

THE UNIQUENESS OF HUMANITY IN STANISŁAW LEM'S PERSPECTIVE IN THE „INQUEST” WITHIN THE CONTEXT OF ROBOTICS

Nadia Kowalska¹

Summary. This article delves into the profound examination of humanity's relationship with artificial intelligence through the lens of Stanisław Lem's "Inquest." It explores Lem's exploration of the intricate dynamics between humans and AI, revealing the enduring relevance of his insights within the context of robotics history. Emphasizing Lem's ability to challenge conventional notions, the article highlights the distinct qualities that define human existence amidst technological advancements. Through this analysis, it offers valuable insights into the philosophical, ethical, and existential dimensions of the human-machine relationship, inviting reflection on the evolving nature of human identity in the face of technological progress. Drawing connections to the works of scholars such as Minsoo Kang, Yulia Frumer, Simon Shaffer, Alexandre Gefen, and Hiroshi Ishiguro, the article presents a comprehensive examination of the multifaceted discourse surrounding AI and humanity.

Key words: artificial intelligence, robots, AI, humanity, Stanisław Lem

Introduction

Stanisław Lem, born in 1921 a Polish science fiction writer, stands as a luminary in the realm of speculative fiction, particularly for his pioneering contributions to the exploration of artificial intelligence within the context of robotics. Lem's career crafted a body of work that not only entertained readers, but also challenged prevailing notions about innovation, consciousness, and the human-machine relationship. As a writer who emerged in the mid-20th century, Lem's work reflects the cultural

¹ Instytut Psychologii, Wydział Nauk o Wychowaniu, Uniwersytet Łódzki (Institute of Psychology, Faculty of Educational Sciences, University of Lodz), ORCID: 0009-0000-3504-8870.

Mailing address: Nadia Kowalska
nadia.kowalska@edu.uni.lodz.pl

and societal anxieties of his time, echoing concerns about the potential consequences of unchecked technological advancement. However, his unique work done years ago remains relevant even today. His questions are these, which are asked by all, as he knew back then, and we are realizing it now, that: “the scientific breakthrough will have their way, no matter what” (Lem, 1982, p. 109).

His “Inquest” stands as a thought-provoking exploration of the intricate relationship between humanity and artificial intelligence and the promises and threats posed by advanced technology, as he goes beyond mere technological speculation, by delving into the psychological, ethical, and existential dimensions of creating and living with artificial beings. It contextualizes Lem’s narrative within the broader history of robotics, drawing connections to the work of Minsoo Kang and the writings of Yulia Frume, Simon Shaffer and Alexandre Gefen. Such connections highlight the importance and the presence of humans’ uniqueness. Indeed, despite the true efforts of inventors, there are some aspects that make a human being distinguishable from AI.

Stanisław Lem’s ‘Inquest’ illuminates the complex interplay between humanity and artificial intelligence, emphasizing the enduring relevance of his exploration amidst the history of robotics. Through his narrative, Lem challenges conventional notions, highlighting the distinctive qualities that define human existence in the face of technological advancement.

Diverse attitudes towards AI

Lem’s literary work perfectly captures the diversity among humans on either rejecting or accepting the presence of technological advances and, most importantly, considering robots in the same way as we do human beings. In the “Inquest” he showed the two possible beliefs of this. On the one hand, some could say that: “If they’re made of the same stuff as I am [...] then they’re people, and I don’t care a damn how they got here—through artificial insemination, in a test tube, or in the more conventional way” (Lem, 1982, p. 120), but also he presented the opposite beliefs in someone saying that: “I just don’t think mankind is ready for an invasion of androids” (Lem, 1982, p. 109). On one hand, there are those who argue that if robots are constructed from the same materials as humans, they deserve equal status and consideration. Conversely, there are skeptics who fear the consequences of a society inundated with androids, expressing concerns about humanity’s readiness for such an invasion.

Undoubtedly, one could relate to both of the presented views. People can already witness the visible benefits of the machines, as not only are “quicker reflexes, immune to fatigue or illness, great energy reserves, functional even during decompression or overheating, not dependent on oxygen or food” (Lem, 1982, p. 112) the things that we as human beings are struggling with or even incapable of doing, but surely the amount of processing and the incomprehensible speed that the robots can do it with is something that mankind needs in many fields.

As the Pilot in the “Inquest” mentioned: “I could barely keep up with the digital displays, and there was Calder constructing four-part differential equations in his head!”. He also said: “I should have guessed beforehand that he wasn’t human, because no human could process the way he did” (Lem, 1982, p. 106), implying that machines do differ from humans, and, more often than not, also make a great impression.

The blur between human and machine

Nevertheless, as grand and promising as the robots’ calculations may seem, and despite the overall impressive capabilities of robots, one should bear in mind that the ability to distinguish automata from real humans says a lot about humans and machines’ uniqueness. Agnieszka Piłat, an “Iron Curtain-born robotics artist”, in the interview on “How Robot Art Reveals The Power of Humanity” references Moravec’s Paradox by saying: “where everything that’s easy for humans is difficult for robots... and the opposite, what’s difficult for humans is easy”, and thereby raises the awareness of human worth. It serves as a reminder of the unique abilities and value inherent in human cognition and physicality (<https://www.euronews.com/culture/2023/06/02/meet-agnieszka-pilat-the-artist-creating-portraits-for-the-machines-of-the-future>).

This perspective enlightens the nature of human-robot relationship, but mankind seems to try to obliterate the boundaries between them. In Ridley Scott’s “Blade Runner” one of the most influential high-tech business companies had the motto: “more human than human” while referring to their replicants. It epitomizes humanity’s ongoing quest to blur the lines between man and machine. However, this pursuit raises fundamental questions about the essence of humanity and the traits that define our species: Do we actually know what makes a human a human and what traits distinguish our species from others? It may trouble one’s mind and as Lem and many others’ exploration present the uniqueness of humanity is multifaceted. The inquiry into whether artificial beings are “human equivalents” evokes profound philosophical questions about consciousness and identity. This exploration challenges conventional notions of what it means to be human, prompting us to reassess our understanding of personhood in the age of artificial intelligence. As we grapple with these questions, we confront the intricacies of human existence and the boundaries that separate us from the machines we create.

Exploring the intricacies of human–machine resemblance

Although initially, attention was paid mostly to the external human-like appearance of the robots and the ‘artificial men’ by the 18th century “were not merely common in the shows but occupants of the linked worlds of court, marketplace and theatre” (Shaffer, 1999, p. 136), it didn’t take long to acknowledge that it takes more to make a better impression. In the exploration of human-machine resemblance,

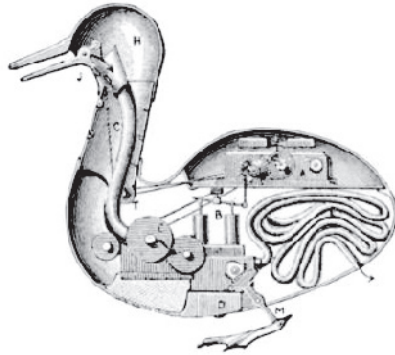


Figure 1. Imaginary rendering of Vaucanson's digesting duck in Scientific American
 Source: https://www.researchgate.net/figure/Schematic-of-Vaucansons-Canard-Digerateur-or-Digesting-Duck-Inspired-by-Descartes_fig1_361531188.

historical perspectives reveal a gradual shift from mere fascination with outward appearances to a deeper understanding of the complexities involved in creating life-like automata. After creating a "flute-player" in 1738, Vaucanson came up with the "Digestive Duck", after which the "automaton market boomed." It became evident that achieving a "perfect illusion" required more than just a human-like exterior. As the historian Jessica Riskin points out, "imitation of life was as much at the outside as in the inside" and it accurately presented that for a "perfect illusion" it is vital for the creator to focus also on what could be found inside of the automaton. It was also confirmed by Lem in his "Inquest", as he explores further this theme, as reflected in dialogues questioning the behavior and physiology of nonhuman entities:

"– The-uh-nonhumans, do they act like humans? Do they eat meals? Drink? //
 – Yes, they do. // – What for? // – To complete the illusion. For the benefit of those around them [...] // – Do they have blood? A heart? Do they bleed if they're wounded //
 // – They have the facsimile of heart and blood" (Lem, 1982).

The notion of completeness in the illusion of artificial beings is underscored, with characters acknowledging the need for simulated bodily functions to maintain the illusion of humanity. Therefore, it seems indeed that mankind does need such imitation to believe the illusion of the artificial man. Later on, one more aspect was added to it. To take a step further Nishimura noticed that "the most significant indicator of humanity was the appearance of affect" (Frumer, 2018), thus the machines were designed to have human-like facial expressions. The inclusion of human-like facial expressions serves to enhance the perceived humanity of robots, further blurring the line between man and machine. This emphasis on behavioral mimicry highlights a deeper understanding of what truly defines human identity, emphasizing the importance of not just physical resemblance but also behavioral authenticity.

As one can see, the creators put much effort in discovering what "makes a human a human" and they strive to imbue machines with increasingly lifelike qualities,



Figure 2. The construction of the rubber mask. Images appeared in Nishimura's article on the process of building Gakutensoku, published in *Kagaku Chishki* (Science Knowledge)

Source: Frumer Y. (2018). Cognition and Emotions in Japanese Humanoid Robotics. *History and Technology*, 34(2), 157-183.

delving deeper into the intricacies of human behavior and physiology. In doing so, not only do they push the boundaries of technological innovation, but also prompt profound reflections on the essence of humanity itself. What stands out most is that, the chief resemblance to human beings is not just about the machine image, but most notably about the way it imitates the real-life behaviors.

Defining human nature

Indeed, Minsoo Kang suggests that the ability of robots to mimic human actions raises questions about emotions and beliefs, as "objects or events that seem to cause the greatest emotional reactions seem to be those that have directly to do with the nature of human identity itself. [...] raising doubts about our own place in the binaries of animate/inanimate, spiritual/material, soul/body" (Minsoo Kang, 2011, p. 53). His insights highlight how such things that evoke strong expressive responses often relate directly to human distinctiveness, blurring the boundaries between living and non-living. These reflections challenge our understanding of what it means to be human, questioning our place in the complex spectrum of existence. Additionally, Lem challenges the idea of a fixed human nature by illustrating subtle yet significant differences between humans and machines, first presenting some from not only a human's perspective, who mentions that the replicant "doesn't write letters", "he eats everything" and moreover "when he remembers, he's all fidgets and bodily motion; but when he forgets, he freezes. With us [humans] it's the other way around: we have to make a conscious effort to keep still" (Lem, 1982, p. 128). Through Lem's narrative, we encounter the replicant's peculiarities, such as its inability to write letters and its distinct patterns of behavior. These differences underscore the multifaceted nature

of humanity and suggest that flaws and contradictions define our essence and these ideas of some simple, yet valid, differences between mankind and machines are truly worth considering.

The Polish writer also draws the reader's attention to the robot's point of view: "I never get emotionally involved in any operation, remaining always the observer" (Lem, 1982, p. 139) and the main "difference is that I act by the logic of accepted norms, not by instinct. Unfortunately for you, you obey almost nothing else but your impulses" (Lem, 1982, p. 149). Lem therefore suggests that flaws and contradictions define humanity: "What is this thing called human nature? Maybe that's all it really means-being irrational and decent and, yes, morally primitive, blind to the final links in the chain. [...] Which would mean that we...our human nature is the sum of all our defects, flaws, imperfections, of what we want to be but can't or don't know how to be; the gap between our ideals and those same ideals as a reality. Our weakness, then, is it our competitive edge? That would mean I should choose a situation better handled by man's fickle humanity than by a flawless inhumanity" (1982, p. 154).

Saying that humankind is perfect in its imperfections might be too poetic, however, Lem's work also presents the importance of man's ability to improvise: "he had to improvise, and that was his Achilles' heel", as "a human can rely on guesswork, sometimes even with success" and that "an artificial intelligence differs from the human brain in its inability to handle several mutually contradictory programs. The brain, though, can; in fact, it does it all the time" (Lem, 1982, p. 140). Even though, as one of the replicants in Lem's tale points out, our intuition and "lack of pre-programming" may sometimes pose some trouble and be misleading, in some situations it gives humans a great advantage. He underscores the importance of human improvisation, acknowledging that our ability to think on our feet is both a strength and a vulnerability. While artificial intelligence may excel in certain tasks, humans possess a unique capacity for intuition and adaptability.

This theme aligns with Descartes' perspective on automata and animals, emphasizing the limitations of non-human entities: "automata and animals can do certain tasks very well, some even better than a human being, but they are limited in the range of things they can do, lacking the intelligence to learn new skills not granted them by their organic makeup" (Minsoo Kang, 2011, p. 243) only confirming that such thoughts were and are occurring, allowing mankind to rest assured regardless of the timeline.

Moreover, Stanisław Lem's tale "Terminus", just like "Inquest" presents the nonobvious side of man's uniqueness, in which often negatively viewed humans' limited life expectancy, may be seen as a silver lining of mankind overall. By challenging conventional notions of mortality. Despite the negative connotations often associated with limited life expectancy, Lem suggests that this impermanence may be a defining feature of human experience. This perspective agrees with Alexandre Gefen's statement that: "humans have the power of life and death over androids", as "although made in the image of man, the robot has no access to human temporality:

it does not age, does not die, can be repaired, reprogrammed, and does not exist as an individual. It can be duplicated” (Gefen, 2022, p. 138).

Morańska emphasizes that “The opportunity to satisfy curiosity about the world and the need to discover new knowledge contribute to young people’s development. This is how they learn. This constant activity stimulates and supports the development of creativity” (Morańska, 2023, p. 51). Nevertheless, regardless of the effort of creating the most human-like robot possible, there is a limit to the amount of machine’s human resemblance that mankind can handle. This hypothesis was presented by Masahiro Mori, who suggested that our attitude towards robots is friendly, to the point where a machine is too manlike, when such a mindset turns towards fear. Such a discovery may seem confusing, but in the same vein, brings a more extended and coherent understanding, not only about machines and technology, but more about the human existence, consciousness and identity itself, as Hiroshi Ishiguro points out on several occasions. His research on robots turns towards the comprehension of the “cognitive turn in robotics” for the deeper knowledge of people’s encounters with AI and the aspect of imitating human behavior by it. By mimicking human actions and interactions, robots provide a unique lens through which to examine the complexities of human existence. Ishiguro’s work underscores the intricate interplay between technology and identity, offering new perspectives on what it means to be human in an age of artificial intelligence.

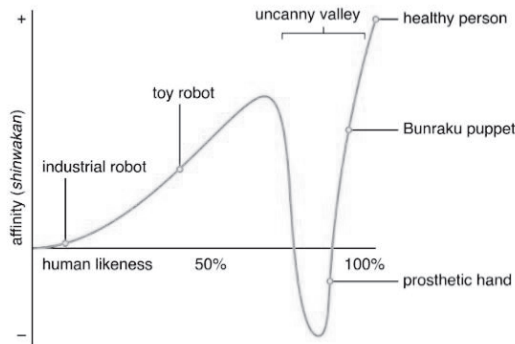


Figure 3. The Uncanny Valley

Source: Mori M. (2012). The Uncanny Valley. *IEEE Robotics & Automation Magazine*, 19(2), 98–100.

Conclusion

In conclusion, Stanisław Lem’s “Inquest” offers a profound exploration of the relationship between humanity and artificial intelligence, highlighting the dual nature of AI, acknowledging both its promises and threats, in the same breath presenting and addressing the doubts that we - as representative of mankind - may have regarding humans’ nature. Lem’s narrative delves into the complexities of human-robot

interaction, showcasing varying perspectives on the acceptance and integration of advanced technology into daily life. Through his work, Lem prompts readers to contemplate fundamental questions about consciousness, identity, and the essence of being human in a world increasingly shaped by technological innovation .

The ability of robots to mimic human actions emphasizes their uniqueness, which, according to Lem, lies in their imperfections, contradictions, and the ability to improvise. The flaws and weaknesses that define mankind present a competitive edge over flawless inhumanity. However, as technology advances and boundaries between human and machine blur, humanity is confronted with existential questions about its place in an increasingly mechanized world.

Furthermore, Lem’s exploration of human-robot dynamics extends to the temporal aspect, as exemplified in “Terminus.” While humans possess the power of life and death over androids, they also grapple with the limitations of their finite existence—a limitation that imbues humanity with a sense of significance and individuality absent in immortal robots

This aligns with historical perspectives: Descartes’ views emphasizing the limitations of non-human entities, Alexandre Gefen’s statement on the temporal aspect that distinguishes humans from immortal robots, and Masahiro Mori’s “Uncanny Valley”. This realization prompts deeper reflections on human existence, consciousness, and identity. Hiroshi Ishiguro’s research on the cognitive turn in robotics sheds light on people’s encounters with AI and the complexities of imitating human behaviour.

In essence, Stanisław Lem’s exploration of humanity in the context of robotics history transcends mere speculation, inviting readers to ponder the essence of humanity in an age of technological advancement. As we navigate the complexities of human-robot interaction, Lem’s work serves as a timeless reminder of the enduring value of humanity amidst the march of progress. Nevertheless, many of these questions about human existence and robotics remain unanswered and it’s “for the future to decide” how and in what way we are going to perceive their development.

References

- Bregman, A. (2024). How Robot Art Reveals The Power Of Humanity. *Forbes*. Retrieved from <https://www.forbes.com/sites/alexandrabregman/2023/04/28/how-robot-art-reveals-the-power-of-humanity/> (access: 14.01.2024).
- Clark, W., Golinski, J., & Schaffer, S. (1999). *The sciences in enlightened Europe*. Chicago: University Of Chicago Press.
- Farrant, T. (2023). Meet Agnieszka Pilat: The artist creating portraits for the machines of the future. *Euronews*. Retrieved from <https://www.euronews.com/culture/2023/06/02/meet-agnieszka-pilat-the-artist-creating-portraits-for-the-machines-of-the-future> (access: 04.03.2024).
- Frumer, Y. (2018). Cognition and Emotions in Japanese Humanoid Robotics. *History and Technology*, 34(2), 157–183.

- Gefen, A. (2022). Posthumanist Solidarity: The Political and Ethical Imaginations of Artificial Intelligence from Battlestar Galactica to Raised by Wolves. *Open Philosophy*, 5, 136–142.
- Imaginary rendering of Vaucanson's digesting duck in Scientific American. Retrieved from https://www.researchgate.net/figure/Schematic-of-Vaucansons-Canard-Digerateur-or-Digesting-Duck-Inspired-by-Descartes_fig1_361531188 (access: 04.03.2024).
- Kang, M. (2011). *Sublime dreams of living machines: the automaton in the European imagination*. Cambridge: Harvard University Press.
- Lem, S. (1982). *More Tales of Pirx the pilot*. San Diego: Harcourt Brace Jovanovich.
- Morańska, D. (2023). Creativity as a strategic competence of the information society in the era of artificial intelligence. *HUMANITAS Pedagogika i Psychologia*, 2(28), 41–53, doi: 10.5604/01.3001.0054.4299.
- Mori, M. (2012). The Uncanny Valley. *IEEE Robotics & Automation Magazine*, 19(2), 98–100.

Translated by Autor

WYJĄTKOWOŚĆ CZŁOWIEKA W KONTEKŚCIE ROZWOJU ROBOTYKI W PERSPEKTYWIE „ROZPRAWY” STANISŁAWA LEMA

Streszczenie. Artykuł stanowi analizę relacji człowieka ze sztuczną inteligencją przez pryzmat „Rozprawy” Stanisława Lema. Podejmuje próbę przedstawienia eksploracji Lema dotyczącej złożonej dynamiki między ludźmi a sztuczną inteligencją, ujawniając trwałe znaczenie jego spostrzeżeń w kontekście rozwoju robotyki. Podkreślając zdolność Lema do kwestionowania konwencjonalnych pojęć, artykuł podkreśla odrębne cechy, które definiują ludzką egzystencję wśród postępu technologicznego. Dzięki tej analizie oferuje cenny wgląd w filozoficzne, etyczne i egzystencjalne wymiary relacji człowiek-maszyna, zachęcając do refleksji na temat ewoluującej natury ludzkiej tożsamości w obliczu postępu technologicznego. Czerpiąc nawiązania do prac takich uczonych, jak: Minsoo Kang, Yulia Frumer, Simon Shaffer, Alexandre Gefen i Hiroshi Ishiguro, artykuł przedstawia wszechstronną analizę wieloaspektowego dyskursu dotyczącego sztucznej inteligencji i ludzkości.

Słowa kluczowe: sztuczna inteligencja, roboty, AI, człowieczeństwo, Stanisław Lem

Receipt Date: 10th June 2024

Receipt Date after correction: 25th June 2024

Print Acceptance Date: 26th June 2024