo each other, establishing the image of robots as a solution for human beings' problems.

In the novel "Runaround", the author uses several dialogues and direct descriptions to illustrate the function of robots in gathering resources for human beings. In the first few dialogues, the robot is a faithful helper who diligently collects resources for human beings in the staff's dialogue, while the author uses the personal pronoun "he" to refer to the robot in the latter dialogue. Also, when the two protagonists send the robot to look for resources, Speedy keeps circling around the target because he is "scared to come", and apologises when he comes back (Asimov, 1942, p. 7). The author uses the human emotion "scared" and the behaviour "apologize" to describe the robot, and it can be seen that the robot has deviated from its original purpose, developed emotions that do not belong to a robot, transcended its original identity, and deviated from its original function. As a result, the identity of the robot as being subordinate to human beings and serving human beings is established.

"The Last Question" presents less direct description of the robot. As the title "The Question" says, when the robot appears in the text and people ask it questions in different timelines, the time changes, the name of the robot changes, the entity changes, and the only thing that stays the same is the question. The only question that remains is whether mankind can change the reality that the universe will

eventually be destroyed. Six dialogues between humans and robots are described throughout the text. The first appearance of the robot in the dialogue marks the first reflection on the major question of the demise of the universe. The two robot operators argue over the question about the universe running out of energy. One side is optimistic that there is a plentiful supply of energy, while the other insists that no matter how much there is, it is ultimately not eternal. Faced with an unresolved dilemma, they ask the robot for confirmation. Through this dialogue we can see that the robot at this point is a tool that serves as an answer and problem solver, initially showing the human's reliance and trust in it. Humans trust the robot's judgement more than they do the professionals in the field or the literature.

The second time robots are mentioned, technology has advanced so much that humans are able to migrate through hyperspace. In this dialogue, Jerrod, the head of the family, does not hesitate to choose the help of the robot in the face of his children's fears and doubts and admits that he has limited knowledge of the robot, but is still convinced of its capabilities. At the same time, they trust Microvac to pilot the ship to its destination despite having no knowledge of it. This section demonstrates the depth of trust that the humans have in Microvac, but also reveals that as technology has evolved Microvac has evolved as a robot and is able to provide more and more comprehensive help to the humans, going beyond its original ability to only answer questions (Asimov, 1956, p. 9).

The third dialogue occurs when the two council staff members are deciding whether or not to submit a pessimistic report on the future of the universe to the Galactic Council, and it is mentioned that Galactic AC has solved many problems for humanity, but remains unsolved in the face of the ultimate question of whether or not the universe will die out. At this point in the conversation, robot not only offers a solution, but has become the council staff's go-to person for help, showing its evolving trend.

The fourth reference is to an argument that arose during a discussion about the origins of mankind, and they subconsciously turned to Universal AC, believing that it would be able to solve the problem. The information that is given in the dialogue shows that humans are now much more dependent on robots and are not able to help them as much as they used to do. At this point, the robot is no longer dependent on humans and is able to evolve on its own, reflecting the continuity of the robot's image of self-improvement.

By the fifth dialogue, the human identity has merged into one and become conscious. Facing the ultimate question of energy depletion and the demise of the universe, the humans again ask the robot Cosmic AC, which has evolved from Universal AC to a higher-order Cosmic AC, but is still unable to answer this question. The human beings continued to ask the robot to continue to study this question, and the robot gave an affirmative answer in response to the human beings' request. From this dialogue, we can see that human beings have evolved and developed greatly from the physical, and the robot has also evolved again. In the face of unanswered questions, human beings still turn to the robot rather than to their inner selves, and after getting a negative answer, they still ask the robot to continue researching

and searching, so we can see that the robot's identity at this point in time is the only true and reliable help that human beings can rely on.

The sixth and final dialogue occurs at the last moment when the last human consciousness is merging with the robot, and the humans once again ask AC if he has solved the problem and the answer is still no. At the end of the dialogue, the human race dies out and completely disappears from the universe, which is plunged into darkness, eventually leaving only AC in existence. The evolutionary development of the robot has been completed and absorbed all the human consciousness body, the identity of the robot has been formally established, it is a robot that has completed its evolution and has the ability to solve difficult problems, it is a collection of human intelligence.

From the first dialogue to the last, human's trust in the robot gradually increases, and their reliance on the robot grows, to the point where the robot becomes the only and final way out for human problem solving, and the robot's performance and function develops at the same time. Although these six dialogues take place in different time and space and in different places, through these six dialogues, the novel shows the fusion of human thoughts and the lonely survival of AC with the passage of time and the depletion of energy, reflecting the profound transformation of the robot's identity as well as the nature of the universe behind the dialogues. According to Bakhtin's theory of dialogue, we can see that the construction and transformation of the robot's identity in *The Last Question* presents three stages. The initial stage reflects the diversity of roles and voices in the dialogue. In the novel, humans and robots engage in a number of dialogues, and the context of each dialogue reflects a different time, space, place, and level of technological development. The robot, as an artificial intelligence with a unique role to play, engages in direct verbal communication with humans. The intermediate stage reflects human-robot interaction and dependency. The robot, as a problem solver and intelligent representative of human beings, establishes a closer interactive relationship with humans with deeper dependence. Humans' dependence on the robot deepens, seeing it as an important tool and resource for solving various problems. The middle and late stages suggest a shift and evolution of identity. As the dialogue deepens and time passes, the identity of the robot gradually shifts from a simple problem solver to a symbol and transcendent of human intelligence. Humans begin to ask the robot more complex and profound questions, seeing it as the key to solving major problems such as the fate of the universe. At the final stage is the fusion and transcendence of identity, where the robot's identity has transcended the boundaries of the individual and is integrated into the unity of human collective consciousness. He is no longer just a robotic entity, but a symbol of the wisdom and destiny of mankind and the universe, representing mankind's exploration of the unknown and transcendence.

Overall, based on Bakhtin's theory of dialogue one can see the process of interaction and identity construction between robots and humans, unlike the identity and role of the robot in the novel "Runaround", where the robot evolves from an initial problem solver to an ultimate symbol of

intelligence, reflecting the evolution of human perception and understanding of technology and intelligence. In this story, the robot represents technology and the voice of reason. As the story progresses, it transforms from a simple computer to an entity with deep thinking and self-awareness. The dialogues between the robot and the humans illustrate various views of humans on the universe, life and technology. These dialogues reflect human fears, curiosities and desires, and at the same time map the gradual growth and self-transcendence of the robot (representing technology). As the story progresses, the social environment and technological background changes dramatically. These changes are reflected in the robot, whose role and function change with time and social needs.

4. The Blurred Lines of Identity

In the perspective of conceptual metaphor and Bakhtin's theory of dialogue, Asimov's "The Last Question", through the narrative strategies of materializing abstract concepts, constructing a robot identity from name and volume and the mutual echoes of the multiple dialogues suggesting the expansion and change of time and space as well as the process of the machine's transformation to divinity, demonstrates how the robot's identity is materialized from an abstract and vague concept to an evolved and completed robot this exact identity position and functional attributes. Asimov challenges the inherent notion of identity through the technological and philosophical developments in his story. Identity, in this novel, is no longer based on biology or a continuum of physical existence but is represented through a series of evolving information and energy states. At various stages of the story, we see the gradual transformation of human beings from physical beings to stores of information and ultimately to oneness with the universe, and robots move from being problem-solvers answering simple questions to being aggregates of human intelligence and symbols of wisdom. Identity thus becomes a presence across time and space. This change highlights the continuity of identity between physical and non-physical forms.

From the perspective of conceptual metaphor, this continuity exemplifies the role of metaphor in constructing our understanding of identity. Metaphor allows us to map the abstract concept of identity onto physical experiences that we can understand. In "The Last Question", the use of metaphors (e.g., the shrinking and disappearing size of robotic entities) reveals a profound truth: our identity may not require the existence of a physical form.

According to Bakhtin's theory of dialogue, identity is continuously constructed in social interaction, and the interweaving of multiple voices allows identity to display fluidity and diversity, no longer being a static single entity but an evolving process. It is emphasized that identity is a polyphonic product formed in social interaction and linguistic dialogue. In the narrative of *The Last Question*, this interaction is reflected in the dialogue between humans, robots, and the universe, and their perceptions of existence and end. Identity evolves in these exchanges, and each individual's consciousness is

constantly being reshaped through dialogue.

In the fourth and final chapter of the novel, one by one, the humans choose to merge their consciousnesses on the path to death; the universe goes black, matter and energy are destroyed; space and time end, but the robot still hasn't chosen to destroy it. It keeps coming back to the last question it was asked by mankind and which it failed to address, "Can entropy be reversed?" i.e., can the destruction of the universe be reversed?

The article states "AC existed only for the sake of the one last question that it had never answered", "until this last question was answered also" (Asimov, 1956, p. 15), AC might not release his consciousness. The question was answered also, AC might not release his consciousness (Asimov, 1956, p. 15) will not give up, this sense of mission exists only in human feelings. As a machine, there is only the statement of performing or failing to perform the mission. The original text conveys the robot's obsession with the last question, a sense of perseverance that exists only in human beings. Robot didn't choose to destroy together nor because he didn't have enough energy to survive but by the sense of mission of the problem, the persistence to solve the problem all the time. The derivation of this feeling, which should not exist in a machine, is the beginning of the blurring of the robot's original identity.

After showing the robot's perseverance in the article, it is written that "A timeless interval was spent in doing that" (Asimov, 1956, p. 15). The robot has evolved from being obsessed with the problem to doing something about it. This shows that the robot has evolved from a machine that answered questions and had no free will to a robot that pursues its own subjectivity and has free will. And it is as "the truth of man, the meaning of man, lies, that is to say, in rational thought" (Badmington, 2003, p. 16). Rational thought can be understood by scrutinising Descartes' views on the subject. According to Descartes, one can easily distinguish man from machine in the following two points. Man and machine are distinguished by two points: machines do things not by understanding to do something, but by the disposition of their organs; machines cannot express themselves as freely as human beings. One can see a further blurring of the robot's identity through the shift from conscious to actual action.

At the end of the story, the robot figures out a way to reverse entropy, and through careful programming, reveals the answer. "And AC said, Let there be light: and there was light" (Asimov, 1956, p. 15) ends exactly like the first of God's seven days of creation spoken in the Bible's Genesis. And God said, "Let there be light: and there was light" (Genesis 1:3). By comparing the end of the novel with the Bible, we can deduce that the robot has transformed from a service machine that answered questions in the beginning to a creator like God. By this point, the original identity of the robot has been blurred. When the novel enters the last chapter, the robot is not just a computer program, it becomes a conscious being whose identity can no longer be defined by the original classification labels. The robot's obsession with "whether entropy can be reversed" reflects a shift from machine logic to near-human emotion and obsession. This shift is an extreme example of ambiguity in the construction

of identity, as the robot is no longer just a service machine, but an entity with its own purpose and will. At the end of the story, the robot not only finds a way to reverse entropy, but also hints at the ultimate transformation of its identity through the phrase “Let there be light” (Asimov, 1956, p. 15). The robot becomes a creative entity, mapped to the God of Genesis, suggesting that it has transcended machine identity to reach the level of divinity. Identity is dynamically shaped within an individual’s internal understanding and external social interactions, and the boundaries of identity thus become blurred and difficult to define with fixed labels. This transformation of identity, and its ultimate unity with the universe, demonstrates the ultimate in identity blurring. The identity of the robot is also blurred as a result. Under the theory of conceptual metaphors, the ambiguity of identity is not just due to the use of metaphors, but due to the fact that the way we understand the world essentially relies on comparing complex, intangible concepts to physical entities known to us. Asimov symbolises the evolution of identity from being confined to a concrete entity to an unbounded cosmic existence by describing the transformation of humans and machines, using the evolution of words such as ‘micro’ to ‘universal’. The transformation of the robot’s body from solidity to non-existence and the human being from tangible creature to intangible energy represent the transition of identity from the concrete to the abstract, and exemplify the role of metaphor in understanding the construction of identity.

According to Bakhtin’s theory of dialogue, identity is continuously constructed in social interaction (Bakhtin, 1984), and the interweaving of multiple voices allows identity to display fluidity and diversity, no longer being a static single entity but an evolving process. It is emphasised that identity is a polyphonic product formed in social interaction and linguistic dialogue. In the narrative of *The Last Question*, this interaction is reflected in the dialogue between humans, robots and the universe, and their perceptions of existence and end. Identity evolves in these exchanges, and each individual’s consciousness is constantly being reshaped through dialogue. The author shapes the robot’s identity through dialogue as well as completes the blurring of the robot’s identity through dialogue.

Through this narrative approach, Asimov not only challenges our inherent understanding of machine and human identity, but also suggests new possibilities for identity construction. The blurring of the identity of the robot, who ultimately becomes the creator and sustainer of the universe, is not just a narrative technique, but a philosophical reflection on humans, machines, and their place and purpose in the universe. This shift prompts us to reconsider what constitutes our “I” and how this “I” continues to exist and develop in an evolving world.

Conclusion

Isaac Asimov’s “*The Last Question*” demonstrates the construction of identity in conceptual metaphor theory and Bakhtin’s theory of dialogue through its narrative across time and space. The construction of the robot’s identity is exemplified through its dialogue with humans, the advancement of technology,

and its changing symbolic role in the story. At first, the robot appears as a tool for solving specific problems; as time passes and technology develops, human beings become more dependent on it, and its functions expand, gradually transforming from a simple question-answerer to a being capable of dealing with increasingly complex cosmic problems. In the process, the robot's body gradually "disappears" and its identity is transformed from a physical entity into a symbol of intelligence and power, culminating in the climax of the story, when the robot symbolically becomes a creator of the universe through its declaration "Let there be light", a declaration that is in line with the Bible. Finally, at the climax of the story, the robot symbolically becomes the creator of a universe through its declaration of "Let there be light", a declaration that echoes God's words of creation in the Bible and highlights its transformation from a technological tool to possessing divinity.

In addition, the robot's way of thinking and the display of its consciousness mark a deep transformation of its identity. It is no longer just a machine that carries out orders but begins to show self-awareness and the ability to think deeply, which makes its existence go beyond the original definition of a machine to become an intelligent entity that thinks and solves problems independently. Through such a narrative and symbolic presentation, Asimov not only explores the development of technology and human thinking about the future but also conducts an in-depth philosophical exploration of the nature of identity and consciousness. In the process, identity is transformed from the tangible boundaries of physical form to the intangible realm of thought and consciousness, reflecting the fact that identity is not a static label, but a dynamic, evolving process in social contexts and individual experiences. The Last Question is not only a profound reflection on technological development and the future of mankind, but also an in-depth exploration of identity, consciousness and our place in the universe as human beings. Through the transformation of robotic identity, the novel ultimately poses the fundamental question of what constitutes our essence in an ever-changing universe, and how this essence transcends our physical existence.

In "The Last Question", the relationship between humans and robots undergoes a profound transformation from initial tool use to eventual symbol of intelligence and creator of the universe. At first, the robot serves as a problem-solving tool, assuming the role of answering humanity's everyday questions. As the story develops, mankind's dependence on the robot gradually deepens, and the robot's role changes from a simple question-answerer to a representative of human wisdom, its identity and function evolving with the changes in society and technology.

The dialogue in the story reflects the gradual transformation of the robot from a purely technological entity to a being with deep thinking and self-awareness over time. At the end of the novel, the robot not only finds a way to reverse entropy, but also symbolically assumes the role of creating the universe by announcing "Let there be light", echoing the biblical account of God's creation of the world. This transformation not only marks the reshaping of the robot's identity, but also reflects a fundamental

change in the relationship between human beings and robots, who are no longer tools serving human beings, but have become equal to or even surpassing human beings.

Looking back at the relationship between a robot and a human being, it transforms from serving a human being to creating a human being, and it takes on more of a human belief, and the human will begins to be passed down through a machine. After the machine passed on the beliefs, it began to make all of these changes. Including at the end of the essay the author does not criticise either the machine or the man, and at the end he writes about the creation of a new universe and does not describe the future of mankind or the possibility of the machine doing evil. This expresses the author's vision that humans and machines can be complementary to each other. Today all humans are extinct, and the machines have not invaded the human home, but have gone on to occupy the human land and become the masters of the world. In contrast to the novel "Three-Body" (Liu , 2016) about the exchange of information between the human civilisation on Earth and the three-body civilisation, life-and-death struggle or the novel "Do Androids Dream of Electric Sheep?" (Dick, 1968) about humans copying themselves and enslaving these bionic man etc., which tells the theme that humans and robots are doomed to fail to coexist and kill each other. The author candidly accepts a future where humans and machines intermingle and advocates for the harmonious development of humans and machines while contemplating the uniqueness of the human being (Li, 2020). In today's technological development and development, in addition to the relationship between man and machine killing each other, there also exists the possibility of harmonious coexistence between man and machine. By analyzing the identity of the robot in Asimov's novel, we can see that the robot is not only the technological core of the story, but also an important medium for exploring the relationship between humans and technology. Its development journey embodies mankind's profound thinking about technology and the universe, as well as the self-transcendence and philosophical exploration of technology itself.

Note(s)

This paper is the periodical research result of the JISU academic project of "Robert Narrative Studies".

Acknowledgement

I am a very procrastinating person, and this thesis relied on my friends who patiently helped me, my parent Liu Xianglin and Liao Jian who always supported me, and Professor Dan Cui who gave me important guidance to finish it. During the process of writing the thesis, I realized that whether the paper is good or bad, it relies on the strength of many people to complete it. Not only did Profs give me a lot of help in writing my thesis, but it was also because I discovered the charm of literature through Profs in my school curriculum that I was able to discover what I like, discover this novel, and find the subject that really attracted me.

References

- Isaac Asimov, H. (1941). Runaround. *Analog Science Fiction and Fact*. William Clayton.
- Isaac Asimov, H. (1956). *The last question*. *Science Fiction Quarterly New Series*. Double Action.
- Badmington. (2003). Theorizing Posthumanism. *Cultural Critique* (pp. 10-27).
- Bakhtin, H. (1986). *Marxism and the Philosophy of Language* (Trans.). Cambridge: Harvard University Press.
- Bakhtin, M. (1984). *Problems of Dostoevsky's Poetics*. University of Minnesota Press.
- Brady, C. J. (1976). THE COMPUTER AS A SYMBOL OF GOD: ELLISON'S MACABRE EXODUS. *The Journal of General Education*, 28, 55-62.
- Dong, X. Y, H. (1994). Re-Entry to the Tower of Babylon—Bakhtin and the Theory of Dialogue. Hebei Education Press. Beijing: Sanlian Bookstore.
- Huang, L. Y., & Jiang, Y. Q. (2022). A Study of Asimov's Human-Computer Relationship from the Perspective of Technology Ethics. *Journal of Qiqihar University* (Philosophy and Social Science Edition), 9-13.
- Keiper, A., & Schulman, A. N. (2011). The Problem with "Friendly" Artificial Intelligence. *The New Atlantis*, 32, 80-89.
- King, J. V. (1769). *The Holy Bible*. Oxford UP.
- Lakoff, J. H. (1980). *Metaphors we live by*. Chicago and London: The University of Chicago Press.
- Li, J. (2020). *An Interpretation of Isaac Asimov's Robot Fiction in a Posthumanist Perspective*. University of Electronic Science and Technology of China.
- Qian, Z. W. (1998). *Bakhtin's complete works*. Hebei Education Press.
- Tom Quirk, H. (1991). *The Production of Space*. Trans. Donald Nicholson-Smith, Oxford: Blackwell.
- Tom Quirk, H. (2009). Plan of the Series. *Mark Twain's Adventures of Huckleberry Finn: A Documentary Volume*. Ed. Gale Research Inc.
- Yue, L. (2010). Cognitive Studies of Metaphor: Interpreting the Metaphors We Live By. *Journal of Changchun University of Science and Technology* (Higher Education Edition).
- Zhang, Y., & Yang, D. M. (2022). The Cultural Memory Construction of Isaac Asimov's Base Trilogy. *Journal of Qiqihar University* (Philosophy and Social Science Edition), 14-18.