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The “alien” alien in Stanislaw Lem’s *Solaris* and its manifold echoes in the world of literature

Obcy „obcy” w *Solaris* Stanisława Lema i jego wielorakie echa w świecie literatury

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Abstract

Stanislaw Lem has left a remarkable impact on world literature in science fiction and beyond. One of the reasons for this is his – often radical – approach to exploring new topics and philosophical concepts. In this article, we study his concept of an unknowable intelligence that eludes all scientific approaches by humans who try to understand its motivations, reasoning and functioning; an “alien” alien, as it is most clearly presented in Lem’s 1961 novel *Solaris*. Echoes of this radical concept can be found, albeit often in a highly diluted form, in a number of subsequent works by various writers like Arkady and Boris Strugatsky, Iain M. Banks and Cixin Liu. They also resurface in other media, from mainstream movies to anime. We argue that Lem’s original concept has been utilized by later writers for manifold purposes, sometimes merely as a plot device, but at other times as a metaphor exemplifying the insurmountable limits of knowledge or even for transporting entirely different ideas.

Introduction

Stanisław Lem (1921–2006) is not only one of the most well-known Polish philosophers and writers, but also one of the most important figures in the history of science fiction. This latter fact is not free from irony, as Lem himself did not like to be considered a science fiction writer, but rather a philosopher who would

be dubbed a science fiction writer by booksellers purely for commercial reasons (Lem 2000).

One of the central motifs in his writings was the impossibility of communication with non-human intelligences. In his very first published novel, *The Man from Mars* (*Człowiek z Marsa*, 1946), this topic plays a key role, but it becomes much more developed in his (probably most famous) work *Solaris* (1961). In the following sections, we will briefly summarize Lem's ideas on this topic, compare them with "classical" treatments, and then explore their traces and utilization in subsequent literature across the world.

The image of the "alien" alien in early science fiction

One of the first and most influential science fiction novels that depicted intelligent beings from outside Earth (what we would now call "aliens"¹) was probably H. G. Wells' *The War of the Worlds* (1898). This work arguably provided a template for many science fiction writers to follow: intelligent beings from space (in this case from Mars) invade Earth and start a war with humanity. There is no space for communication in this storyline: the exchange between both sides is basically reduced to fighting. Nevertheless, the question about the motives and the civilization of the invaders is frequently revisited and a certain amount of understanding about the other side is reached merely based on conclusions drawn from their behaviour.

In a certain sense, the aliens in *The War of the Worlds* are not an incomprehensible mystery. Even though their technologies are far beyond human abilities (at least the technology of the late 19th century: Martians even have machines that can fly!), and even though there is no communication between humans and Martians, we still get an understanding of their general plan and their invasion of Earth in a desperate attempt to find a new home for the population of their dying planet. Wells' Martians are not that "alien" to us. We can comprehend their actions and even, to some degree, sympathize with them.

This degree of comprehensibility became standard in the science fiction literature of the following decades, and it was mainly due to Stanislaw Lem's writing that this standard was challenged and the scope of possibilities was broadened.

¹ As an interesting sidenote, the word "alien" is indeed used once in *The War of the Worlds*, but only to explain that humans would look as "alien" to a supreme intelligence as "monkeys and lemurs to us". The "aliens" for Wells are, therefore, us humans.

The “alien” alien in *Solaris*

As previously mentioned, Stanislaw Lem’s first published novel, *The Man from Mars*, already dealt with the problem of communication between humans and a non-human intelligence. It is interesting that this takes place in a setting that is at first glance quite similar to that of *The War of the Worlds*: Lem also has the alien arrive from Mars, and the alien is also defeated in the end. The difference, however, is that in Lem’s novel, there are serious attempts from both sides to reach some kind of communication, and the aliens are also much more physically different from humans than Wells’ Martians were.

Lem himself did not like his first work and stated that “unfortunately, an author cannot withdraw from what was once written” (own translation from: solaris.lem.pl. n.d.) although it was well-received elsewhere (Jarzębski 1994).

Far more influential than this early novel, however, was Lem’s 1961 novel *Solaris*. It has been adapted into three movies, first a two-part Soviet television play (in 1968) that was only released in Russian language, then a highly inspiring movie directed by Andrei Tarkovsky (in 1972), and finally, a mainstream Hollywood movie directed by Steven Soderbergh (in 2002). The novel lifts the topos of the “alien” alien to a new level, and not only in its physical scale. *Solaris* is the name of a hypothetical planet² covered entirely by a mysterious entity – a unified and utterly incomprehensible intelligence. The novel recalls how human researchers tried for decades to understand the nature of the planet; how progress was made, but ultimately all attempts towards a real understanding failed again and again. The planet becomes the prime example of the inevitable limits of human understanding and yet, in a surprising twist, the planet itself achieves so much understanding about the human researchers that it can replicate human beings from their fantasies and memories – to the horror of these humans who are now exposed to images from their dark fantasies or horrific past, just like in a nightmare but without the possibility to wake up.

The idea that the human mind is simply not able to comprehend anything deeply enough to communicate with a non-humanoid civilization is presented in the novel by summarizing a booklet written by an angry autodidact, the quantum physicist Grattenstrom. The main character happens to encounter this book in the library and recalls its content. This way of presentation is also interesting in that it lets Lem distinguish his point of view (the impossibility of communication, and

² Since 2020, *Solaris* has also been the name of a real star (BD+14 4559) in the constellation Pegasus, named in commemoration of Stanislaw Lem (IAU, 2021).

thus, ultimately, a failure of science) from a complete denial of the validity of the scientific approach: after all, the conclusion of the impossibility of communication is reached by a scientist, using a scientific method. In a certain sense, we can see here the echo of another famous philosopher, mathematician and contemporary of Lem, Kurt Friedrich Gödel (1906–1978). He proved in his incompleteness theorem (Gödel 1931) that certain mathematical facts cannot be proven or disproven mathematically. The methods he used, however, were of course mathematical proofs which gave rise to a number of subsequent studies. It is likely that Lem, who was highly interested in scientific developments, had at least heard about these findings – after all, connections between his writings and other highly mathematical results such as Einstein’s relativity theory have already been discussed in previous studies (Kassung 2013). Lem might therefore have attempted something similar here: instead of outrightly rejecting science as a useless tool, he actually points out that science is even able to find out the limitations of our scientific and technological capabilities. What Gödel did for mathematics, the previously mentioned Grattenstrom does for the communication problem, which is at the core of *Solaris*. Within his story, Lem manages to invent a “scientific” basis for the novel’s conclusion about the limits of science.

As Katarzyna Stępień (2019) puts it, Lem manages “to point out weaknesses in understanding and perceiving the world from the anthropocentric perspective”. Congruent with this point of view is the conclusion of Istvan Csicsery-Ronay (1985) that *Solaris* is “an elaborative metaphor for the cultural and philosophical implications of scientific uncertainty” (Csicsery-Ronay, 1985: 7). He sees the limitation of understanding in the “human-centered, egocentric conception of reason” (Csicsery-Ronay 1985: 9). Evidence for this view is the dream that the protagonist has in which he communicates directly with Solaris, bypassing “the mediations of egocentric rationality” (Csicsery-Ronay 1985: 11).

We will see just how radical Lem’s approach to the topic of the “alien” alien is when we discuss subsequent literature on this topos. It is a sign of Lem’s mastery as a writer that this radical novel, which raises deep philosophical questions, is still readable and appeals to a broad audience. This has certainly also played a role in his wide reception and the many traces of this idea which we will find in later works.

Lem’s mastery can also be seen in the many interpretations he leaves open for what the planet Solaris and its multitude of phenomena really are. From “vaginal readings” to “Schizophrenic readings”, plenty of interpretations have been proposed (e.g., Geier 1992). Csicsery-Ronay (Csicsery-Ronay 1985: 20) concludes that, given these manifold perspectives, “no privileged way of reading exists”.

In the footsteps of *Solaris*

Several authors have used variations of the concept of an “alien” alien, some with clearly visible references to *Solaris*, some with at least strong hints on a connection³.

A prominent case which seems to be directly linked to *Solaris* is *Roadside Picnic* (Пикник на обочине, 1972) by the Russian writers Arkady and Boris Strugatsky. The two novels are often mentioned together, mainly since the Russian director Andrei Tarkovsky directed movies based on both of them. While this does not tell us anything about communalities in their contents, these can also be easily found, as we will see.

Roadside Picnic approaches the “alien” alien from a very original angle: there are no aliens in the story – only their traces. Aliens must have visited six areas of Earth on a day 12 years before the story begins. In the zones that they visited, all kinds of unusual things happened in the aftermath: people went blind or died mysteriously, and strange relics were found. Scientists and treasure hunters alike try to make sense of these findings. The novel describes the fate of one of these treasure hunters and his family living near one of these “zones”. The open question in all of this is why the aliens visited Earth and why they left these bizarre and seemingly random items and traps behind. One theory that is suggested is that the aliens merely made a stopover without considering the inhabitants of Earth at all. The weird relics are to us what the left-over garbage of a picnic would be to ants and bugs: strange and incomprehensible, but meaningless for the ones who left it.

The novel therefore picks up the theme of the impossibility of communication in a different way: the communication cannot take place because the aliens have already left. However, the impossibility of comprehension is the same, as humans struggle in vain to make sense of the aliens’ traces. There are some direct parallels to *Solaris*, in particular in the description of the research institute that studies the zones and the various attempts that have been made to explain the mysterious phenomena. These attempts are ultimately all in vain, since – as in the case of *Solaris* – the researchers can only formulate hypotheses about the “visitation” which can never be falsified, or describe the effects of the artefacts without ever being able to comprehend their underlying mechanisms. In all of this,

³ Lem himself revisited the topic of the “alien” alien in later works, in particular in *The Invinible* (1964) which is, however, much less radical in nature: even though communication fails, the aliens’ actions are, in this case, still comprehensible to some extent.

they are trying to come up with theories that are “flattering [...] for human vanity” (Strugatsky 1972: 133). In contrast to *Solaris*, however, this pessimistic view is contradicted by Valentine, one of the researchers, who points out that although nothing much is known about how the objects retrieved from the zone work, some of them have been used and have helped to advance technologies (Strugatsky 1972: 136). Another motif similar to *Solaris* is that of the “reconstructions on the skeletons” (Strugatsky 1972: 140) which are like the reconstructed Rheyra and the other “visitors” in *Solaris*, made from a completely unknown material and with strange regenerative properties.

It must be added that although the novel provides such an original frame to the problem of the “alien” alien, the storyline itself is more predictable than in Lem’s stories and feels generic at times. However, the fact that these “zones” can be the setting for any type of story led to a large number of variations on the novel by other writers and directors. The latest example is the Japanese anime *Urasekai Picnic* (裏世界ピクニック, 2021) which, however, turns the “zone” into a place with monsters and horror which does not have much to do with the original novel anymore.

The impression that Lem inspired the Strugatsky brothers when they worked on *Roadside Picnic* is also consistent with their professional connection: Stanislaw Lem even wrote an afterword for the German edition of *Roadside Picnic*. In this afterword, he not only gives some polite praise, as could be expected, but also discusses the novel critically, and beyond that, explains his demand for logical coherence in science fiction novels (Lem 1978). Mutual influence between these authors therefore seems plausible and is further supported by Boris Strugatsky’s statement that he “considered Lem to be one of the most influential fantastika authors in Soviet history, including *Solaris* in his list of the top ten works of international fantastika ever published” (O’Dell 2019: 138).

It is difficult to know when Western works started to be influenced by Stanislaw Lem’s oeuvre, given that it took until 1970 for an English language translation of *Solaris* to be published. There was already a French translation in 1964 (the basis for the English translation) which might have provided a source (Kellman 2010), but we can at least assume that the Tarkovsky movie that was shown in 1972 at the Chicago International Film Festival and the Cannes Film Festival made *Solaris* well-known. Given this history, it is likely that the influence of *Solaris* on science fiction literature in the West began early in the 1970s. Let us therefore start our search for traces of *Solaris* in the year 1973 with Arthur C. Clarke’s novel *Rendezvous with Rama* (1973). In this novel, a mysterious object is discovered on its way into the solar system. While scientists at first mistake

it for a comet, it is soon revealed to be a gigantic spaceship⁴. The novel then takes us on an expedition which tries to reveal the spaceship’s secrets before it inevitably leaves the solar system.

The setup of this novel is very close to *Solaris* – scientists trying to make sense of an alien, but ultimately failing to do so, and failing to establish a direct communication. In *Rendezvous with Rama*, however, the aliens are in the background – similarly to *Roadside Picnic*, we never actually encounter them, but only their machines and relics. In the end, the motivation for the visit of the alien spaceship is at least partially revealed: no contact had been planned – our solar system is nothing more than a “refuelling stop” (Clarke 1973: 246), and the destination is somewhere far away.

There are, however, some noteworthy ideas in the book that we would like to investigate further. First, the “colonial reading” of an alien encounter: “the situation is one of an encounter between two cultures – at very different technological levels. Pizzaro and the Incas. Peary and the Japanese. Europe and Africa. Almost invariably, the consequences have been disastrous – for one or both of the parties” (Clarke 1973: 24). Second, the impact of religious faith is mentioned: for some Christians, the spaceship is said to be a “cosmic Ark” (Clarke 1973: 105), sent to rescue humanity.

The first encounter of a human with one of the intelligent life-like robots on the ship already foreshadows the punchline of the book: the scared human that tries to show his peaceful attitude towards the alien intelligence is simply ignored entirely, as Clarke writes with sharp irony: “Feeling extremely foolish, the acting representative of *Homo sapiens* watched his First Contact stride away [...], totally indifferent to his presence” (Clarke 1973: 154).

We find more direct connections to *Solaris* in some of the descriptions of the spaceship’s interior with all its mysterious phenomena, which can be catalogued accurately but not understood by the humans: “The mystery of Rama was steadily growing; the more they discovered about it, the less they understood” (Clarke 1973: 169).

It is not only the lack of communication, but also the total lack of attempts to communicate that are at the heart of this encounter with the “alien” alien: “They

⁴ The main reasons for this discovery are its origin from outside the solar system and its strange elongated shape. When in 2017, the first interstellar object was discovered and this also turned out to have a very elongated shape (Meech et al. 2017), the reminiscence of Clarke’s book gave it the preliminary name *Rama* (Glester, 2019) and also led to many speculations about its origin and nature. Further research revealed that it was most likely a rather exotic comet (Wall, 2017). The object was finally called ‘*Oumuamua* (Hawaiian word for “scout”).

would probably never even know that the human race existed; such monumental indifference was worse than any deliberate insult” (Clarke 1973: 246).

While the spaceship and its (absent) constructors in Clarke’s novel are still more tangible and not as entirely beyond understanding as the planet Solaris, the same cannot be said for the “alien” aliens in *Excession*, a novel by the Scottish writer Iain M. Banks (Banks 1996). Here, the alien does not simply come from far away, but indeed from a different universe altogether. It appeared thousands of years ago as a perfect black sphere of huge size, accompanied by a star that was by all physical measurements “at least fifty times older than the universe” (Banks 1996: 65). Both the sphere and the star vanish after a while. The humans from the supercivilization that had colonized the galaxy, and who watched it from their spaceship, all die within a short period of time, mostly by suicide. Now, after such a long time, the sphere appears again. This poses an Outside Context Problem – “the sort of thing most civilisations encountered just once, and which they tended to encounter rather in the same way as a sentence encountered a full stop” (Banks 1996: 71). Here, we again have the colonial interpretation of a meeting with a superior alien civilization, as mentioned in *Rendezvous with Rama*. However, in Banks’ novel this is a major plot element, as the fear of being crushed by this contact leads the civilization to passively observe rather than to actively try to communicate or even just approach the mysterious sphere. While the plot revolves mostly around the events – intrigues, plots, war – caused by this appearance, the Outside Context Problem or Excession, as the object is called, is the mysterious centre around which the story evolves. It is “like the black monolith in Arthur C. Clarke’s *2001 – A Space Odyssey* (1968), a perfect and insoluble mystery” (Kincaid 2017: 78). And yet, as one of the civilization’s sentient machines notes, “the damned Excession hasn’t *done* anything yet. All the nuisance has been caused by everybody’s reaction to it” (Banks 1996: 212). Banks is not primarily interested in the contact event as such, but in how it affects the contacted. In the end, some of the spaceships decide to take the risk and approach the Excession, which then disappears with them. The ones left behind discuss the Excession’s true intent, one arguing that “it was somehow a test; an emissary. We were tried and found wanting. It encountered the worst that we can be and took itself off again. Probably in disappointment. Possibly in disgust” (Banks 1996: 445).

Of all the “alien” aliens that we have encountered, this might be the closest to the planet Solaris – where communication fails not for lack of interest or absence of the “alien” alien, but because of the vast gulf between the civilizations. Indeed, this connection between Lem’s work and Banks’ *Excession* has already been pointed out by Kincaid (Kincaid 2017: 76).

The Outside Context Problem that plays a central role in Banks’ description of an encounter with an “alien” alien can be found in an interesting inverse relation in *Pulaster* (1986), a slightly older novel by the East German science fiction writers Angela and Karlheinz Steinmüller⁵. While this novel has not been translated and is therefore not well known outside Germany, it is an interesting example of the influence of Lem’s *Solaris*, which can be expected for authors from a geographically and politically close country.

Pulaster is the name of a planet – the only one where a future interstellar human civilization has found intelligent life. This life, however, turns out to be a disappointment: seemingly dim-witted reptiloids whose civilization is still in the stone age. The result is a very different Outside Context Problem and gives rise to the question of how a post-colonial and “enlightened” human society deals with a situation where they become colonists once more. Communication with these aliens seems surprisingly easy at first glance, but in fact the details are not, and the limits to mutual understanding between beings with a vastly different culture, developmental state and biology become a central topic of the novel.

Closer to the concept of the “alien” alien, however, is another topic in the novel: a mysterious encoded number measured in the universe’s background radiation which is revered by some followers as a near-holy item called “the NUMBER” (Steinmüller 1986: 10). This encoding is allegedly the trace of a super-civilization of which nothing else is known, and which has been dubbed the “Außerzeitler” (“outside-time-beings”). Humanity puts substantial effort into contacting these outside-time-beings by trying to decode the meaning of the NUMBER, much like humanity tries to understand *Solaris* in Lem’s work, and this enterprise fails at least as thoroughly: while some theories regarding the meaning of the NUMBER lead to various space expeditions, none of those find any new evidence for the existence of these hypothetical outside-time-beings. Finally, a side-character, Abd-Feyr, in striking similarity to Grattenstrom in *Solaris*, publicly denounces the idea of contact as “nonsense” and argues that such contact will never be achieved with the outside-time-beings (Steinmüller 1986: 118). The description of the scientific efforts towards the goal of achieving contact with a vastly different intelligence is all in all very much reminiscent of *Solaris* and can be interpreted as paying homage to Lem.

This relation is unlikely just by chance: the authors quite generously refer to famous authors and season their novel with at times ironic quotations from other

⁵ Angela and Karlheinz Steinmüller were probably the most well-known science fiction authors in East Germany. While most of the GDR science fiction literature is nowadays of mere historic interest, their books have been reprinted since reunification and are still available today.

science fiction novels. Here are two examples: the aforementioned *Roadside Picnic* is directly referred to when the main character is confronted with a strange anomaly on Pulaster that could be a relic from the “outside-time-beings” and half-jokingly replies that this might simply be their beer cans dumped there after a picnic (Steinmüller, 1986: 120). They also directly quote Douglas Adams’ *Hitchhiker’s Guide to the Galaxy* (1979) when Abd-Feyr states that the search for contact will not bring the truth “about life, the universe and everything” (Steinmüller 1986: 199) – incidentally an interesting choice of citation, given that Western books were virtually banned in the GDR and censorship was heavy.

In summary, the idea of the “alien” alien and the ultimately fruitless efforts of science to establish communication, as we know them from *Solaris*, are central topics of *Pulaster* and are expanded in two directions: On the one hand, the contact goal is even more elusive, as the only trace of the hypothesized “outside-time-beings” is an encoded number. On the other hand, the contact with the inhabitants of Pulaster seems at first glance much easier: they seem much less “alien” – but even there, the difficulties are overlooked, and a real mutual understanding fails most of the time.

Let us conclude our walk through the literature related to Lem’s *Solaris* by leaving our own Western civilization and taking a look at China – at Liu Cixin’s bestselling *Trisolaris* trilogy (Liu 2006–2010). While the name gives a faint echo of *Solaris* and the sheer number of ideas, particularly in the first two volumes, can certainly be compared with Lem’s work, the “alien” alien here is again very different in nature from that of *Solaris*: in the *Trisolaris* novels, the motivation of the aliens soon becomes very clear. They need to leave their planet as it faces imminent destruction, and happen to find out that Earth is habitable; thus, they plan to conquer and colonize it. This motivation is straightforward and follows exactly the same ideas as we know from *The War of the Worlds*. Moreover, communication is possible, and happens all the time throughout the books. The aliens, however, stay “alien” in a different sense: there is never a direct encounter between them and the humans. They are somehow “off screen”. There are vague descriptions, but we never see them. The communication, therefore, becomes remote: humans interact with a robot ambassador the aliens have sent (which takes the shape of a human), the aliens send and receive messages, they send probes and war machines, but they stay “alien” in the most human sense. One could indeed argue that *Trisolaris* is a juxtaposition of *Solaris*: whereas the planet Solaris is accessible and can be watched, entered, studied and sampled (but we never understand its thoughts and plans), the aliens in *Trisolaris* are comprehensible, but invisible, untouchable, evasive. In both cases, the “alien” alien can be seen as a metaphor for the limits of human understanding.

Conclusions

With his extreme solution to the “alien” alien problem, Lem directly and indirectly paved the way for subsequent literature that used the incomprehensibility and incompatibility of communication with other intelligences not only as a plot element, but also as a way to reflect upon ourselves. As Lem used the planet Solaris to reflect upon the suppressed desires and wishes of humans, the Strugatsky brothers used the “alien” alien to reveal our incomprehension of the motives and technologies of the elusive aliens, while Banks and the Steinmüllers turned the contact into a metaphor for colonization – from different perspectives. All of these writers, however, exemplify the limits of human knowledge and mark the unknowable; the alien that will always be alien serves as a cypher for the unsolvable mysteries and the limitations of human minds.

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