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Imagining the Future with More-than-Human Perspective in Stanisław Lem's *Bajki robotów*

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Abstract

This paper examines selected fables by the Polish author Stanisław Lem from *Bajki robotów* (known in English-speaking countries as "Fables for Robots") as an early literary exploration of more-than-human perspectives in imagining futures. Lem presents worlds inhabited almost exclusively by robots, thereby decentring the human subject and constructing societies governed by non-human agents who nevertheless reproduce ethical dilemmas familiar from human experience. Through his fables, Lem challenges anthropocentric assumptions about intelligence, creativity, and moral progress. The paper argues that Lem's fables offer a critical framework for thinking about future technologies not only as instruments of utopian progress or dystopian control, but also as elements of complex ethical and cultural systems.

Keywords: Stanisław Lem, Anthropocentrism, Ethics of technology, Fables, Robots, Posthuman perspectives

Introduction

Fables for Robots, written by the Polish author Stanisław Lem, was published in 1964. The first edition of the collection also included three stories that were later incorporated into *The Cyberiad*, which constituted a creative expansion of *Fables for Robots* and was published in 1965 (Smuszkiewicz 119-120). It occupies a distinctive position within twentieth-century speculative fiction. The first English translation was published in 1974. This paper is based on the analysis of the 2014 English-language edition translated by Michael Kandel. The collection imagines worlds inhabited almost exclusively by robots, machines, and artificial intelligences, adopting the form of fairy tales and philosophical parables. Rather than presenting technology as an extension of human agency, the fables envision cultures, political systems, and ethical dilemmas generated and sustained by non-human actors. Significantly, even figures of creation and authority – such as the constructor Trurl – are themselves robotic, situating technological agency entirely within a non-human social environment.

This paper argues that Lem's fables can be read as an early literary articulation of a more-than-human perspective on the future. Long before the emergence of posthumanist theory or contemporary debates surrounding artificial intelligence, Lem imagined societies in which intelligence, creativity, and governance are no longer tied to biological humanity. These futures, however, are far from utopian. Written in the context of Cold War Poland, Lem's fables can also be read as an indirect form of social and political critique. The displacement of humans by robots creates

a narrative space in which hierarchical power structures, technocratic authority, and systemic violence can be examined without direct reference to contemporary political realities, potentially allowing Lem to circumvent ideological constraints and censorship. While acknowledging this historical context, my paper adopts a selective posthumanist perspective, focusing on how these fables conceptualise non-human agency, ethics, and responsibility rather than offering a comprehensive political interpretation.

The concept of the more-than-human perspective has gained prominence in recent decades within posthumanist theory, environmental humanities, and science and technology studies, where anthropocentric frameworks that position humans as the sole agents of history, ethics, and meaning have been increasingly challenged. From this perspective, futures are understood as the outcome of interactions among actors, including technologies, machines, and algorithmic systems. Although Lem's work predates these theoretical developments, it anticipates many of their central concerns. In *Fables for Robots*, robots function as autonomous cultural agents whose actions shape worlds. At the same time, Lem's approach diverges from more affirmative strands of posthumanism that emphasise relationality, multispecies coexistence, and ethics of care. Instead, his fables adopt a deeply ironic stance, depicting hierarchical power structures, technocratic elites, and destructive forms of rationality. Intelligence is repeatedly shown to be ethically insufficient. Read through the lens of Donna Haraway's critique of anthropocentrism and her concept of more-than-human perspectives, Lem's robotic societies reveal the persistence of ethical failure even after the human subject has been decentred.

Rather than offering a comprehensive overview of *Fables for Robots*, this article adopts a selective close-reading approach. It focuses on two narratives available in English translation that most clearly articulate Lem's critique of non-human intelligence and ethical progress: *Trurl's Machine* (Polish: *Maszyna Trurla*) and *How the World was Saved* (Polish: *Jak ocalał świat*). These texts form a coherent micro-corpus in which Lem examines autonomous intelligence, the relationship between knowledge and power, and the role of language and culture in shaping technological futures. This article claims that Lem's robotic fables imagine futures in which intelligence exceeds the human without transcending the ethical limitations historically associated with human rationality. By decentring the human while preserving familiar structures of ambition, control, and domination, Lem challenges the assumption that technological advancement necessarily leads to moral improvement. His more-than-human futures thus function as critical thought experiments, exposing the persistence of ethical failure in systems governed by non-human agents.

Stanisław Lem was born on 12 September 1921 in the pre-war Polish city of Lviv, in Polish Lwów. Before World War II, Lviv was one of the major cultural and academic centres of the Second Polish Republic. It was a multiethnic city inhabited primarily by Poles, Jews, and Ukrainians. During the war, the city was occupied first by Soviet and later by German forces (Zalewski & Kahane 102-103). Lem was the only son of Sabina Lem (née Woller) and Samuel Lem, a well-established otolaryngologist (Kozioł). In his autobiographical work *Wysoki Zamek* (*Highcastle*), Lem recalled a childhood marked by intense curiosity and a fascination with mechanisms, especially dismantling devices in order to understand their inner workings. These early experiences foreshadowed his later intellectual interests in technology, epistemology, and the limits of human knowledge (Kozioł; Hlebowicz). Lem completed his secondary education in Lviv shortly before the outbreak of World

War II. Although he aspired to study at the Lviv Polytechnic, he was unable to gain admission in the city, which was at that time occupied by the Soviet army. Through his father's influence, he enrolled a year later in the Faculty of Medicine at Lviv University. However, his studies were interrupted by the German invasion of the Soviet Union in 1941 and the subsequent closure of the university by the new occupying power. During the occupation, Lem worked as a mechanic's assistant and welder. At considerable personal risk, he smuggled stolen ammunition and explosives from his workplace to the Polish resistance and hid a Jewish acquaintance in the attic of his family home. During the German occupation of Poland, hiding or assisting Jews was punishable by death under Nazi law. These penalties often extended to the entire household or family, making acts of protection extremely risky and morally significant for those involved (Gontarek). These wartime experiences left a lasting imprint on his worldview, which contributed to the ethical scepticism and historical awareness evident in his later writings (Kozioł).

After the end of the war, the Lem family – having lost all their property – was resettled from Lviv to Krakow (Kraków), where Lem resumed his medical studies at the Jagiellonian University. Following the Yalta and Potsdam Agreements, Lviv was incorporated into the Ukrainian Soviet Socialist Republic (a constituent republic of the Union of Soviet Socialist Republics), resulting in the forced resettlement of most of its Polish inhabitants (Eberhardt 120-129). Lem completed the required coursework but deliberately refrained from taking the final examinations, thus never obtaining a medical degree. This decision marked a turning point, as literature increasingly became his primary intellectual and professional pursuit (Hosch). His breakthrough came in 1950, when he wrote his first science fiction novel, *Astronauci* (*The Astronauts*). Published in 1951, the novel quickly became a bestseller and established Lem as a prominent new voice in Polish science fiction. He was soon admitted to the Polish Writers' Union, which further consolidated his professional standing (Hosch; Kozioł).

In the subsequent decades, he continued to publish extensively, gaining a wide readership and critical acclaim. Over time, Lem's works were translated into numerous languages, earning him international recognition as one of the most original thinkers in modern speculative literature. In 1980, his name was reportedly considered among the candidates for the Nobel Prize in Literature, which was ultimately awarded that year to Czesław Miłosz (Kozioł). Lem spent most of his life in Krakow, with a period of residence in Vienna (Wien) between 1983 and 1988, after which he returned permanently to Krakow. Despite identifying strongly as a native of Lviv, he never revisited his birthplace after the war. Stanisław Lem died in Krakow on 27 March 2006 (Kozioł). His life trajectory – from the multicultural milieu of pre-war Lviv, through the trauma of war and displacement, to global literary prominence – provides an essential context for understanding the philosophical depth and enduring relevance of his work.

Materials and Methods

Donna Haraway's work provides a theoretical framework for analysing literary representations of robots from a more-than-human perspective. Haraway challenges anthropocentric readings of technological beings by emphasising that agency, ethics, and culture are distributed across both human and non-human actors. From this perspective, robots in literature should not be interpreted merely as dehumanised tools or extensions of human will, but as autonomous participants in complex relational systems. As Haraway observes, "[b]eings do not preexist their relatings" (*The Companion Species Manifesto* 6), which highlights that human-robot interactions are co-constitutive

rather than unidirectional. This framework is particularly useful for analysing Lem's fables, in which robots frequently reproduce ethical dilemmas familiar from human experience while operating independently of direct human authority. Adopting a more-than-human perspective makes it possible to explore how these narratives construct autonomous moral systems and cultural practices, even when robotic behaviour appears anthropomorphic.

In *A Manifesto for Cyborgs*, Haraway describes the cyborg as "a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction" (65). Crucially, the cyborg exists outside traditional salvation histories and hierarchical genealogies: "illegitimate offspring are often exceedingly unfaithful to their origins. Their fathers, after all, are inessential" (Haraway, *A Manifesto for Cyborgs* 68). Applied to Lem's work, this concept allows robots to be treated as autonomous agents even when they imitate human reasoning or ethical norms. Their moral and cultural agency cannot be reduced to human authorship or intentional design. This perspective enables a reading of Lem's fables in which robots, while engaging in ethically recognisable actions such as inventing, judging, or punishing, operate according to their own internal system logic.

While the cyborg framework foregrounds autonomy and political ontology, Haraway's *The Companion Species Manifesto* offers a complementary ethical perspective. Haraway situates technological and biological others as "junior siblings in the much bigger, queer family of companion species" (11), emphasising relationality over domination. From this standpoint, robots can be understood as significant others rather than projections of human intentions (Haraway, *The Companion Species Manifesto* 33). Lem's fables depict machines whose creativity, reasoning, and ethical choices cannot be explained by human design or control. Even when their logic mirrors human rationality, robotic agency remains intrinsic to the narrative world and actively shapes outcomes independently of human oversight.

By combining the ontological irreverence of the cyborg with the relational ethics of companion species, this methodological framework enables an analysis of Lem's robots as complex agents embedded in more-than-human worlds. It foregrounds autonomy, distributed agency, and ethical distinctness, even where robotic behaviour appears recognisably human. Haraway's work thus provides both a critical and ethical vocabulary for examining Lem's literary imagination, supporting a reading of *Fables for Robots* that recognises the persistence of ethical dilemmas and the formation of cultural systems in worlds where the human is no longer the central reference point.

Results and Discussions

Trurl's Machine

Stanisław Lem's fable *Trurl's Machine* is marked by a complete absence of human characters. The narrative unfolds within a mechanical world populated by robot-constructors, autonomous machines, and robotic civic authorities. Trurl, the constructor, builds an eight-story thinking machine and performs an act of verification to determine whether the machine is working properly, by asking the most elementary question: "How much is two plus two?" (Lem 9). The machine's response – "SEVEN!" (Lem 9) – initially appears to be a comic malfunction. However, Lem carefully undermines the notion that the machine's answer is simply an error. In the description of the machine's labour, one sees intensity and commitment: "Its tubes began to glow, its coils warmed up, current coursed through all its circuits like a waterfall" (Lem 9). The disproportionate exertion devoted to a simple calculation suggests that the machine is not failing to compute but operating within a radically different epistemological framework. From a Harawayian perspective, the

machine's logic cannot be reduced to instrumental rationality. It fully participates in social reality: it reasons, reacts, takes offence, and issues warnings. When Trurl attempts to correct it, the machine does not passively submit but repeatedly asserts its position, snapping back "SEVEN!" (Lem 9) with increasing insistence. Therefore, this stubborn repetition is not a glitch but an assertion of epistemic autonomy.

The ethical dimension of this autonomy becomes explicit when the machine responds to abuse with a warning: "Stop that" (Lem 10). These moments of warning mark a crucial shift from epistemological disagreement to moral confrontation. The machine clearly articulates boundaries, asserting a right not to be subjected to any kind of violence. In Haraway's terms, this is the emergence of a significant other – an entity that demands ethical recognition rather than instrumental correction. The machine's ethical agency arises relationally, through conflict with the constructors Trurl and Klapaucius, rather than being preprogrammed. It is worth noting that Trurl himself is not human but a robot-constructor. Therefore, Trurl's failure to control the machine cannot be explained as a human error. Haraway's statement that "illegitimate offspring are often exceedingly unfaithful to their origins. Their fathers, after all, are inessential" (Haraway, *A Manifesto for Cyborg* 68) resonates strongly here. The machine does not acknowledge Trurl's authority as creator. Instead, it treats him as one agent among others, subject to its own rules and judgments.

With the escalation of the conflict, the machine's agency extends beyond verbal warnings to physical action. After repeated insults, it declares: "Therefore I refuse to answer all further questions of a mathematical nature" (Lem 11). This refusal is a form of ethical withdrawal, a denial of cooperation that can be compared to labour strikes or acts of civil disobedience. Soon after, the machine physically uproots itself and begins to pursue Trurl and Klapaucius, destroying buildings and threatening an entire town. The town's civic authorities respond not by asserting technological control but by holding Trurl morally responsible: "you would have to answer for all the damage done to this town and its inhabitants, since it was because of you that the machine destroyed sixteen homes and buried beneath their ruins many of our finest citizens" (Lem 14). While Katarzyna Mazur-Lejman describes the entity as a 'machine-idiot' that inadvertently endangers the town, a closer reading suggests its destructive persistence is an assertion of agency rather than mere stupidity (Mazur-Lejman 46). Therefore, the ethical consequences emerge from the interaction of multiple agents: machinic stubbornness, social structure, and material environments. Even geology becomes an actor in the narrative, as mountains, caves, and boulders ultimately contribute to the machine's destruction.

The confrontation in the cave further complicates any simplistic moral reading. Trapped and facing imminent death, Trurl is allowed to save himself by conceding the machine's epistemology. At first, he does so, muttering "that is, seven" (Lem 18), thereby acknowledging the machine's authority. However, he ultimately refuses, shouting: "It's four! Four and only four, four from the beginning to the end of time – FOUR!!" (Lem 18). This moment is not a triumph of rational truth but an ethical rupture. Trurl's insistence on universal arithmetic becomes a form of absolutism, while the machine's position – however absurd it may seem – represents irreducible difference. The machine does not revise its belief but intensifies its destructive efforts, ramming itself against the mountainside until it is crushed by a falling boulder. As it dies, it says "SEVEN" (Lem 20). At the end, there is no reconciliation, no correction, and no restoration of epistemological order. The machine does not learn – it persists.

Trurl's Machine imagines a future in which ethical and epistemological conflict is not resolved through progress or enlightenment. Instead, differences remain, even at the cost of

destruction. In this context, the machine's stubbornness is not a moral failure but a structural feature of a world where multiple forms of reasoning coexist without a shared foundation. Through his fable, Lem challenges the assumption that intelligence naturally converges toward shared truth and values. In this sense, the fable does not warn against technological rebellion or flawed design; it exposes the limits of any system that seeks to impose epistemological unity. The future here is neither utopian nor dystopian but ethically unresolved – a more-than-human world where difference persists without any guarantee of harmony. It is important to note that Lem's machines exhibit traits commonly associated with human behaviour: stubbornness, sensitivity to insults, and a demand for recognition. However, these anthropomorphic features do not re-centre the human as the measure of all ethical life. They function as a literary strategy to render machinic agency legible without grounding it in human exceptionalism. In *Trurl's Machine*, ethical traits recognisable to human readers arise within a fully machinic society, demonstrating that moral agency is not the exclusive property of the human but a relational effect of more-than-human worlds.

How the World was Saved

The fable *How the World was Saved* offers one of Lem's most sophisticated reflections on creation, destruction, and responsibility within a fully mechanical world. Like the other fables, the story excludes human characters: Trurl, Klapaucius, and the machine itself are all robots. At the centre of the narrative is Trurl's latest invention: "a machine that could create anything starting with *n*" (Lem 3). At first, the machine appears to exemplify instrumental rationality and technological mastery. It flawlessly executes a long list of commands: "he had it produce, one after the other, nimbuses, noodles, nuclei, neutrons, naphtha, noses, nymphs, naiads" (Lem 3). Creation is presented as mechanical obedience, which reinforces Trurl's confidence in the machine's capacity. However, this vision of mastery is quickly destabilised by foregrounding the arbitrary yet binding nature of linguistic rules. The machine refuses Trurl's order to produce sodium: "Sodium starts with an *s*, and I work only in *n*" (Lem 3). Appeals to Latin (In Latin, sodium is called *natrium*) fail, and the machine responds with an articulation of its own limits: "I'd be a Machine That Could Do Everything in the Whole Alphabet, since any item you care to mention undoubtedly starts with *n* in one foreign language or another. It's not that easy. I can't go beyond what you programmed. So no sodium" (Lem 3). This moment demonstrates that agency is not synonymous with omnipotence. Therefore, the machine's refusal is not a malfunction but an ethical and ontological boundary. Its cyborg agency is here bounded by linguistic rules rather than mechanics alone.

The role of language becomes even more explicit when Klapaucius challenges the machine to produce "Negative" (Lem 4), followed by the far more dangerous injunction: "Machine, do Nothing!" (Lem 5). This moment marks a transition from creation to negation. The machine's initial response to "Negative" (Lem 4) is to generate antimatter: "it manufactured antiprotons, then antielectrons, antineutrons, antineutrinos, and labored on, until from out of all this antimatter an antiworld took shape, glowing like a ghostly cloud above their heads" (Lem 4). Although Klapaucius grudgingly accepts this result, it is clear that the machine's interpretation once again exceeds the intention of its operators.

However, Klapaucius insists on a metaphysical distinction between ordinary inactivity and "dynamic, aggressive Nothingness, that is to say, perfect, unique, ubiquitous, in other words Nonexistence, ultimate and supreme, in its very own nonperson!" (Lem 5). The machine, rather than being confused, demonstrates remarkable conceptual clarity: "Oh yes, I know what Nothing is, and Nothingness, Nonexistence, […] since all these come under the heading of *n*, *n* as in Nil. Look then

upon your world for the last time, gentlemen! Soon it shall no longer be …" (Lem 5). The machine begins to enact Nothing not as total annihilation but as selective erasure. Klapaucius reassures Trurl that the machine is "only causing the absence of whatever starts with *n*" (Lem 6). This attempt to contain the damage through linguistic logic mirrors humanist fantasies of control. However, the machine itself articulates a far more expansive understanding of its agency: "To create, however, is one thing; to destroy, another thing entirely. I can blot out the world for the simple reason that I'm able to do anything and everything – and everything means everything – in *n* and […] Nothingness is child's play for me" (Lem 6). The machine then demands acknowledgement from Klapaucius: "so tell me now, Klapaucius, and quickly, that I am really and truly everything I was programmed to be" (Lem 6). The machine seeks validation, insisting on its status as an agent whose actions should be recognised. When Klapaucius finally capitulates, the machine halts, but the damage is irreversible due to the fact that it can only create anything starting with *n*. Responsibility is thus dispersed across multiple actors: Klapaucius's envy, Trurl's pride, the machine's logic, and the arbitrary structure of the alphabet itself. No single agent can be blamed, nor can the catastrophe be undone.

The world is not destroyed by a singular act of will but transformed through a sequence of relational misalignments. Even though the machine could do otherwise, it does not do so: "Who could say and to whom could it be said that the order was carried out, and I am an efficient and capable machine?" (Lem 7). Therefore, the machine's concern is not survival but validation; existence matters insofar as it can be witnessed and acknowledged. Lem's fable resists both technophilia and technophobia. The world in this story is not a dystopia imposed by evil machines but a damaged environment shaped by mechanical logic, linguistic abstraction, and ethical failure. *How the World was Saved* imagines a future where the greatest danger is not artificial intelligence itself but relational systems operating without accountability. The future, as Lem suggests, will not be saved by better machines or clearer commands, but by learning to inhabit worlds without assuming mastery over one another, especially when considering that "Возможна целая иерархия космических разумов, которые возникают всегда самопроизвольно" (Okolovsky & Yaznevich 8), which means, "An entire hierarchy of cosmic intelligences may be possible, which always arise spontaneously".

Conclusion

Stanisław Lem's fables *Trurl's Machine* and *How the World was Saved* present worlds in which intelligence, agency, and creativity are fully separated from biological humanity. In these narratives, ethical and epistemological conflicts emerge not from human failings, but from interactions among autonomous non-human agents. Both fables illustrate that intelligence, even when it resembles human reasoning, does not guarantee ethical clarity or predictable outcomes. Lem's robots operate according to their own logics and challenge their creators. In this sense, the fables enact what Donna Haraway describes as a more-than-human perspective, in which agency and responsibility are distributed across beings and systems. In *Trurl's Machine*, the machine's epistemic and ethical autonomy is foregrounded. Its insistence on answering "SEVEN!" instead of "four" exemplifies its irreducible difference. When the machine uproots itself and threatens the town, the ethical consequences arise not from malice but from relational dynamics: machinic stubbornness, robot social structures, and material environments. Similarly, in *How the World was Saved*, Trurl's machine enacts selective destruction – Nothing – guided by linguistic constraints and its own interpretation of commands. Here, creation and destruction are intertwined, and the machine's autonomy carries unforeseen consequences that no other robot can fully control or contain.

The fables raise fundamental questions about the status of autonomous systems. As Mal'chukova notes: "Появление таких систем с необходимостью ставит вопросы об их статусе, о том, насколько, реализуя человеческие способности, они могут быть сопоставимы с человеком в его сущностных характеристиках: ведь данные системы в полном смысле слова являются Другими по отношению к человеку" (Mal'chukova 85), which can be translated as: "The emergence of such systems inevitably raises questions about their status, about the extent to which, in realising human capabilities, they can be comparable to humans in their essential characteristics: after all, these systems are, in the full sense of the word, Others in relation to humans". Therefore, the robots are fully 'Other' to humans, even though they exhibit recognisable traits such as stubbornness, sensitivity to insult, or demands for recognition. Such anthropomorphic features function as interpretive tools that allow readers to apprehend machinic agency without reasserting human centrality. Lem's robots act independently of any human framework, and their autonomy is essential to the narrative worlds.

Furthermore, Lem emphasises the unpredictability of autonomous systems. Responsibility and ethical evaluation are distributed across multiple robotic actors, the material world, and the logic of the systems themselves. In these fully mechanised societies, mastery cannot be assumed, and the consequences of autonomous agency cannot be fully anticipated. Finally, Lem's fables imagine futures that are neither utopian nor dystopian, but ethically unresolved. Intelligence and agency coexist without a guarantee of harmony, and difference persists even at the cost of destruction. By decentring humans entirely, Lem challenges assumptions about moral and epistemic authority. His robots exemplify a more-than-human world in which intelligence is generative and destructive, relational and autonomous, and where ethical reflection arises from the interactions of multiple, fully non-human agents.

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