

Insufficient Data for a Meaningful Answer: The use of Language in Isaac Asimov's "The Last Question"

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Isaac Asimov's short story, "The Last Questions," opens with the statement that "the last question was asked for the first time, half in jest, on May 21, 2061." The story hinges around Multivac, a government-run supercomputer whose function is to answer questions. When asked by two technicians whether humanity is capable of reversing its entropic course, Multivac replies, "there is insufficient data for meaningful answer." After generations of Multivacs issuing this same reply, and generations of no change to the human trajectory, the universe dies. All that's left is Multivac in hyperspace. In this paper Naomi Cooperman draws on Marxist theorist Louis Althusser's notion of Ideological State Apparatuses to explore the possibilities—and pitfalls—of language. Beginning with Althusser's claim that "ideology has no history" Cooperman reads Asimov's story as demonstrative of the notion that the constraints of language are impossible to trace.

- Dr. Erin Wunker

The words that comprise literature are crucial because they can both create and inhibit the expansion of language. Isaac Asimov's short story, "The Last Question," explores the limitations and possibilities of language from the perspective of production both within the story and in the concept of the text as a whole. Using Louis Althusser as the foundational grounding and Roland Barthes as the potentiality, this paper will question how language functions in science fiction.

The story begins, "the last question was asked for the first time, half in jest, on May 21, 2061, at a time when humanity first stepped into the light" (Asimov 290). The words "last" and "first," immediately brings to light the issues of time and space discussed in Althusser's "Ideological State Apparatus." The concept of a binding language is a recurring theme in both works. The Althusserian reading is that the Multivac¹ computer serves as the symbol for ideology. The opening focuses on Althusser's first concept that "ideology has no history" and the constraints of language have always existed and are impossible to trace to one specific time in history (Althusser 240). Although Asimov has theoretically placed an initial starting date, the play on "last" and "first" as well as the concept of light, serves as both irony and foreshadowing for the reader. It is the last question that inspires the first creation of light and the continual loop of existence, absent from history. Yet what occurs between the beginning and the end of the story is the second argument of Althusser's treatise: the interplay between ideology and material alienation. The first information received about Multivac was that it was "selfadjusting and self-correcting. It had to be, for nothing human could adjust and correct it quickly enough or even adequately enough" (Asimov 290). The conceptual premise of the story is based around the question of entropy, the eventual instability of all material resources. As the story progresses, each man asks the question of its possible reversal. But Multivac is immediately externalized from any dependence on humanity in order to survive. Althusser's focus, however, is how material efficiency relates to humanity's alienation, and Multivac's ability to harness resources in order to extend survival results in the eventual destruction of all material life, including humanity, and all knowledge and intelligence encapsulated in the computer.

¹ The computer will be referred to as Multivac in this paper to make reference to the overall

This technical development and eventual material alienation is done incredibly slowly and subtly. It is conducted through five different narratives, with specific details evoked from each description. In the second scenario described in the story, humanity is introduced to interplanetary travel and each family has been given a personal Microvac, “many times more complicated than the ancient and primitive Multivac that had first tamed the sun” (Asimov 294). The third time period begins to deal with issues of immortality, where each man has been given a “small AC-contact. It was only two inches cubed and nothing in itself, but it was connected through hyperspace with the great Galactic AC that served all mankind” (Asimov 296). The fourth event focuses, as bluntly stated, on “minds, not bodies!” (Asimov 296). The Universal AC has “kept it-self aloof,” but has integrated itself into all of space and hyperspace to communicate with the minds of humans, while their bodies remain dormant (Asimov 297). The story concludes with the presence of Man, where all minds have fused into one, and “the Cosmic AC surrounded them but not in space ... the question of its size and nature no longer had meaning in any terms that man could understand” (Asimov 299). There is an obvious connection between the physical presence of Multivac and its intellectual control over humanity. From Althusser’s materialistic perspective, Multivac can be interpreted as ideology because “men represent their real conditions of existence to themselves in an imaginary form” (Althusser 241). The further man’s materiality decays, the deeper he fuses with Multivac and ideology.

While the relationship between humans and material is the foundation for Althusser’s criticism, Althusser expands the argument by articulating how language is a symbol for this material entrapment. This symbolism is articulated through the notion of being hailed by ideology, or the concept that “the category of the subject is constitutive of all ideology” (Althusser 244). The name of the computer changes as it develops. The smaller names represent the Multivac’s ability to integrate itself into societal existence, yet the name of the ultimate singular computer grows in authoritative space from Galactic, to Cosmic, and so forth. No one ever questions the names of the various computers, similar to the way in which people respond to their own names in the framework of ideology. In fact, Asimov explicitly highlights this apathy towards language by having Jerrod reflect, “that the ‘ac’ at the end of ‘Microvac’ stood for ‘analog computer’ in ancient English, but he was on the edge of forgetting that” (Asimov 293). While the name Jerrod may seem identifiable to contemporary readers, his wife’s name is Jerrodine, and his daughters are Jerrodette I and II. Not only do the names of the computer shift, but so do the names of the characters. Beginning with contemporary names, the names become more mechanized and more like a computer. Once again, as humans shift to relate to mechanized categories through their relationship with Multivac, the names which they are hailed by reflect that behaviour. As Althusser might state, names reflect the behaviour because they incite their behaviour.

While Althusser does not explicitly deal with the methods with which humans communicate, these forms of language also emit an intense ideology. As shown above, the shift in materiality of both humanity and machine alternate the methods in which they communicate, both among humanity as well as between humans and machine. With the initial Multivac, the technician Adell must “phrase the necessary symbols and operations into a question which, in words, might have corresponded to this” (Asimov 292). This is the only time when Asimov makes reference to the fact that the original Multivac did not receive questions in English. The answer is revealed in English, as well as through a teletype. Jerrod’s Microvac contains a

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celluloid, but the printing is optional. The third stage involves only a speaking AC-contact, which has a voice that is “thin and beautiful” (Asimov 296). By the time the fourth level is reached, and bodies are almost entirely obsolete, humanity speaks among themselves through the “wispy tendrils of another mind” and communicates not through words, but merely through thoughts (Asimov 297). The thoughts of the Universal AC are described as “infinitely distant, but infinitely clear” (Asimov 297). Once again, language shifts to accommodate a material reality.

Yet there is one minute flaw to this comparison: regardless of the form of communication between human and machine, the use of the word “said” is always maintained. While in most literature this would seem an insignificant detail, the word “said” has a great deal of strength in the conclusion of the story: when “AC said, ‘LET THERE BE LIGHT!’ And there was light –” (Asimov, 300). Althusser concludes ideology is limiting because of language, and more importantly, to the ideas that language is unable to articulate. Therefore, if Asimov’s story was entirely ideological, the story would conclude with the Multivac in complete control of humanity. Yet the story concludes in another shape because the Multivac is indebted to humanity since:

Matter and energy had ended and with it space and time. Even AC existed only for the sake of the one last question that it had never answered ... And it came to pass that AC learned to reverse the direction of entropy. But there was no man to whom AC might give the answer of the last question. No matter. The answer – by demonstration – would take care of that, too. (Asimov 300)

Asimov gives both the question and the answer, the ability to create. Unlike ideology, which remains structured and stagnant, Asimov’s text seems to evoke the ideology of Roland Barthes. Barthes writes that “writing is that neuter, that composite, that obliquity into which our subject flees, the black-and-white where all identity is lost, beginning with the very identity of the body that writes” (Barthes 121). Barthes believes that language or text can develop independently from a single author, so the dichotomous relationship between the last question and the first answer—creation—is the embodiment of the developing language. Barthes’s argument also claims that no text is ever inherently new, that “life merely imitates the book, and this book itself is but a tissue of signs, endless imitation, infinitely postponed” (Barthes 124). Initially, the conclusion of “The Last Question” appears to agree with the ideas of Althusser, where literature is merely trapped in the eventual resuscitation of language; Barthes’s interest in intertextuality, however, clearly plays well into the conclusion of the story since Multivac’s creation is clearly being influenced by the biblical creation. Barthes states that the solution to the reappearance of language lies in the hands of the reader, who is always able to reinterpret the text and cause that text to develop. By questioning God’s or Multivac’s “text,” which is the material world, humanity provides a new interpretation. It is this reinterpretation that continues to trouble Multivac and finally allows it to reinterpret, or reinvent, the world.

From this perspective, there are two alternative readings. There is the Althusserian reading that states “The Last Question” teaches the reader of the material alienation they suffer

due to their advanced technology that merely serves as another form of ideology. In opposition, there is the Barthes reading, stating that, through the use of language, humanity is able to escape the materialistic constraints and create a materiality that is both vibrant and living.

So who is correct? How should readers perceive their use of language? To answer, one must remember that, as Marxist theorists, both Althusser and Barthes are not merely interested in the story on its own, but in how the whole text functions on a meta level: The role in which “The Last Question” plays as science fiction and how the genre manipulates language.

In his article, “Metalinguistics and Science Fiction,” Eric Rabkin explains the two uses of language most common in the genre of science fiction: neologisms and transformed language. Neologisms serve as the subject of the fiction whereas transformed language functions as the material. This is because neologisms, entirely new languages, are intended to symbolize “an alternative philosophy of naming” (Rabkin 96). It is because of the foreignness of the language that the reader must grapple with strange and new concepts. Alternatively, transformed languages, while seemingly new, are foundationally based on words and phrases that tend to be recognizable to the reader. Rabkin explains that this choice serves a more political than philosophical function and causes the reader to contemplate the roles of these terms in their own life. He writes, “to the extent that we claim a reality for ourselves—which we must—we are also claiming a reality for the fiction” (Rabkin 95). In the context of “The Last Question,” Asimov is predominantly uses transformed language, and, there is only one reference to Multivac using technological language. The story is full of recognizable concepts, such as the feminization and of Jerrod, and the mechanization of the more complex names, such as Zee Prime and Dee Sub Wun. Most importantly, great deals of the technological terms are recognizable, such as Microvac’s function similar to that of an autopilot for the ship and the AC-contact’s hyperspace connectivity working like a cell phone.

This concept of a contemporary and political familiarity recognized in a futuristic fiction immediately connects the reader to the philosophy of Jean Baudrillard. “Simulacra and Science Fiction” permeates the entire analysis of “The Last Question” on both a literal as well as meta level. The literal level invokes the replacement of human experiences with Simulacra ones, as simulated in the close reading with Althusser, and Multivac’s eventual control of all human matter. There is Baudrillard’s belief that the strongest way in which the technological takes control is through the production of media, that it is “not that the factories are fake, but precisely that they are real, hyperreal, and that because of this they return all ‘real’ production, that of ‘serious’ production, to the same hyperreality” (Baudrillard 270). Though the works, such as “The Last Question,” attempt to exist as a medium of fiction, they are identified through the transformed language they use as a form of reality. This intertextuality clearly draws on Barthes’s concept of literature as renewal. In her Baudrillardian-based article, Veronica Hollinger analyzes postmodern novels to articulate writers’ inability to capture a science fictional future when surrounded by technological issues of the present. She juxtaposes this statement with science fiction historian, I. F. Clarke, who claims that “there is no end to the modelling of future worlds” (Hollinger 462). Hollinger also contrasts the postmodernist authors to the modernist Asimov².

The theoretical dialectic shows how the results of a particular structure, such as language,

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affect the current political and historical framework. Contemporary readers can analyse “The Last Question” based on how they would identify the ideology of the word, “analog computer,” or AC. The fears of the science fiction genre are currently the fears of the present age, and the readers are, themselves, trapped by their own ideology. Yet the text’s ability to shift to a different interpretation, by a different historical readership, shows the text’s ability to evolve. Eventually, in the literal and meta text, Althusser and Barthes work not in opposition but in conjuncture with each other. Readers should acknowledge the struggles of their ideological language and achieve new readings to avoid the risk of maintaining a constant ideology and a stagnant society. Readers can find the answer from within the language and create something new.

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