

Solaris – the world of “alien(ated/ing) consciousness”

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“Babylon is nothing else than an infinite game of chance.”¹

Jorge Luis Borges, *Lottery in Babylon*

“I, at any rate, am convinced that He is not playing at dice.”²

Albert Einstein in a letter to Max Born (1926)

The invisible lottery

The above words uttered by writers and scholars bring to mind the antagonism between chance and the laws of the universe which were discovered accidentally. Albert Einstein and Niels Bohr argued about it at the dawn of quantum mechanics, when reality was becoming less and less obvious. Stanisław Lem, I believe, would have argued with Einstein, because he referred to Borges' concept of the lottery, a certain mythologization of humanity's beginnings, to review the apocryphal text *Das kreative Verrichtungsprinzip. The World as Holocaust*, which comments on the mystery of *silentium universi*, or the silence of the universe. In his re-

¹ Jorge Luis Borges, “Lottery in Babylon”, in: *Collected Fictions*, trans. Andrew Hurle (New York: Penguin Putnam, 1998), 106.

² Robert Andrews, *The New Penguin Dictionary of Modern Quotations* (London: Penguin Books UK, 2003), 499.

view, Lem tries to universalize Darwinism as a model for calculating and explaining evolution in the biosphere and extrapolate it onto cosmology:

It turned out, however, that God plays dice with the world not only at the level of atoms but also galaxies, stars, planets, the birth of life, and the existence of intelligent beings. That we owe our existence both to catastrophes that occurred “at the right place and time” as well as to those that did not take place in different eras and places.³

A series of probabilistic events which took place in the biosphere, including the emergence of human intelligence, had been preceded by innumerable other events, also governed by probabilistic forces, at the level of celestial bodies, and even prior to that – at the level of subatomic particles. Before mammals took over the Earth, many holocausts had occurred, also accidental ones, as a result of which dinosaurs, among others, became extinct. Human intelligence, considered God’s creation, turned out to be one of the highest, almost unimaginable, jackpots. The price that had to be paid for that lottery win involved countless loses, which often took the form of holocausts for those who lost. The chances of the human mind evolving in such random circumstances, according to Lem, are so slim that they seem miraculous. Respectively, what remains incalculable for contemporary computational power is a testimony to the limits of human intelligence and not to the omnipotence of the Creator. Thus, *silentium universi* does not point to the unique nature of humanity or the flora and fauna on Earth. Our chances of winning were so unlikely. And what is even more unlikely is that two equally intelligent forms of life should inhabit the same solar system or the same galaxy. In adopting universal probabilism in his review and other works, such as *The Investigation*, *The Chain of Chance*, and *The Philosophy of Chance*, Lem does not only rationalize the lottery metaphor but also unifies (or rather combines) the microworld and the macroworld.

One of the most famous science fiction scholars, Darko Suvin, argues in his essay “On the Poetics of the Science Fiction Genre” (1972) that the form relies on cognitive estrangement.⁴ Science does not so much assimilate strangeness and examines the truth as takes on a new form that compels us to reimagine what we know. Lem’s *Solaris* is a science fiction text that both extrapolates contemporary scientific knowledge and shows science as alienated from and alienating in the world in which we live. Does living in such a world give us, as readers, a useful theoretical tool for reinterpreting *Solaris*? It is difficult to answer this question. After all, the novel itself is a record of a theory, or rather a warning against theorizing.

Ambiguous reality

In his analysis of the pseudo-detective novel *The Chain of Chance*, Rafał Koschany argues that it relies on chance. He further suggests that in his novel Lem tried to build a model of a fictional world that would correspond to his beliefs about the nature of the real world, and, moreover, that Lem’s

³ Stanisław Lem, *Biblioteka XXI wieku [21st Century Library]* (Kraków: Wydawnictwo Literackie, 2024), 133.

⁴ Darko Suvin, “On the Poetics of the Science Fiction Genre”, *College English* 3 (1972): 372, <https://doi.org/10.2307/375141>.

interpretations of the achievements of contemporary atomic physics could have influenced his philosophical concept.⁵ This is true also for Lem's other literary works, such as *Solaris*. Lem might be considered one of the supporters of the Copenhagen interpretation of quantum mechanics, positioning himself against Einstein. The first supporters of the Copenhagen Interpretation – Niels Bohr, Werner Heisenberg, Erwin Schrödinger, and Richard Feynman – stated that the probabilistic nature of photons and electrons could undermine classical physics' deterministic framework. Observations and measurements further troubled positivists and realists. It is the conscious observer who determines such properties of microparticles as position, momentum, polarization, and rotation. This conscious process of measurement renders the system definite. The Copenhagen Interpretation was also adopted by, among others, John Clauser, Alain Aspect, and Anton Zeilinger, winners of the 2022 Nobel Prize in Physics. They have made one of the most disturbing discoveries in the last 50 years, namely that the universe is not locally real, and that objects lack definite properties prior to being measured by humans or machines. This discovery marks the end of a long debate. The failure of local realism would not have been accepted by Einstein, a determinist, who once asked a colleague if he really believed that the moon existed only when he looked at it.⁶

In addition to the Copenhagen Interpretation and other neopositivist attempts to explain quantum phenomena, one can notice in the broadly defined scientific community trends which emphasize the role of the conscious observer related to panpsychism, mysticism, or solipsism. One such intriguing figure is the American cognitive psychologist Donald D. Hoffman, professor emeritus in the Department of Cognitive Sciences at the University of California, Irvine, who coined the theory of the so-called Conscious Realism based on verifiable mathematical models and cognitive experiments. Conscious Realism, which relies on consciousness, is a paradox and a step too far, because the superposition of microparticles does not force us to adopt solipsistic ontological views.

Still, I find Hoffman's other theories which helped him formulate the tenets of Conscious Realism more intriguing. These include the Fitness Beats Truth (FBT) Theorem and the Interface Theory of Perception (ITP). Hoffman could embrace Lem's universal probabilism in his reflection, because the FBT theorem is based on natural selection, which, metaphorically speaking, relies on chance. It is a lottery. In contrast to the ideas of the Enlightenment, Hoffman postulates that our reason and senses are not designed to reveal the true nature of reality. In his opinion, the greater the usefulness of a given cognitive apparatus for the survival of a conscious individual in a given environment, the less reliable this apparatus is in describing reality. Our perception of the world is the result of evolution, because such a way of perceiving and knowing the world guarantees us the greatest probability of passing on genes and information. The fact that the world thus transformed does not reflect the real world behind the scenes should not be a concern. This notwithstanding, it is a source of constant worry.

The FBT theorem is the starting point for Hoffman's so-called Interface Theory of Perception, which posits that Darwinism provides us with a certain interface that filters out unnecessary,

⁵ Rafał Koschany, *Przypadek. Kategoria egzystencjalna i artystyczna w literaturze i filmie* [Chance: Existential and Artistic Category in Literature and Film] (Toruń: Wydawnictwo Naukowe UMK, 2016), 198.

⁶ Abraham Pais, "Einstein and the Quantum Theory", *Reviews of Modern Physics* 4 (1979): 907, <https://doi.org/10.1103/RevModPhys.51.863>.

worthless, and even survival-threatening interpretations of reality. Thanks to this interface, we see a hammer instead of a cluster of atoms, and thus we can work with the greatest possible efficiency. By analogy, with the help of the computer’s operating system we can edit a text without engaging with the algorithms hidden underneath the pixels on the screen. In this analogy, the matter that we register and interact with is merely a set of icons available to every user of that interface. These icons, Hoffman explains, should be taken seriously but not literally.⁷ Other beings with varying degrees of consciousness have their own distinct – mutually exclusive – interfaces. Following this line of thought, all entities and conditions, including spacetime, possess their unique features simply because we observe and measure them in a certain way. It should be noted, however, that such a solution to the quantum paradox is not necessary and that, as usual, pursuing the so-called theory of everything is questionable.

The dilemma of emergence, seen in the unexplained transformation of Heisenberg’s uncertainty principle into Einstein’s determinism, indeterminism into determinism, chance into order, matter into life, an amalgam of thoughtless neurons into a powerful mind, consciousness into intelligence, or algorithms into artificial intelligence, worries many scientists and philosophers, such as Hoffman and Lem, and thus inspires their shared metaphysical musings. Hoffman goes a step further than Lem in finding an answer to this question. Instead of giving primacy to consciousness, Lem suggests that one should respectfully acknowledge its failure, and in fact he does so, as do other proponents of the Copenhagen Interpretation. Unlike Hoffman, Lem is a pessimist. Having given up, he clearly sets the limits of scientific inquiry. It can be seen in the chapter “Chaos and Order” in *Summa Technologiae*, where he uses an erotic metaphor of the cosmos as a kitchen. Astrophysicists-readers observe the behavior of three celestial bodies – namely Mr. Smith, the Puritan aunt, and the lodger – from a distance and try to theorize their actions. Every time the aunt goes to the basement, Mr. Smith and the lodger kiss. The astrophysicists attempt to describe how the three bodies function. We are presented with Ptolemy’s theory of sink as the center of the universe, Newton’s theory of mutual (sexual) attraction, Einstein’s theory of the curvature of space around the gravitating erotic masses. As kitchen telescopes develop, Heisenberg, having noticed the finer elements of bodies, such as arms, legs, and heads, concludes that the kissing or the non-kissing state of Mr. Smith and the young lady is “a consequence of indeterministic regularities coming together,”⁸ to say nothing of arms, thighs, calves, and fingers.

Admitting defeat does not mean that Lem was any less of a visionary or a catastrophist or nihilist. He was at best an absurdist who saw endless antagonisms between the human mind and the lack of reason and purpose in the universe. In other words, Lem, like other Polish post-avant-garde writers (e.g. Gombrowicz), seems to embrace the so-called chaosmos in his prose.⁹ He also reflected on the frontiers of science, which would continue to trouble many scientists and philosophers. In *Solaris*, he was able to put into words the uncertainty and

⁷ Donald D. Hoffman, *The Case against Reality. How Evolution Hid the Truth from Our Eyes* (London: Penguin Books, 2020), xiii.

⁸ Stanisław Lem, *Summa technologiae*, trans. Joanna Zylińska (Minneapolis: University of Minnesota Press, 2013), 163.

⁹ See Przemysław Czapliński, “Chaosmos: Stanisław Lem’s *Solaris* and Polish Post-Avant-Garde Prose,” *Polish Review* 2 (2023): 46–64, <https://doi.org/10.5406/23300841.68.2.05>.

anguish that accompanied (often unsuccessful) attempts to perceive and know both alien beings, which possessed their own interfaces, and our own neurons from which a consciousness emerges that cannot even answer such questions as “Who am I?” and “Where am I from?” Lem’s prose, so alien to the Star Wars era and at the same time so eccentric from the perspective of contemporary American science fiction, is a firm protest against anthropocentrism and scientism. Still, it is based on scientific reasoning, which renders it as ironic and paradoxical as quantum mechanics. For Lem, the emergence of order from chance or consciousness from matter is and will always be a sword of Damocles hanging over humanity. One of his most famous novels, *Solaris*, is both an apocalypse and an anticipation of the posthumanist condition in the face of “alien(ated/ing) consciousness,” a world in which both the consciousness of the alien and one’s own consciousness become alien.

Solaris – the world of “alien(ated/ing) consciousness”

Solaris describes the failure of connecting/communicating with “alien(ated/ing) consciousness,” and investigates how it exists and operates. Imagining, or rather the impossibility of imagining, a distant living and intelligent planet is a double extrapolation. On the one hand, it offers a seemingly simple, though fictional, answer to the Fermi paradox: “Where are they?” Even such a pessimist as Lem does not consider finding and reaching an alien civilization impossible. He believes in the incredible luck of the one who wins in a game of dice, not in his loneliness. On the other hand, this novel anticipates a future (universe) when contact with alien minds will be common. Such an extrapolation makes sense. After all, since *Solaris* philosophical discussions about mind-body relations and minds trapped in non-human bodies have animated both philosophy, as exemplified by, among others, Hilary Putnam’s “brain in a vat” question,¹⁰ and cognitive science, especially studies of the human embodied mind and the animal mind, such as Francisco J. Varela, Evan Thompson, and Eleanor Rosch’s *The Embodied Mind* (1992),¹¹ Thomas Nagel’s *What Is It Like to Be a Bat?* (1974),¹² and Peter Godfrey-Smith’s *Other Minds: The Octopus, the Sea, and the Deep Origins of Consciousness* (2016).¹³ Entering alien, although earthly, minds is not easy. We are not able to inhabit a non-human body, and even if we were to succeed, we would not be ourselves in someone else’s body, because evolution has shaped the interface we use. So how can we be sure that we are able to get to know such an intelligent being as Solaris? Lem, it seems, is skeptical, writing in one of his final e-mails to Peter Swirski that

any meaningful form of contact – or, even less, cooperation or confederation – with extraterrestrial intelligences is simply not possible. The reasons for this owe to the almost limitless diversity and distribution of evolutionary paths taken by different forms of life and civilizations.¹⁴

¹⁰Hilary Putnam, *Reason, Truth and History* (Cambridge: Cambridge University Press, 1981).

¹¹Francisco J. Varela, Eleanor Rosch, Evan Thompson, *The Embodied Mind* (Cambridge, Massachusetts: MIT Press, 1992).

¹²Thomas Nagel, “What Is It like to Be a Bat?”, *The Philosophical Review* 4 (1974): 435–450, <https://doi.org/10.2307/2183914>.

¹³Peter Godfrey-Smith, *Other Minds: The Octopus, the Sea, and the Deep Origins of Consciousness* (New York: Farrar, Straus and Giroux, 2016).

¹⁴Peter Swirski, *Stanislaw Lem: Philosopher of the Future* (Liverpool: Liverpool University Press, 2015), 39.

Considering Lem’s musings on the emergence of consciousness from physical matter, and in the case of *homo sapiens*, from a network of neurons, I argue that the planetary organism *Solaris* is a macro-metaphor of the human brain, a fictional world of alien(ated/ing) consciousness, where both one’s own consciousness and alien consciousness is alien(ated/ing). The emergence of consciousness from physical matter is a central question in neuroscience, just as quantum mechanics is a central question in physics. We know more about the moon, which puzzled Einstein, than about our own brain, which only seems to be so close. The macro-metaphor consists of other metaphors, integrated by the narrative, metanarrative (e.g. the history of Solaristics), and terms used to describe the planet’s landscape. Topographically, *Solaris* resembles the human brain, especially in its shape and appearance. Both *Solaris* and our brain are described in terms of hemispheres, probably because both are globes. Such descriptive expressions as “the slate-colored ripples of the ocean,”¹⁵ the ocean’s “oleaginous gleam,”¹⁶ “formless glue,”¹⁷ and “gluey substance”¹⁸ are also associated with the brain, which is covered with ripples and immersed in the cerebrospinal fluid which feels “gluey.” One of the adaptations of *Solaris*, directed by Steven Soderbergh in 2002, which Lem heavily criticized, also shows gelatinous sea waves behind the Station. Interestingly, in Chinese, the word *naohai* (“sea of the brain”) simply means the mind. Still, the sea-brain analogy is too intuitive and obvious. What’s more, the graphic designer of the cover of *Solaris* published by Harcourt Brace in 1987 had the same idea. It is too obvious, and we know that “[i]t did not possess a nervous system (...) or cells, and its structure was not proteiform.”¹⁹ This analogy becomes meaningful thanks to a different analogy: that of the human brain as a black box.

The black box analogy opens up Lem’s masterpiece. Lem, after all, was a self-taught cyberneticist. In science, computer science, and engineering,²⁰ a black box is a system viewed in terms of its inputs and outputs. Its internal workings are not visible. The black box metaphor may be applied to many different devices and solutions, such as the transistor, the engine, the algorithm, the government, and, of course, the human brain. As Lem points out in *Summa technologiae*:

Our own brain is one of the “devices” that is “closest to us” in the whole Universe: we have it in our heads. Yet even today, we do not know how the brain knows exactly.²¹

To better understand how the black box works, let us return to the “Chinese room,”²² a thought experiment formulated by the American philosopher John Searle in the 1980s to show that even if the computer can appear intelligent, it actually is not intelligent in and of itself. Observers of a black-box-like system have access to the external outputs, but

¹⁵Stanisław Lem, *Solaris*, trans. Joanna Kilmartin and Steve Cox (New York: Faber And Faber Ltd., 2016), 4.

¹⁶Lem, *Solaris*, 12.

¹⁷Lem, *Solaris*, 19.

¹⁸Lem, *Solaris*, 18.

¹⁹Lem, *Solaris*, 23.

²⁰William Ross Ashby in *An Introduction to Cybernetics* (1956) was the first to use the term “black box” in this sense. See William Ross Ashby, *An Introduction to Cybernetics* (London: Chapman & Hall Ltd., 1956).

²¹Lem, *Summa technologiae*, 121.

²²John Searle, “Minds, Brains, and Programs”, *Behavioral and Brain Sciences* 3 (1980): 417–424, <https://doi.org/10.1017/S0140525X00005756>.

the physical cause-and-effect relationships inside the box are as opaque as a black hole in space. Similar metaphysical discussions and arguments are held by methodologists in *Solaris*'s metanarrative:

Was it possible for thought to exist without consciousness? Could one, in any case, apply the word thought to the processes observed in the ocean?²³

Umberto Eco is right:²⁴ due to its opacity and inaccessibility, the human brain is nothing else than magic, which sets the bar incredibly high for contemporary science.

Given the experiences of the characters in the novel, we know that the planet/brain also displays functions and abilities of the human nervous system, such as sleep, memory, and mental imagery.²⁵ The dreamlike scenes, the so-called Phi-creations, in the Station invite us to question the boundary between reality and sleep. Entering the orbit of an alien planet is like an expedition into one's own brain. Dreaming is a metaphor in which self-awareness reaches an alien, synthesized, and analyzed dimension of reality, which, in turn, is produced by random signals during the regeneration of the cerebral cortex and interpreted as stimuli from the outside world. Thus, *Solaris* is a superposition of each astronaut's journey into their own brain. In this respect, the dream world is no less alien than the haunted Station above *Solaris*. Kris Kelvin seems to see his dead wife, Rheya. He is unable to decide whether it is a dream or reality (of course, before he rationalizes his state), whether the person he sees is his dead wife or just looks like her. A couple of factors are at play here. First, dreaming is an important context. The fact that the cerebral cortex interprets random signals as purposeful, motivated, and real images points to the fact that Kelvin and the Station crew interpret these random neutrino patterns as phantoms, as projections of something hidden deep in their memory. The dream images emerging from the brain are both one's own and alien, for the dreamer continues to use the same interface as in real life to interpret himself pretending to be an alien. Kelvin explains:

[...] Even while dreaming, when we are in perfectly good health, we talk to strangers, put questions to them and hear their replies. Moreover, although our interlocutors are in fact the creations of our own psychic activity, evolved by a pseudo-independent process, until they have spoken to us we do not know what words will emerge from their lips. And yet these words have been formulated by a separate part of our own minds; we should therefore be aware of them at the very moment that we think them up in order to put them into the mouths of imaginary beings.²⁶

The paradox of sleep involves alien(ated/ing) consciousness. When we stop anticipating our own actions and responses, even when we know perfectly well that we are dreaming, our consciousness alienates itself.

²³Lem, *Solaris*, 24.

²⁴Umberto Eco, "El mago y el científico", *El País*, 14 Dec. 2002, https://elpais.com/diario/2002/12/15/opinion/1039906807_850215.html, date of access 1 Apr. 2024.

²⁵Although the cognitive revolution began in the 1950s, research on mental imagery gained momentum only in the 1980s, thanks to such American psychologists as Roger N. Shepard, Lynn A. Cooper, Stephen M. Kosslyn, and Howard Gardner.

²⁶Lem, *Solaris*, 49.

Secondly, the mind or consciousness of imaginary beings or Phi-creatures may be just an anthropocentric interpretation, a product of one’s own limited interface, since beings which look or behave like humans (e.g. Rheya or a cloned human) do not necessarily have to have minds. Rheya also has doubts about this: “I felt as if there was no body underneath my skin and there was something else instead: as if I was just an illusion meant to mislead you.”²⁷ The trope of the cloned human brings to mind a famous thought experiment, the “philosophical zombie,” which inspires reflection on physicalism and at the same time the possibility creating strong artificial intelligence: the same arrangement of physical matter does not necessarily give rise to the same consciousness. After all, a zombie, by definition, is a being with a human body but without a human psyche. Zombies are not humans, although they feel pain and have reflexes. Indeed, Rheya is also “somehow stylized, reduced to certain characteristic expressions, gestures and movements.”²⁸ She is recognizable in her “habits,”²⁹ because “the albumen, the cell and the nucleus of the cell are nothing but camouflage. The real structure, which determines the functions of the visitor, remains concealed.”³⁰ Jerzy Jarzębski is right when he says that

Lem’s hero is forever suspended between himself-as-the body and himself-as-consciousness, and the complicated (for both the scientist and the philosopher) relationship between the two is a source of constant amazement and inquiry.³¹

Apart from Kelvin, this puzzle apparently also astonishes Rheya, who is the product of Kelvin’s self-reflection. The visitors are both perceived as uncanny³² and endowed with consciousness. Both are anthropocentric acts. Our way of knowing and perceiving reality is, after all, conditioned by our interface. Consciousness may be just an insignificant by-product of the lottery. Thus, Lem points to the paradox of panpsychism, which is based on anthropocentrism.

After all, Phi-creatures are uncanny because memory works in an uncanny way, as does information processing. As research in cognitive psychology shows, long-term memory and the so-called mental image used for storing a remembered or imagined representation of an object, concept, idea, or situation are a constantly reconstructed *gestalt*³³ with indistinct, blurred details. Rheya’s clothing is one such imprecise mental image generated by the planet/brain. She is barefoot like a Negress, Sartorius’s visitor. Also, for unknown reasons, her dress has no zips and only decorative buttons running down the middle, so she cannot take it off. The

²⁷Lem, *Solaris*, 143.

²⁸Lem, *Solaris*, 58.

²⁹Lem, *Solaris*, 53.

³⁰Lem, *Solaris*, 101-102.

³¹Jerzy Jarzębski, “Lustro. Posłowie prof. Jerzego Jarzębskiego do Solaris” [The Mirror. Prof. Jerzy Jarzębski’s Afterword to *Solaris*], *solaris.lem.pl*, <https://solaris.lem.pl/ksiazki/beletrystyka/solaris/30-poslowie-solaris>, date of access 1 May 2024.

³²I am referring to the concept of the “uncanny valley” proposed by Masahiro Mori. See Masahiro Mori, Karl MacDorman, Norri Kageki, “The Uncanny Valley [From the Field]”, *IEEE Robotics & Automation Magazine* 2 (2012): 98–100, <https://doi.org/10.1109/mra.2012.2192811>.

³³In Gestalt theory, the concept of “gestalt” (German for “figure”) is a sum that contains more information than its constituent elements.

bare soles of Rheya's and the Black woman's feet are "soft, like that of a newborn child."³⁴ The visitors are thus mental doppelgangers of the Station's crew. Having set off on the expedition to Solaris, on a metaphorical journey into the depths of their own brain, they incarnate the homunculus of their own consciousness. In addition, the aforementioned mental images, according to cognitive psychology, are stored, processed, and manipulated. So, for example, one can rotate certain letters or geometric figures in the mind, which enhances the process of imagining and visual reasoning. And both mental images and the Phi-creations created by the thinking ocean undergo manipulation. The pilot André Berton³⁵ thus describes a giant infant he once saw flying over the ocean:

It opened and closed its mouth, it made various gestures, horrible gestures. [...] if it hadn't been for the movements, the gestures, as though someone was trying ... It was as though someone else was responsible for the gestures. [...] they were methodical movements. They were performed one after another, like a series of exercises; as though someone had wanted to make a study of what this child was capable of doing with its hands, its torso, its mouth. [...] But this face ... a face can't divide itself into two—one half gay, the other sad, one half scowling and the other amiable, one half frightened and the other triumphant.³⁶

The child that Berton saw was probably a product of mental manipulation taking place in the planetary brain. It was manipulation on a superhuman scale, because everything – as Berton stated – that he saw took ten seconds. He tried to explain this phenomenon to the suspicious Commission, saying that it involved "the most durable imprints of memory, those which are especially well-defined."³⁷ He had the missing Fechner in mind.

We should ask at this point: What is it all about? If the planet created by Lem is just a macro-metaphor of the human brain, then what does it entail? If we were to replace "just" with "indeed," the textual world would transform into a three-dimensional ironic vision of humanity. First, the crew members only think that they perceive the reality imposed by their cognitive interface. Everything they anthropomorphize may be reduced to a bunch of neutrinos, unaware of their own materiality and the purpose that is bestowed upon them by different methodologists. And yet they "need mirrors. [They] don't know what to do with other worlds."³⁸ One's own consciousness is the source of alienation. Contact with other civilizations, as Sartorius sarcastically put it, means that "we can observe, through a microscope, as it were, our own monstrous ugliness, our folly, our shame!"³⁹

Secondly, it is peculiarly ironic to anticipate that after so many years of scientific and technological development, after having travelled through so many light years, our stellar journey

³⁴Lem, *Solaris*, 57.

³⁵Lem often created fictional characters based on real ones (e.g. Baloyne in *His Master's Voice* is Jan Błński, Trurl in *The Cyberiad* is Alan Turing). The pilot's name was probably inspired by the French surrealist André Breton, who initiated and developed the concept of objective chance (French: *hasard objectif*).

³⁶Lem, *Solaris*, 82-83.

³⁷Lem, *Solaris*, 102.

³⁸Lem, *Solaris*, 72.

³⁹Lem, *Solaris*, 73.

has finally come to an end, and the planet, the civilization, that took so many years to reach, turns out to be nothing more than the human brain. Does this mean that everything has been in vain? That all attempts to establish contact with this colossal cerebral ocean, all experiments and data obtained, are useless? Does this mean that the measurements and observations made by humanity were manipulated? Are we still dealing with a black box, since “[t]he ocean itself took an active part in these operations by remodelling the instruments. All this, however, remained somewhat obscure?”⁴⁰ Maybe everything that imprints itself on our perception boils down to chance, to lottery?

Had the electronic apparatus recorded the cryptic manifestation of the ocean’s ancient secrets? Had it revealed its innermost workings to us? Who could tell? No two reactions to the stimuli were the same [...].⁴¹

Equipped with the human interface, glasses, and headphones, we are like, as Lem writes, deaf listeners to a geometric symphony performed by both aliens and alien(ated/ing) consciousness.

Finally, Kelvin, as a psychologist, talks about Solaris with irony. It resembles contemporary cognitive science, haunted by the specter of failure in exploring the mystery of human consciousness.⁴² It is worth noting that the fictional scientific discipline is not mentioned marginally; indeed, the respected psychologist has read all the books on Solaris he could find, including the dubious apocrypha, which endows this novel within the novel with significance. However, I believe that Solaristics is not so much an analogy to cognitive science as a caricature or a caricatured extrapolation of all human knowledge that pretends to explain the sources and the emergence of consciousness. On the one hand, contemporary neopositivists and physicalists are most often optimists, like alchemists in the Middle Ages. On the other hand, they are lost and frightened in the face of a scientific and technological limit that is and probably will never be transcended. For Solarists, the problem of Solaris is like a perpetual motion machine, like squaring the circle for the ancient Greek philosophers – after all, “[t]he existence of the thinking colossus was bound to go on haunting men’s minds.”⁴³ Meanwhile, contemporary scientists and philosophers still perceive the network of almost a hundred billion randomly connected neurons as a black box. We can therefore say that the darkest abyss is not the most distant part of the universe, but our own skull. Kelvin was right: “Man has gone out to explore other worlds and other civilizations without having explored his own labyrinth of dark passages and secret chambers, and without finding what lies behind doorways that he himself has sealed.”⁴⁴ No sophisticated term or neologism, be it “mimoids,” “symmetriads,” or “asymmetriads,” is of any help. Any terminology associated with Solaris, which Lem coined

⁴⁰Lem, *Solaris*, 21.

⁴¹Lem, *Solaris*, 21.

⁴²Paweł Grabarczyk, “O czym nam mówi milcząca planeta? Analiza wybranych wątków filozoficznych w *Solaris* Stanisława Lema” [What is the silent planet telling us? Analysis of selected philosophical themes in Stanisław Lem’s *Solaris*], *Acta Universitatis Lodzensis. Folia Litteraria Polonica* 4 (2020): 69–80, <https://doi.org/10.18778/1505-9057.59.04>.

⁴³Lem, *Solaris*, 171–172.

⁴⁴Lem, *Solaris*, 157.

ironically, is just a kitschy parody of logocentrism and anthropocentrism: “the most abstract achievements of science, the most advanced theories and victories of mathematics represented nothing more than a stumbling, one or two-step progression from our rude, prehistoric, anthropomorphic understanding of the universe around us.”⁴⁵ “Alien(ated/ing) consciousness,” or perhaps more precisely “self-alien(ated/ing) consciousness,” like *Solaris*, will go on haunting men’s minds. Ursula K. Le Guin in her introduction to *Solaris* wrote that “the novel is an exhibition of the inability of human understanding to achieve a final stage of knowledge; perhaps it implies also that human understanding at best can understand itself, but nothing outside itself.”⁴⁶ However, *Solaris*, as I have indicated, perhaps shows that unfortunately we are still not even close to reaching this best-case scenario. What’s more, the very attempt at interpreting *Solaris* is a paradox. Lem said that he did not fully understand the novels he wrote and that the language of the book did not “mee[t] with [his] complete approval.”⁴⁷ It is therefore not surprising that – as the American scholar Istvan Csicsery-Ronay Jr. writes – “Readers of *Solaris* are Solarists, too”⁴⁸ – as are its author and protagonist.

translated by Małgorzata Olsza

⁴⁵Lem, *Solaris*, 170.

⁴⁶Ursula K. Le Guin, “Stanisław Lem: *Solaris*: An introduction written in 2002 for a German-language edition of *Solaris*”, in: Ursula K. Le Guin, *Words are My Matter: Writings on Life and Books* (Boston and New York: Mariner Books, 2019), 135.

⁴⁷Edward Balcerzan, “Seeking Only Man: Language and Ethics in «*Solaris*»”, trans. Konrad Brodziński, *Science Fiction Studies* 2 (1975): 155, <https://doi.org/10.2307/4238938>.

⁴⁸Istvan Csicsery-Ronay Jr., “The Book is the Alien: On Certain and Uncertain Readings of Lem’s *Solaris*”, *Science Fiction Studies* 12 (1985): 12, <https://doi.org/10.1525/sfs.12.1.0006>.

References

- Andrews, Robert. *The New Penguin Dictionary of Modern Quotations*. London: Penguin Books UK, 2003.
- Ashby, William Ross. *An Introduction to Cybernetics*. London: Chapman & Hall Ltd., 1956.
- Balcerzan, Edward. “Seeking Only Man: Language and Ethics in «Solaris»”. Trans. Konrad Brodziński. *Science Fiction Studies* 2 (1975): 152–156. <https://doi.org/10.2307/4238938>.
- Borges, Jorge Luis. “Lottery in Babylon”. In: Jorge Luis Borges, *Collected Fictions*. Trans. Andrew Hurle, 101–106. New York: Penguin Putnam, 1998.
- Csicsery-Ronay Jr., Istvan. “The Book is the Alien: On Certain and Uncertain Readings of Lem’s *Solaris*”. *Science Fiction Studies* 12 (1985): 6–21. <https://doi.org/10.1525/sfs.12.1.0006>.
- Czapliński, Przemysław. “Chaosmos: Stanisław Lem’s *Solaris* and Polish Post-Avant-Garde Prose”. *Polish Review* 2 (2023): 46–64. <https://doi.org/10.5406/23300841.68.2.05>.
- Eco, Umberto. “El mago y el científico”. *El País*, 14 Dec. 2002. https://elpais.com/diario/2002/12/15/opinion/1039906807_850215.html. Date of access 1 Apr. 2024.
- Godfrey-Smith, Peter. *Other Minds: The Octopus, the Sea, and the Deep Origins of Consciousness*. New York: Farrar, Straus and Giroux, 2016.
- Grabarczyk, Paweł. “O czym nam mówi milcząca planeta? Analiza wybranych wątków filozoficznych w *Solaris* Stanisława Lema”. *Acta Universitatis Lodzensis. Folia Litteraria Polonica* 4 (2020): 69–80. <https://doi.org/10.18778/1505-9057.59.04>.
- Hoffman, Donald D. *The Case against Reality. How Evolution Hid the Truth from Our Eyes*. London: Penguin Books, 2020.
- Jarzębski, Jerzy. “Lustro. Posłowie prof. Jerzego Jarzębskiego do *Solaris*”. [solaris.lem.pl](https://solaris.lem.pl/ksiazki/beletrystyka/solaris/30-poslowie-solaris). <https://solaris.lem.pl/ksiazki/beletrystyka/solaris/30-poslowie-solaris>. Date of access 1 May 2024.
- Koschany, Rafał. *Przypadek. Kategoria egzystencjalna i artystyczna w literaturze i filmie*. Toruń: Wydawnictwo Naukowe UMK, 2016.
- Le Guin, Ursula K. “Stanisław Lem: *Solaris*: An introduction written in 2002 for a German-language edition of *Solaris*”. In: Ursula K. Le Guin, *Words are My Matter: Writings on Life and Books*, 133–136. Boston and New York: Mariner Books, 2019.
- Lem, Stanisław. *Solaris*. Trans. Joanna Kilmartin and Steve Cox. New York: Faber And Faber, 2016.
- – –. *Summa technologiae*. Trans. Joanna Zylińska. Minneapolis: University of Minnesota Press, 2013.
- – –. *Biblioteka XXI wieku*. Kraków: Wydawnictwo Literackie, 2024.
- Mori, Masahiro, Karl MacDorman, Norri Kageki. “The Uncanny Valley [From the Field]”. *IEEE Robotics & Automation Magazine* 2 (2012): 98–100. <https://doi.org/10.1109/mra.2012.2192811>.
- Nagel, Thomas. “What Is It Like to Be a Bat?”. *The Philosophical Review* 4 (1974): 435–450. <https://doi.org/10.2307/2183914>.
- Pais, Abraham. “Einstein and the Quantum Theory”. *Reviews of Modern Physics* 4 (1979). <https://doi.org/10.1103/RevModPhys.51.863>.
- Putnam, Hilary. *Reason, Truth and History*. Cambridge: Cambridge University Press, 1981.
- Searle, John. “Minds, Brains, and Programs”. *Behavioral and Brain Sciences* 3 (1980): 417–424. <https://doi.org/10.1017/S0140525X00005756>.
- Suvin, Darko. “On the Poetics of the Science Fiction Genre”. *College English* 3 (1972): 372–382. <https://doi.org/10.2307/375141>.
- Swirski, Peter. *Stanislaw Lem: Philosopher of the Future*. Liverpool: Liverpool University Press, 2015.
- Varela, Francisco J., Eleanor Rosch, Evan Thompson. *The Embodied Mind*. Cambridge, Massachusetts: MIT Press, 1992.

KEYWORDS

Solaris

STANISŁAW LEM

ABSTRACT:

The article proposes a new interpretation of Stanisław Lem's *Solaris*. Indeterminism and determinism clash both in Lem's prose and in his understanding of physics. The latter, according to Lem, is governed by a probabilistic force, the propeller of all events, including the emergence of consciousness and perhaps even intelligence. In contrast to neopositivists, Lem could be described as an absurdist for whom the emergence of consciousness and intelligence marks the limits of scientific inquiry, because, as I point out, the planet Solaris is a macro-metaphor for the human brain, and Solaristics is an ironic response to the origins of intelligent life. In the world of "alien(ated/ing) consciousness" found in *Solaris*, one's and the other's consciousness becomes alien, and perhaps being alien is a way to live.

alien(ated/ing) consciousness

MACRO-METAPHOR

chance

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