



A Critique of the Representation of Human and Technological Relations in Indonesian Science Fiction Literature

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Abstract. This article discusses the relationship between humans and technology as represented through Indonesian science fiction literature. This research aims to explore and criticize the single narrative of technological optimism that continues to appear repeatedly in Indonesian science fiction literature. The research process is carried out by, 1) analyzing the development of Indonesian science fiction literature in the period 1966-2008 by utilizing available research documentation studies, 2) analyzing one of the latest Indonesian science fiction literary novels entitled *Hujan* to show the continued production of a single narrative of technological optimism, and 3) critiquing the single narrative of technological optimism as a one-dimensional point of view using the perspectives of one-dimensional human theory and technocapitalism. The results of the discussion obtained in this research are in the form of criticism of the single narrative of technological optimism which does not provide much space for readers to understand the relationship between humans and technological progress in various aspects such as economics, politics, power relations, etc.

Keywords: Critique of representation, relations, humans, technology, Indonesian science fiction literature.

1. Introduction

The relationship between humans and technological development has basically colored the development of Indonesian literature since the 1960s through a science fiction genre novel entitled *Getaran* written by Djoko Lelono [1-2]. The relationship between humans and technological development in Indonesian science fiction novels is written with roots in the didactic tradition, as a means to arouse public interest (especially teenagers) in the development of science and technology, science fiction generally has the same themes (space travel, time travel, technological inventions) and forms of characterization (teenagers who have high intelligence) [1-3]. The didactic tradition in writing science fiction novels means that these novels only have a single point of view in representing the relationship between humans and technology, namely a point of view that emphasizes the superiority of technology in human life and the safety of the earth on which it lives, or commonly referred to as the techno-optimism point of view.

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Techno-optimism in general is a view that believes technology can make the world and life (humans, nature, and animals) in it better [4], this view believes that technology is the main determinant of all improvements in life in the world (technology determinant). Techno-optimism is not one specific view [4], but a set of related views that vary in the level of optimism towards the development of the role of technology, some of these thoughts such as Transhumanism [5], Techno-Utopianism [6], Posthuman [7–9] and so on. The emergence of the techno-optimism view is motivated by the fact that the existence of modern humans cannot be separated from technology, such as Smart Phones which can now be said to have become an external brain for humans, or Jarvik.7 artificial heart technology that can replace the function of the human biological heart.

Techno-optimism as a single point of view in science fiction writing in Indonesia has basically limited readers to understand the complexity of problems regarding the relationship between humans and technology in various perspectives, so that readers cannot respond critically to the phenomenon of these problems outside the mindset offered by the text, this condition in Marcuse's view [10] is referred to as the condition of creating a one-dimensional mindset. Marcuse explained that a one-dimensional mindset is a condition created to provide limitations for a person/society in recognizing and believing discourses, ideologies, ideas, aspirations that are different from those believed by the status quo [10]. The creation of a one-dimensional mindset is necessary to close the possibility of the entry of other narratives (discourses) into the socio-political reality controlled by the status quo. For Marcuse [10], the distribution of one-dimensional mindset basically always involves various things ranging from building architecture, food, clothing, entertainment industry, to literary works. The distribution of this mindset has the main purpose of ensuring that the wider community has adopted this mindset as a basis for consideration in thinking and behaving, which in the next stage will turn into what Marcuse [10] calls one-dimensional behavior.

The single narrative of techno-optimism presented in various science fiction works in Indonesia has the potential to ignore the exploitative side of technology. Luis Suarez Villa [11-14] in his thoughts on technocapitalism clearly explains how technological development based on the economic structure of capitalism leads to massive exploitation of humans and nature.

Technocapitalism is a term used to refer to a new form of capitalism that is built and sustained by the power of technology companies that exploit creativity and human labor as its main resources [11-14]. In Technocapitalism, creativity is the most valuable resource because it is where new innovations and breakthroughs are born, which are then used to accumulate capital and increase the profits of technology companies. In this way, the potential of human creativity, knowledge and learning that can be used to improve the quality of human life is reduced to serving only the increasing profits of technology companies.

The central role of technology companies in developing technology ultimately has an impact on the creation of full power in controlling the course of technological and human development in all domains of life, ranging from the social [15], economic [16], political [17], and environmental domains. At this point, it can be said that the degradation of human values that occurs today is not caused by something that comes

from within technology, but is caused by the economic structure that is the basis for technological development and progress, allowing technology companies to have unlimited control and power.

For Villa [13] technocapitalism has a completely different form from industrial capitalism, some of these differences are explained by him as follows:

Table 1. Resource Differences

Key Resources Industrial Capitalism	Key Resources of Technocapitalism
The raw materials	Creativity
Production equipment	Experimental tools
Capital	Experimental design
Labour (physical ability)	Bueruh (creative thinking ability)

The table is enough to explain how the transformation of the form of capitalism from industrial to technocapitalist. The critical perspective that Villa [13] tries to offer in the concept of technocapitalism is that technological rationality is not truly neutral and prioritizes the nature of usefulness, but rather represents the economic, political, social, and power interests of a more dominant group, namely technology companies or so-called technocapitalists.

Based on this phenomenon, it can be seen that there is a gap between the didactic agenda at the root of science fiction writing in Indonesia and the lack of critical perspectives in Indonesian fiction novels. By ignoring critical perspectives on the relationship between technology and humans, science fiction novels in Indonesia have indirectly failed to fulfill their didactic purpose. Instead of fulfilling its main purpose as a didactic literary work, science fiction novels in Indonesia have the potential to become a tool of control that limits readers in understanding the complexity of the relationship between humans and technological development.

The novelty in this research consists of two things, 1) regarding the lack of critical perspectives on the impact of exploitation arising from the relationship between technological development and humans in Indonesian science fiction, the novelty is related to the explanation of how the narrative of techno-optimism is continuously displayed in Indonesian science fiction novels and 2) the combination of technocapitalism theory [13] and one-dimensional human theory [10] as an analytical tool. Technocapitalism theory is used to explain how the mode of operation of exploitation occurs in the relationship between humans and technology, while one-dimensional human theory is used to show how the discourse of techno-optimism is displayed as a single discourse that dominates the discussion of the relationship between humans and technology in Indonesian science fiction novels. The integration of these two theories into this research has an important role, namely to uncover the exploitation practices hidden behind the techno-optimism discourse constructed in Indonesian science fiction novels.

This research was conducted with the main objective of analyzing and critiquing the singular viewpoint of techno-optimism accommodated in Indonesian science fiction

novels, with the main focus on Tere Liye's novel *Hujan* [18] through the lens of technocapitalism and one-dimensional human theories. The following explanation of the research stages will be explained in more depth in the next section.

2. Method

The research in this article is conducted within the framework of qualitative research that aims to analyze and criticize [19-20] the object of research in the form of a literary text, namely, a novel entitled *Hujan* by Tere Liye [18], the novel is important to choose because it is a science fiction novel that re-presents techno-optimism as a single narrative. The novel was analyzed through textual and contextual-based approaches [21], both approaches were chosen with the aim of clarifying the relationship and interrelationship between the construction of techno-optimism views in science fiction texts and the world outside the text.

In addition to the novel *Hujan*, this study also used secondary data sources from books, research reports, and documents, which are related to science fiction literary writing, and theories used to analyze. Data collection in this research was conducted through 1) literature study, 2) documentation, and 3) read and write. In this article, the data is analyzed based on the theory of technocapitalism [11-14] and the theory of one-dimensional man [10], the selection of the two theories was carried out with the aim of presenting an in-depth analysis of the impact of the naive optimistic view of technology presented in the novel *Hujan*.

Data analysis in this research article is carried out to answer the objectives of the problem focus, data analysis is carried out through 3 stages, namely;

1. Analyzing the development of science fiction literature in Indonesia in the period 1968-2000s by utilizing available research documentation studies.
2. Analyzing the textual data of the novel *Hujan* by using Genette's [22] narratology theory, this was done with the aim of finding how the narrative of techno-optimism became a one-dimensional point of view in the novel. The narratological analysis was conducted sequentially starting from the stages of 1) narrative order, 2) narrative duration, 3) narrative frequency, 4) narrative mood, and 5) narrative voice.
3. After conducting a narrative analysis, the researcher then critiques the one-dimensional point of view shown in the novel *Hujan* based on the findings generated from the previous narrative analysis using the point of view of one-dimensional human theory [10] and technocapitalism [13].

The three stages of data analysis were generally carried out by: 1) conducting a narrative analysis of the literary text that became the object of research, 2) categorizing and organizing the data that has been analyzed, 3) explaining the various problems that arise using the perspectives of one-dimensional human theory and technocapitalism, and 4) drawing conclusions from each analysis.

3. Result and Discussion

This section will explain how the narrative of techno-optimism becomes the dominant narrative and continues to be reproduced in every work of recent science fiction literature. The discussion is done by, 1) Explaining how the narrative of techno-optimism becomes a narrative that continues to dominate the development of science fiction literature in Indonesia in the period 1966-2000s, 2) Analyzing and criticizing the narrative of techno-optimism present in the narrative structure of the novel *Hujan* to show the dominance of the narrative of techno-optimism that continues to be reproduced in Indonesian science fiction literature, and 3) Criticizing the narrative of techno-optimism represented by the novel *Hujan* as a one-dimensional view and showing how alternative perspectives to understand the relationship between humans and technology.

3.1 Techno-optimism as a single narrative in the development of Indonesian science fiction literature

There are three studies that in depth discuss the development of Indonesian science fiction literature, the first study was conducted by Budiaju [1] with a research focus related to the development of science fiction literature in the 1966-1991 period, the second was conducted by Merawati [2] with a research focus on the 1980-2000 period, and the third was conducted by Maulana with a research focus related to science fiction literature published in 2006 and 2008 [3,23].

The three researchers basically have different opinions about the first appearance of science fiction literature in Indonesia, the first two researchers argue that the first appearance of science fiction literature began with a literary work entitled *Getaran* by Djokolelono which was written in 1968 and published in 1972 by Balai Pustaka [1-2]. In contrast to these two researchers, Maulana [3,23] argues that the emergence of science fiction literature in Indonesia has appeared before the authorship of Djokolelono, this opinion is based on two things, 1. Djokolelono in his interview explained that before he wrote his first novel entitled *Getaran*, he had read some science fiction literature (the reading was not documented), and 2. Some science fiction stories that took the form of comics had appeared in Indonesia during 1956, one of which was a comic entitled *Sriasih* by R.A. Kosasih.

Although they have different opinions about the history of the emergence of Indonesian science fiction literature, all three basically have similarities in explaining the main themes that continue to dominate the development of science fiction literature in Indonesia. Budiaju [1] in his research explained that Indonesian science fiction works that developed in the period 1966-1991 prioritized fiction over science-fiction, with the most dominating main themes being space travel to defend justice and the use of advanced technology.

The same findings were also presented by Merawati [2], in her research explaining that the development of science fiction in the 1980 and 2000 periods experienced a shift, in the 1980 period, science fiction works were still dominated by themes about space travel and warfare (heavily influenced by physics, geography, and astronomy),

while in the 2000s, the theme of the story experienced a shift with many science fiction works that did not only take place in space but were set on Earth, one of the science fiction works referred to by Merawati to explain these conditions was the novel *Supernova: Knight, Princess and Shooting Star* by Dee Lestari [24], which was first published in 2001. Despite the shift, the development of science fiction still remains within a circle of certain formulaic conventions in accordance with the formula for the science fiction genre.

Continuing Merawati's research, Maulana [3,23] in his research also explained that there was a shift in themes and story forms in the development of science fiction works in Indonesia, he explained that there was an attempt by science fiction writers to combine themes related to science and Javanese folklore through the depiction of speculative science elements, the research conducted was based on the novel *Lanang* by Yonathan Rahardjo [25], *ORB* by Galang Lufityanto [26], and *Lesti, Nyatakah Dia?* by Soehario Padmodiwirio [27]. The research conducted by Maulana basically confirmed the findings of Merawati's research on the shift in themes from space travel and life to life on Earth, even directly related to certain folklore, which Maulana later referred to as postcolonial science fiction, because it was no longer fixated on technological developments in Western countries.

Based on these three studies, it can be said that Indonesian science fiction literature basically has an accepting point of view towards technological development, technology is seen as an entity that is very influential in human life, it appears as a helper for humans if used properly, and becomes a bad thing if used badly. This of course ignores the more complex issues related to the relationship between humans and technology, which always involves other things such as economics and politics.

3.2 Narrative structure of techno-optimism towards technology in the novel *Hujan*

In this section, the researcher focuses on analyzing the narrative structure in Genette's [22] theoretical framework, analyzing the narrative structure to get a complete picture of how events are presented in sequence (order), the duration of each event (duration), the frequency of recurrence of an event (frequency), how the author presents the narrator in the story (mood), and how the narrator conveys the story (voice). The following is the structure of the narrative theory [28-30]:

Table 2. Genette's Narrative Theory

Order	1. Achrony	
	2. Anachrony	1. Prolepsis 2. Analepsis
Duration	1. Pause	
	2. Scane	
	3. Summary	
	4. Ellipsis	
Frequency	1. Singularly	
	2. Multipe-Singularly	

	3. Repetitive	
	4. Iterative	
Mood	1. Nonfocalization	
	2. Internal Focalization	1. Fixed Focalization 2. Variable Focalization 3. Multiple Focalization
	3. External Focalization	
Voice	1. Time of Narrating	1. Subsequent 2. Prior 3. Simultaneous 4. Interpolated
	2. Person	1. Narrator heterodiegetic 2. Narrator homodiegetic
	3. Narrative Level	1. Ekstradiegetik-heterodiegetik 2. Ekstradiegetik-homodiegetik 3. Intradiegetik-heterodiegetik 4. Intradiegetik-homodiegetik

- **Order**

The novel *Hujan* [18] has a narrative structure that is written by presenting events not chronologically, starting from the character Lail who decides to come to the neural therapy center to erase memories, then in the process the character Lail is asked by the therapist (Elijah) to tell about the events in her memory that will be erased, at this point there is a break in the story to recall events that have occurred in the past by the character Lail, the story sequence in Genette's [22] theory is classified as Anachrony in the Analepsis category. The structure is generally used to provide an explanation of a main event in a story [28], in the context of the novel *Hujan*, the story structure is used as an explanation of why the character Lail decides to erase the memory.

- **Duration**

Duration relates to the speed at which the narrative narrates an event, the narrator can speed up or slow down the narrative with respect to the event being told, a main event in a story is usually presented with a long narrative (measured in the number of paragraphs, pages, or chapters used), whereas a secondary event is presented with a short narrative by reducing it to a few paragraphs or pages [22,28,29]. For example, a narrator may summarize a person's entire life in one sentence (15 years later, he is now 30 years old), or may spend hundreds of pages recounting the events of 24 hours (e.g. Solzhenitsyn's *A Day in the Life of Ivan Danisovich*).

In the novel *Hujan*, various narratives related to technology are presented in a way that the story time (ST) is stopped in order to provide special time for the narrator (NT) to provide an explanation related to a certain matter, which in the novel refers to an explanation of technological development, in Genette's theory (1980) this is referred to

as a pause. The following is an example of how Pause is used by the narrator to explain about technological advances in the novel *Hujan*.

Table 3. Excerpt data duration

Excerpt data	Description
<p><i>Lail nodded hurriedly. She had been looking around, staring at the television screens on the walls, poles, and everywhere broadcasting breaking news. The train aisle in the distance looked deserted. 'Well, it looks like the train is late this morning too.' Her mother checked her arm (page 12) [18].</i></p>	<p>ST (The story of the character Lail and her mother walking in the station hallway).</p>
<p><i>There is no conventional watch, but a small touchscreen, which shows 7.46am. This is the latest model of the device. It measures 2x3 centimetres and is embedded in the arm. Simply shake the arm and the screen lights up. Many city dwellers are still not used to (page 12) [18].</i></p>	<p>NT (explanation of watch technology in 2042).</p>

Based on the duration analysis, it can be said that the story time (ST) related to technology in the novel *Hujan* is basically displayed more by utilizing the duration in the form of pauses (Pause) and summaries (Summary), this also shows that the narrative about technology is not the main focus in the story, but only supports the story.

- **Frequency**

Frequency (or repetition) relates to the number of times an event occurs in the story and the number of times the event is told, according to Genette [22], a narrative can tell an event in the story into several forms of frequency, 1) singularly, one narrative representation is used to tell one story event (1N/1S), such as “Yesterday, I came in the morning;”, 2) multi-singularly, several repeated narrative representations are used to tell several story events (nN/nS), such as “Sunday, I came in the morning; Monday, I came in the morning; Thursday, I came in the morning,” and so on, 3) repetitively, repeated use of the same narrative representation for one story event (nN/1S), such as “Yesterday I came in the morning; yesterday I came in the morning; yesterday I came in the morning,” and so on.; (4) iterative, one narrative representation is used to narrate repeated events in the story (1N/nS), as in “Every day of the week I go to bed early”.

In the novel *Hujan*, narratives about technology are told in two forms, namely, singularly and repetitively. The most prominent and continuously talked about technology in novel *Hujan* is the medical technology related to neural therapy to erase memories, the explanation of the technology continues to be told repetitively in many chapters of the novel. Here is the data that explains this:

Table 4. Excerpt data about frequency

Excerpt data	Description
<i>The 4x4m² room at first glance looks too modestly designed for the most up-to-date room in the city. Yet it is high-tech and equipped with the most advanced medical equipment. The therapy technology is unimaginable to man (page 5) [18].</i>	The repetitive frequency about the medical room occurs 11 times in 32 chapters. This number is the highest number of other repetitive frequencies.
<i>The 4x4m² room with its flawless alabaster floor was deserted.</i>	
<i>Elijah watched the flickering screen of the tablet in front of him. It was a sign that the silver headband-shaped scanner on Lail's head was working properly since she started telling her story. The scanner began mapping the neurons of the brain of the patient sitting on the green couch. The red, yellow and blue coloured threads on the tablet screen began to form, indicating active memory (page 19) [18].</i>	
<i>The 4x4m² room with alabaster floors was quiet. A 21-year-old girl sitting on a green sofa wipes the corner of her eye. Reminiscing and recounting the events of eight years ago was not easy. In fact, she only started on her first day (page 40) [18].</i>	

The repetitive frequency in the quotation is basically used to refer to, 1) the same event, namely the erasure of memory by the character Lail, and 2) the medical room in which there is a high level of neural technology. Based on this frequency, it can be said that the narrative of neural medical technology (memory erasure) is the most frequently occurring technological narrative in *Hujan*.

- **Mood**

Mood is related to the narrative mode, this refers to how the position or position of the author, narrator, and characters in a story, the main focus is on observing how the narrator's presence is arranged in the story, whether the narrator is in the story, or outside the story. According to Genette [22], there are several possibilities related to how the narrator is realized in a story, 1) Nonfocalization narrative, the narrator is positioned as a party who knows many things, for example various facts about several characters, physical forms, movements, ways of thinking, to feelings, rather than characters in the story, 2) Internal focalization, where the narrator only says what the character knows, this is manifested in several forms, namely, a) fixed focalization, b) variable focalization, and c) multiple focalization, and 3) external focalization, where the narrator says less than what the character knows.

In the novel *Hujan*, the narrator is positioned in two forms of nonfocalization and external focalization. In the first position, the narrator is positioned as a party who knows many things, various facts about each character (feelings, thoughts, activities,

actions), and conditions that occur around the character (technological developments that are happening). While in the second position the narrator is positioned as an observer, the narrator only acts like an observer and reports every action of the characters from the outside, this second position appears when there is dialogue between characters.

Table 5. Excerpt data about mood

Excerpt data	Description
<p><i>Two years after the disaster, manufacturing plants have fully recovered. They raced to deliver tablets as thin as HVS paper, holographic screens, refrigerators that could think, wireless electrical devices, automatic room cleaning machines, and various appliances with advanced technology.</i></p> <p><i>New buildings are adopting smart systems. Supermarkets without waiters. Even in restaurants, diners order food by simply tapping the dining table, which is also a touch screen, selecting the menu from the screen. And when finished, leave the table. the system will immediately autodebt, the payment process is complete. Hotels also no longer use receptionists. Starting from the check-in process to room service is done by machines (page 96) [18].</i></p>	

The quote is enough to explain that the narrator as the all-knowing party and as an observer appears very dominant when giving an explanation of how technological developments occur in the novel. The narrative of technological progress is presented as something that is present and taken for granted.

- **Voice**

If mood is related to the position or position of the narrator in a story, then voice is related to how the narrator manifests his existence in a story, in explaining this Genette (1980) explains that this can be done by analysing 1) Time of Narrating (how the narrator represents time in the story), 2) Person (how the narrator embodies himself, whether the narrator is present as a character in the story, or on the contrary the narrator stands outside the story), and 3) Narrative level (relating to where the narrator is involved in telling a story, a. extradiegetic-heterodiegetic, the narrator is outside the text and tells about the experiences of other people/characters, b. extradiegetic-homodiegetic, the narrator is outside the text and tells about his/her own experiences, c. intradiegetic-heterodiegetic, the narrator is inside the text and tells about other people's/characters' experiences, and d. intradiegetic-homodiegetic, the narrator is inside the text and tells about his/her own experiences). Based on the narrative analysis developed by Genette, the voice structure is as follows:

Table 6. Excerpt data about voice

Time of Narrating	Voice	
	Person	Narrative Level
Subsequent or narrative past, where the narrator recounts events that happened at some time in the past.	A heterodiegetic narrator is a type of narrative in which the narrator recounts the experiences of others.	In the extradiegetic heterodiegetic paradigm, the narrator is outside the text and narrates the experiences of other people/characters.

Based on the voice structure, it can be said that the narrator has an important role in structuring and regulating the course of the story, because what is read by the reader in the novel is the result of the narrator's observation and point of view, In the context of the narrative about technology, the narrator presents the narrative about technology as something that is just present, there is no debate presented through the narrator's narrative or dialogue between characters.

3.3 A critique of the techno-optimism perspective in the novel *Hujan*

Based on the analysis of the narrative structure of the novel *Hujan*, it can be said that the position of the narrator as an all-knowing party appears very dominating when providing explanations about technology, in this position it can be said that the techno-optimism raised in the story is basically in full control of the narrator, which if understood more deeply, it can be seen that the narrator does not present technological progress as a debate and negotiation through dialogue between characters, but rather as something that is taken for granted, this is enough to prove that the narrator is basically internalising a one-dimensional view of technological optimism.

There is one major narrative that is consistently raised by the narrator in the novel *Hujan*, it is related to the inability of the characters, especially the main character, to question, criticise or even reject the presence of technology, even though technology is narrated to be enjoyed by only a few people,

Table 7. Excerpt data about technology optimism narrative

Excerpt data	Description
<i>'Humanity must be saved from extinction. The only way available is to send them away from the earth. Each ship can hold ten thousand inhabitants, taking them to a stratospheric orbit up to two hundred kilometres from the earth, far above the stratospheric layer. They would survive there. The ship would provide a living space designed to resemble the idealised surface of the earth. Until a hundred years have passed since the ship sailed, and the earth's climate has fully recovered naturally, they can land again.'</i> <i>Lail exclaimed covering her mouth. 'Humans are endangered?'</i>	In the dialogue excerpt, it can be seen that the character Esok explains about the high-tech space ship that is the only savior of the earthlings from extinction to the character Lail.

Esok nodded. 'We might still have a chance of surviving on the Earth's surface if we let the winter pass naturally beforehand. But, with the intervention of the stratospheric layer, that possibility is getting smaller. No human will be able to survive the extreme summer. That's the only way to save the human race, to send it on a ship, leaving the surface (page 280) [18]'

In the dialogue excerpt, it can be seen that there is no critical dialogue that the narrator tries to build to question the excessive control of technocrats and bureaucrats in building, selecting and implementing technology development policies for the wider community. Technology is narrated as the only saviour that must be taken for granted, without critically discussing the creation, determination and use of a technology for the lives of society at large.

Table 8. Excerpt data about the dialogues between the characters Lail and Esok

Excerpt data	Description
<p><i>'Who...'</i> Lail swallowed. <i>Who will be on this ship?'</i> <i>'The consortium agreed this would be done fairly. We built a machine that can select randomly, according to the genetic distribution of humans, from existing population data. It's important to bring genetic diversity on board, to make sure the humans of the coming centuries can survive. In the coming weeks, the names of the tens of thousands of people on board will be determined. They should already know. The evacuation process will begin immediately. In four weeks, the four ships will depart. Exactly when the aircraft departs, the government will publicly announce this project, so that anyone living on earth can prepare for the situation.'</i> <i>'Why don't they announce it now?'</i> <i>'They can't, Lail. It could spark large-scale riots. People will find out where the ship was built. They will force their way aboard. Until the day of departure comes, only a few will know about it.'</i> (page 280) [18].</p>	<p>In the dialogue excerpt, it can be seen that the character Lail shows an acceptance response to the idea of limiting the number of survivors.</p>
<p><i>'Oh my God...'</i> Lail rubbed her face. <i>'Does... does Wali Kora know?'</i> <i>'The mayor knows. But not from me. The mayor is one of the consortium members. Our city gave a lot of money to the project secretly. That's why the repair of the underground railway was stopped, there are more urgent things to do (page 281) [18].'</i></p>	

In the dialogue, it can again be seen how technocrats and bureaucrats have full power and control in determining the direction of technological development by hiding it from the public, which is then justified in the narrative for the main reason of avoiding riots and public panic.

Instead of presenting techno-optimism as a critical dialogue through its characters, the novel *Hujan* presents what Marcuse (2013) calls a one-dimensional condition, where the narrator through his narration encourages the formation of conditions and control of mindsets and behaviours of acceptance / normalisation of the full control possessed by technocrats and bureaucrats in determining the direction of technological development. In the novel, the formation of a one-dimensional mindset and behaviour is displayed using two resources, namely, through dialogue between characters who avoid critical conversations to debate technological progress and the formation of the main character Esok who is a technocrat (scientist), and Esok's adoptive parents who are bureaucrats (mayor).

The techno-optimism displayed in the narrative of the novel *Hujan* basically does not provide much space for readers to understand the relationship between humans and technology in various aspects, by avoiding discussion of the political-economic relations underlying the development of a technology. The separation of the relationship between technological development and political economy conditions basically ignores critical narratives about the other side of technology that is exploitative.

In the same dialogue, it can be seen that technological development is done by taking away freedom, exploiting knowledge, creativity, and the human body. Instead of resisting, Esok character in this novel normalises it. At this point Villa's critique in technocapitalism becomes relevant, that the potential of human creativity, knowledge, and learning that can be used to improve the quality of human life is reduced only to serve the interests of a handful of technology development financiers. The central role of financiers in technological development ultimately results in the creation of full power for themselves to control the course of technological progress and human development in all spheres of life, ranging from the social, economic, political, and environmental spheres.

This highly exploitative representation of the relationship between humans and technology must be reconsidered in the writing of Indonesian science fiction literature. A more critical perspective must be presented to present an alternative narrative of technological innovation.

4. Conclusion

Based on the results and discussion, it can be stated that the development, the narrative of techno-optimism that dominates in Indonesian science fiction literature is always presented by ignoring critical discussions about the political-economic relations underlying the progress of a technology, technological progress in Indonesian science fiction literature is narrated as something separate from political-economic relations. The narrative continues to be produced continuously, one of which is through the novel *Hujan* by Tere Liye, the narrative of techno-optimism in the novel is presented as something that is taken for granted by the main character, without presenting critical dialogues that lead to questioning the political-economic conditions underlying a technology being developed.

References

1. M.V. Wresti Budiaju A P. *Kajian Perkembangan Fiksi Ilmiah Anak dan Remaja Karya Pengarang Indonesia 1968-1991*. University of Indonesia; 1992.
2. Merawati F. SCIENTIFIC DEVELOPMENT WORKS FICTION AUTHOR INDONESIA YEAR 1980'S AND 2000'S. *Gramatika: Jurnal Ilmiah Kebahasaan dan Kesastraan*. 2015;3(2):141–51.
3. Maulana S. *Sikap Terhadap Sains dan Folklor Tradisional dalam Novel-Novel Fiksi ilmiah Kontemporer Indonesia*. Universitas Padjajaran; 2010.
4. Danaher J. Techno-optimism: an Analysis, an Evaluation and a Modest Defence. *Philosophy and Technology* [Internet]. 2022;35(2):1–29. Tersedia pada: <https://doi.org/10.1007/s13347-022-00550-2>
5. Vita-More MM and N. *The Transhumanist Reader*. 1 ed. Vita-More MM and N, editor. *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*. Malden: John Wiley & Sons; 2013. 1–467 hal.
6. Pinker S. *Enlightenment Now: The Case for Reason, Science, Humanism, and Progress*. 1 ed. Pinker S, editor. New York: Viking; 2018. 1–701 hal.
7. Hayles NK. *How We Became Posthuman*. 4 ed. Hayles NK, editor. Chicago: University Of Chicago Press; 1999. 1–325 hal.
8. Hayles NK. *My Mother Was a Computer: Digital subjects and literary texts*. 1 ed. Hayles NK, editor. Vol. 55, *Svenska läkartidningen*. Chicago: The University of Chicago Press; 2005. 1–279 hal.
9. Hayles NK. *Postprint: Books and becoming computational*. 1 ed. Hayles NK, editor. New York: Columbia University Press; 2021. 1–225 hal.
10. Marcuse H. *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society*. 8 ed. Marcuse H, editor. *One-Dimensional Man*. New York: Routledge Taylor & Francis Group; 2013. 1–336 hal.
11. Suarez-Villa L. *The Rise of Technocapitalism*. *Science & Technology Studies*. 2001;14(2):4–20.
12. Suarez-Villa L. *Globalization and Technocapitalism*. 1 ed. Suarez-Villa L, editor. Farnham: ashgate publishing limited; 2012. 235 hal.
13. Villa LS-. *Technocapitalism*. 1 ed. Villa LS-, editor. Philadelphia: Temple University Press; 2009. 1–211 hal.
14. Villa LS. *Corporate Power, Oligopolies, and the Crisis of the State*. 1 ed. Villa LS, editor. New York: State University of New York Press; 2015. 1–380 hal.
15. Hawkins S. *Access and Control In Digital Humanities*. 1 ed. Hawkins S, editor. New York: Routledge Taylor & Francis Group; 2021. 1–301 hal.
16. Fuchs C. *Digital labour and Karl Marx*. 1 ed. Fuchs C, editor. *Krisis*. Routledge Taylor & Francis Group; 2014. 1–421 hal.
17. Fuchs C. *Digital Demagogue: Authoritarian Capitalism in the Age of Trump and Twitter*. 1 ed. Fuchs C, editor. London: Pluto Press; 2018. 1–337 hal.
18. Liye T. *Hujan*. 1 ed. Liye T, editor. Jakarta: Gramedia Pustaka Utama; 2016. 1–315 hal.
19. Creswell JW. *Research Design : Qualitative, Quantitative, and Mixed Methods*

- Approaches. 4 ed. New York: SAGE Publications Inc; 2014. 282 hal.
20. Merriam SB. *Qualitative Research A Guide to Design and Implementation Revised and Expanded from Qualitative Research and Case Study Applications in Education*. 2 ed. Progress in Electromagnetics Research Symposium. San Fransisco: Jossey-Bass; 2009. 262–265 hal.
 21. Klarer M. *An Introduction to Literary Studies*. 2 ed. Klarer M, editor. Darmstadt: Taylor & Francis Group; 2004. 1–182 hal.
 22. Genette G. *Narrative Discourse: An Essay In Method*. 1 ed. Lewin JE, editor. New York: Cornell University Press; 1980. 1–284 hal.
 23. Maulana S. Fiksi Sains Indonesia: Istilah, Sejarah, Tonggak [Internet]. [tenggara.id](https://tenggara.id/esai/fiksi-sains-indonesia-istilah-sejarah-tonggak/). 2022 [dikutip 10 Agustus 2024]. Tersedia pada: <https://tenggara.id/esai/fiksi-sains-indonesia-istilah-sejarah-tonggak/>
 24. Lestari D. *Supernova: Kesatria, Putri, & Bintang Jatuh*. 2 ed. Dhewibrata, editor. Vol. 19. Yogyakarta: Bentang Pustaka; 2012. 1–147 hal.
 25. Rahardjo Y. *Lanang*. 1 ed. Fathoni A, editor. Ciputat: Alvabet; 2008. 440 hal.
 26. Lufityanto G. *ORB*. 1 ed. Lufityanto G, editor. Surabaya: Tiga Serangkai; 2008. 416 hal.
 27. Padmodiwirio S. *Lesti, Nyatakah Dia?* 1 ed. Padmodiwirio S, editor. Jakarta: Yayasan Pustaka Obor Indonesia; 2006. 496 hal.
 28. Bal M. *Narratology: Introduction to the Theory of Narrative*. 4 ed. Bal M, editor. Toronto: Universitas of Toronto Press; 2017. 592 hal.
 29. Chatman S. *Genette 's Analysis of Narrative Time Relations* Genette 's Analysis of Narrative Time Relations. *L'Esprit Créateur* [Internet]. 1974;14(4):353–68. Tersedia pada: <https://www.jstor.org/stable/26280067>
 30. Chatman S. *Narrative and Discourse: Narrative Structure in Fiction and Film*. 3 ed. Chatman S, editor. New York: Cornell University Press; 2019. 288 hal.

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