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“The Fathomless Ocean of Objectivity: An OOO reading of the Solaris Ocean in Stanislaw Lem’s *Solaris*”

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Kwasu Tembo

English Literature and Creative Writing Department
Lancaster University, UK.

k.tembo@lancaster.ac.uk

<https://orcid.org/0009-0008-8326-1359>

Abstract

This article seeks to provide an Object-Oriented Ontological (OOO) analysis of Stanislaw Lem’s *Solaris* as a novel way of reconsidering the strange object-being of the text’s central phenomenon, namely, the giant pseudo-sentient ocean. Drawing from phenomenological and ontological philosophy and theory influenced by Maurice Merleau-Ponty, Martin Heidegger, Graham Harman, Arthur Stanley Eddington, and Francois Jullien, the article tries to discuss Lem’s ocean not so much as the appearance of a type of radical alterity or uncanniness but as a strange presentation of the paradox of alien familiarity in and because of the linguistic, psycho-emotional, and ontological gaps in and between objects and beings.

Keywords: *Solaris*, Ontology, Phenomenology, Object-Oriented Ontology, l’écart, Stanislaw Lem, Graham Harman

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The Fathomless Ocean of Objectivity

An OOO reading of the Solaris Ocean
in Stanislaw Lem's *Solaris*

I: On Solaris and Old Solaristics: Gaps, Appearances, and the Poetics of Alterity in *Solaris* and its Study

First published in 1961, Stanislaw Lem's *Solaris* details the uncanny experiences of a team of human scientists stationed on a research station hovering above a planet called Solaris, covered in what appears to be an 'ocean'. Believing the ocean to be a sentient being, Terran scientists dispatch various missions over a century to establish contact and communicate with it. The latest mission, taking place in the novel's present, centres on Dr. Kris Kelvin, a psychologist, who is sent to the station to investigate strange occurrences and the seeming onset of madness amongst its crew. Before Kelvin's arrival on the station, it is revealed that the station crew conducted a highly aggressive and unsanctioned experiment which involved bombarding the Solarian surface with high-energy X-rays. Ostensibly, it appears as if the strange phenomena Kelvin is sent to investigate are the result of the ocean's 'retaliation' by 'scanning', 'parsing', or 'reading' each of the crew member's unconscious, penetrating the depths of their respective traumas, and manifesting them physically on board the station itself. In Kelvin's case, this takes the form of a simulacrum of his dead wife, Rheya, who acts as a reified physical embodiment of Kelvin's guilt concerning her suicide. The 'Visitors' of the other crew members are only ever alluded to. This 'exchange' between station and ocean does not, however, reveal anything further about the nature, that is ontology, of the ocean itself.

In performing a close reading of the second chapter of the text, this paper seeks to assert an object-oriented approach, specifically referring to Graham Harman's use and understanding of the term 'withholding' or 'withdrawal' to account for the unaccountable in terms of object relations; that is, the alienness of objects themselves and in relation to one another. It proposes that doing so will allow for hopefully insightful re-readings of well-trodden ground; namely, readings concerning the 'alienness' of the Solarian ocean as an imagined object that, in Lem's rendering, attempts to make the tensions and gaps between objects that resist or trouble representation appear. To do so, it will offer an object-oriented analysis of Lem's alterity poetics – his literary representation of radical alienness – through the paradoxically concrete, albeit also radically indeterminate, image of an ocean-like entity/object/space. It seeks to approach the theoretical and artistic underpinnings of Lem's ocean in order to (re)theorize perspectives on the ocean as a space of mystery, depth, and the liminal intersection between the living and the non-living, the creative and the inert, the current-causing and the current-moved.

There are two primary thematic strands running through the text which several critics have commented upon. One thread describes variations on the theme of psychic repression. The other strand weaves various threads concerning the theme of First Contact and alienness. Contact with extraterrestrial beings is a recurrent, defining motif of SF and fantasy genera. However, 'contact' is oftentimes equated with a simplistic understanding of meeting or encounter. In *Solaris*, meeting and encounter have occurred in the diegetic prehistory of the narrative, and neither meeting nor encounter proffer anything resembling genuine contact for over a century, with the radical unanswered question being whether or not contact between human consciousness and what appears to be non-human consciousness is even possible at all. In *Solaris* and elsewhere, Lem's implicit critique of the false equivalence of meeting, encounter, and contact asks whether it is not "disqualifyingly anthropocentric to apply the category of intelligence to the living ocean? Or is even the category of life, in this context, unacceptably biocentric? (for that matter, is the category of ocean unacceptably geocentric?)" (Freedman 2013, 103). What *Solaris* does regarding the question of contact, and where Harman steps in as I will show, is to both acknowledge and celebrate the ontological gap (or *l'écart*) inherent in both meeting and contact. Alphonso Lingis,

translator of the Claude Lefort edition of Maurice Merleau-Ponty's *Visible and Invisible* (1968), offers a footnote concerning *l'écart* as a "recurrent term [which is] rendered variously by 'divergence', 'spread', 'deviation,' 'separation'" (1968, 7). This relates to the instances of the use of the word 'gap' in this translation, such as when Merleau-Ponty states, for example: "If we succeed in describing the access to the things themselves, it will only be through this opacity and this depth, which never cease: there is no thing fully observable, no inspection of the thing that would be without gaps and that would be total" (1968, 77).

Merleau-Ponty gives us a phenomenological framework through which to think the unthinkable, to parse and (re)present that which resists representation as anything more or less than a type of descriptive, discursive, and epistemological gap. When thought in objective terms – that is in relation to objects – the gap coincides with the always-only *partial* relation between the object under observation, and the observing object as opaque to its own self as an object that observes. What vision and appearance covers, discovers, uncovers, makes appear and disappear are always-Also¹ instantiations of gaps between objects in themselves and in relation to one another; namely, these processes of encounter and exchange delineate that which they cannot fully account for just as much as what it is they claim to measure (account for). In other words, in order for something to be accounted for – to be seen, measured, observed – there has to be something about and because of it that cannot be seen, measured, or observed. In this sense, what appears is as much the gaps between the object and itself as well as the object and the observer. It is (in) the gap that that appears and with it, an uncanny sense of the exorbitant alienness of objects, a feature or quality I, and Harman, hold to be a default of all objects.

My understanding and use of this term *l'écart* is also indebted to Francois Jullien who, in an interview for *Purple* (n.d), describes *l'écart* as not a matter of difference and its deductions, but rather their admixture, complications, and metamorphoses:

¹I use the term *always-Also* as a variant on the term *always-already* employed by Deconstructionist theorists including Jacques Derrida. While both suggest the idea of surplus, I elect to use *Also* as opposed to *already* as the latter denotes staticity while the former implies movement and dynamism, the importance of which is denoted by the capitalization of the letter A.

The *écart* creates a distance, but the objects retain a relationship [...] “Gap” implies separation, the space between the running board and the platform. But an *écart* is not a separation, not a ditch. It is the opening of a distance that puts things in a reflective relation to one another, creating a tension between them. (Jullien, qtd. in Zahm, n.d).

The cognate polysemy of this term between Merleau-Ponty and Jullien is helpful in thinking about and speaking about Lem’s polymorphous entity that, although linguistically described, is always-Also troubling its very naming and description. It is spread out, diverted, deviated but also opened up in-between and in tension with the author’s description of it, the diegetic observers of it, and the reader’s imagination of it. Therefore, what is novel about the employment of *l’écart* here is that when trained on Lem’s description and engagement with alienness in *Solaris*, *l’écart*, in this construction of indeterminacy, is the elision of self and Other, ocean and planet, planet and station, observer and observed, visitor and visited. The ocean occupies a liminal ontological state of simultaneous tension and openness – either/or and neither/all, the truth of which is always-Also located in an inaccessible third position. It is precisely this indeterminacy that forms the predicate of Lem’s critique and satire of human scientific methodology and epistemological resources. The text ultimately suggests that while perhaps not entirely vain, the quest for contact can, at best, only produce fragmentary, tentative, ambiguous, indirect, and unexpected results; results which, in themselves, necessitate a rethinking of the borders of the frames of reference of contact itself.²

Istvan Csicsery-Ronay Jr.’s reading of the text is predominately psychoanalytical in tone and mode. He presents his reading in specifically specular terms that posit that the ontologically opaque Solarian ocean is – like a spirit mirror – a highly psycho-emotionally reflective *surface*, and as such can and should be interpreted as a giant macrocosmic mirror of the human image, replete with its ignorance, hubris, and the seemingly fathomless depths of trauma bounded by these two existential shores. This tension between surface and depth, openness and foreclosure, reflection and refraction implies that the text is not preoccupied by the idea of an attempt to make contact with a radical

²See Thomas Grob, “Into the Void: Philosophical Fantasy and Fantastic Philosophy in the Works of Stanislaw Lem and the Strugatskii Brothers” in *Soviet Space Culture* ed. Eva Maurer, Julia Richers, Monica Ruthers and Carmen Scheide (London: Palgrave, 2014) for further detail.

Other out-there, so to speak. Rather, it is concerned with the more psychoanalytically radical attempt to establish contact with the radical Other of the self, which science assumes concrete knowledge of while being oftentimes unable to exhaust the flows, rhizomes, and lines of power of the self in either replete or consistent ways. 'The gist of *Solaris* in this reading', writes Csicsery-Ronay Jr.,

is that human consciousness could not proceed to a new cognition as long as it was trapped in its own human-centred, egocentric conception of reason. Only a cathartic encounter with an alien reality insistent and intrusive enough to violate the membrane of self-sufficient human self-awareness could dissolve the scientists' repressed emotional fixations and initiate a new receptivity to the universe outside the self – a knowledge that something Other not only exists, but can transform the self. (1986, 9)

In this sense, the text is an exploration of the broader struggles, issues, and debates concerning not only the 'accuracy' or 'veracity' of naming things, but of *identity*.

Accordingly, Sandor Klapcsik suggests that the *l'écart* from which Lem's novel emerges and simultaneously retreats into specifically "describes the universe without the presence of meanings, without an all-encompassing code that would clarify the relationship of self" (2012, 154). Relatedly, Ann Weinstone also suggests that the text's central *l'écart* invites, impels, and even distresses human beings to attempt to fill it. In the last instance, after more than a century of study, the Solarian ocean leaves its diegetic and extradiegetic speculator-spectators with inconsistent phenomena and unanswered (and potentially unanswerable) questions: "[i]s the alien sentient or is it not? What does it know? How does it communicate? Can it be believed? Are its actions cruel or merely indifferent? Is it deserving of compassion? Who is studying whom?" (Weinstone 1994, 177)

The question of alienness is central to not only the study and commentary on *Solaris*, but Lem's oeuvre *in toto*. Three of many examples can help me contextualize and predicate my own exploration of the same, which I hope to humbly extend with a turn toward Object-Oriented Ontology (OOO) and the *l'écart*. Huss notes of Przemysław Czapliński's essay "Chaosmos" that the author traces the trajectory of Lem's alterity poetics, that is, his preoccupation with alienness, which

tends away from the purely surreal and parodic toward the radical unknowable:

Czaplinski casts the scientists in *Solaris* as facing up to the inadequacy of the Cartesian paradigm. The world is not separable into cognizing subjects and extended objects. The Solarian ocean does not yield to the Cartesian framework, shattering its ontology and stymying its epistemology. Scientific attempts to know the Solarian ocean only yield an encounter with one's own mental states. Its properties appear to defy physics and understanding. Lem's representation of the blissful acceptance of incomprehensibility can be understood within the broader contours of a heretofore unspecified movement. (2023, 9)

I have deliberately cut this quotation at "movement" in order to pre-empt my suggestion that while the Polish avant-garde certainly represents one such movement within and through which alterity poetics of the type Lem produced trafficked, an intersecting type of theoretical movement is also made possible and necessitated thereby; namely, what I'm calling the movement of the *l'écart* or lukatory movement of objects.³ Gomel makes a similar point of the relationship between Lem's alterity poetics and whether nor not poetics more generally (in this sense language, literature, semiotic systems) are or can be a successful interface between objects in a way that accounts for as much as produces their indissoluble objective alienness:

Jean-Francois Lyotard distinguishes between "two sorts of inhuman" of history and of the psyche, the "inhumanity of the system" and "the infinitely secret one of which the soul is hostage" (2). Sf often uses these two interchangeably, as metaphors for each other [...] Echoing Stanislaw Lem's preoccupation in *Solaris* with the cognitive and moral limits of Nietzsche's "human, all too human." (2004, 369)

Simons likewise suggests, albeit indirectly, that this objective instability and opacity, this gap, is simultaneously fissure and frame, a separation and an opening up. Simons says that in Lem's writings,

A confrontation with an alien is a confrontation with ourselves, only situated in an unfamiliar setting. Either to make us more aware of what we take for granted or, more pessimistically, to delude ourselves

³From the Polish word *luka* meaning 'gap', 'lacuna', 'vacancy', 'opening' or 'loophole'.

into thinking that speculations about aliens will show us anything but ourselves. (2021, 66)

Again, Csicsery-Ronay Jr. articulates the manner in which Lem uses *Solaris* and the genre of SF more generally as a way of symbolizing that which resists symbolization, the paradox of making the gap appear. In this sense, the gaps in the medium are themselves the message of the gap:

[In] SF, this problematic of language is not a problem, but a medium [...] Lem set out to imagine a creature whose mental state cannot be inferred by observing its behaviour, because the information is so unfamiliar or contradictory to normal human perceptions and sympathies that it perpetually generates new ideas [...] All aliens are more or less philosophically consistent fictions. In fiction, the perceptual and sympathetic imagination is organized in the symbolic design. No matter how hard the writer strives to capture the strangeness of the alien, the fiction's linguistic-symbolic imagination will give it a form. The alien cannot be completely different because it is different in *significant ways*. The alien is fated to signify. It must have a mind, because if it does not, neither do we. (2007, 9)

Perhaps one of the most famous meditations on the alterity poetics of Lem's *Solaris* is found in Fredric Jameson's opus of SF studies *Archaeologies of the Future* (2005). In it, Jameson often holds the issues of first contact, the (im)possibility of literary or indeed symbolic representation of alienness, and the variable approaches to both in *Solaris* in tension with the same in some of Lem's other texts. One that is referred to often is Lem's 1973 (in English) *The Invincible* which, like *Solaris*, features a narrative centred around human beings' first contact with an alien mass. While the Solarian ocean has a measure of passivity and, as a result, a quiet malevolence in its reaction to human observation, the 'Cloud' formations of swarms of self-replicating nanomachines are directly combative in their interaction with the crew of the *Condor*, sister ship of the eponymous *Invincible*:

Now only dark shadows were visible. They kept merging, forming one continuous mass in whose center fiery flames hissed and boiled. *The cloudy substance, whatever it was, had moved in to attack* the missing aircraft, and fierce flames shot up wherever the black mass collided with the ship's energy screen. (Lem 1973, n.p; emphasis mine)

The various descriptions of the Cloud contain phrases and words that connote division, expanse, spreading, gaps, hiddenness, danger, metamorphosis, opening, enclosure, dissipation, density, opacity, penetrability, dynamism and staticity. Whereas in *The Invincible* there is a remove due to the non-human aspect of the cloud's alienness, *Solaris* has a human-in-the-loop when it comes to the network of relations effected by humans encountering but 'communicating', as opposed to reacting and counter-reacting with and against an alien entity. I assert that it is this opaque presence of a human observer that gives the planet-ocean its uncanniness, its 'thirdness', its excess and gap that holds together and apart both objects in the relational network (the human and the alien respectively). So much so that alienness itself becomes a kind of third object in relation to and caused by the other two. It is the presence of a conscious observer that produces, interrupts, makes both possible and necessary the *l'écart* and the lukatory movement that emerges because of the relation of objects.

Jameson makes similar note of these poetics of alterity, stating that "In *The Invincible* [...] we have to do with a swarm of crystals which can in no case be reduced to the subjectivity of a human character. And the absence of human form is doubled by the multiplicity of these elements, a second non-human characteristic which individual biological organisms cannot understand or grasp by way of projection" (2005, 115). We can see here that the sense of foreboding, hostility and defensiveness issued forth from the Cloud lacks this disruptive 'anthropresence' which is what makes the Solarian ocean truly alien; namely, how it ostensibly reflects that gaps in the objects (Solaris station scientists) observing it back to themselves. It might appear specular as noted above, but if it is reflective at all, then that reflection is anamorphic: it is precisely its appearance *as* anamorphic that makes it a true reflection; one whose incomprehension and uncanniness pierce to and reflect the core of humanity's *self*-incomprehension and default *mis*representation when attempting to self-represent in and through the partial observances of semantic systems like language. In both *The Invisible* and *Solaris*, one central implication made apparent is the persistence of a "fundamental misunderstanding which [amounts to] the anthropomorphic projection of hostility and antagonism - human traits, emotions, and projects - onto beings which, not being alive, are not even conscious in the enigmatic and alien sense in which the sentient ocean of Solaris is judged to be conscious in a way

incomprehensible to us” (Jameson 2005, 115). It is through this gap that Jameson identifies that OOO allows us to approach the question of radical alterity reposed; namely, is “[an entity’s] otherness [...] unknowable because it signified a radical otherness latent in human history and human praxis, rather than the not-I of a physical nature?” (118)

II. The Minor Apocrypha: Old Solaristics as Xeno-ontology⁴

What is Solaris? Is it an ocean covering a planet? Is the planet itself sentient? Is and/or how is Solaris ‘alive’? In three fictional volumes of the history of Solaristics, Lem presents the fictional intergenerational, interdisciplinary study of the alien ocean in a highly scientific register, not shying away from jargon, empiricist diction, or historiographic scope. Initially, as the opening of the second chapter (titled ‘The Solarists’) describes, humanity observes and measures the ocean’s orbits (15–16). Four years later, physical expedition precipitates the second method/means through which observation and measurement occur. At this point in the history of Solaristics, humanity has essentially attempted two distinctly antipodal degrees of observation: from afar and from up close (16). The outcome of this concentrated observation is a confirmation of lifelessness: “as was foreseeable, no trace of life was discovered, either on the islands or in the ocean” (17). At this point in time in Solaris’ fictional history, the Solaristic scansion of the entity is still presented in ‘objective’ overtones precisely due to the perceived lack of life or evidence thereof. The interest the planet generates at this point is still sequestered to scientific disciplines via empirical observation and the abstractness of mathematical calculation. There is no religious or artistic interpretation of the phenomena pertaining to its gravitational instability (17). In this sense, the question of what Solaris is refers to a non-living object whose ontological indeterminacy is still firmly couched in the greater mystery of gravity, not of life in the universe.

⁴In science fiction studies and criticism, the term xenology refers to a hypothetical science whose goal is the study and analysis of speculative extra-terrestrial societies as developed and inhabited by alien life forms. Therefore the prefix *xeno-* in this paper refers to the study of alienness through various Terrestrial disciplines including ontology, philosophy, biology, and physics. See Freitas 1979; Tembo 2018.

Lem describes another two expeditions occurring in the following four years, the first led by a scientist named Shannahan and the second by one Ottenskjöld. These expeditions are concerned with the data that the satellites used therein accrue, which stands as corroborating evidence related to an important aspect of the ocean's ontology: "the active character of the ocean's movements" (17). As a result, the ocean is no longer regarded as a 'dead' thing, inert save for its more primary interactions with the fundamental forces of nature such as gravity. It is now dynamic, changing, becoming. However, activity in this broad sense is not surety of life. At this point, the question of what Solaris is can more fully be answered but not completely: it is a planet covered entirely by an active ocean. However, these hermeneutic conclusions resulting from close observation have themselves ontological consequences: "while the biologists considered it as a primitive formation – a sort of gigantic entity, a fluid cell, unique and monstrous (which they called 'prebiological'), surrounding the globe with a colloidal envelope several miles thick in places – the astronomers and physicists asserted that it must be an organic structure, extraordinarily evolved" (17–18).

The dissension concerning the Solarian ocean is predicated on a paradox. The ocean is equally described as simple, rudimentary, primordial, and inert, as well as being extraordinarily evolved, complex, and unique. According to the text's scientists and xenobiologists,

the ocean possibly exceeded terrestrial structures in complexity, since it was capable of exerting an active influence on the planet's orbital path. Certainly, no other factor could be found that might explain the behaviour of Solaris; moreover, the planeto-physicists had established a relationship between certain processes of the plasmic ocean and the local measurements of gravitational pull, which altered according to the 'matter transformations' of the ocean. (18)

All these phenomena beg several questions concerning 'intent', 'consciousness', 'telos', 'design', and 'instinct' - in short, its 'behaviour', broadly speaking. Moreover, all these questions ultimately redound to the following: how and indeed why, if at all, is or does Solaris doing/able to do what it does? Here, a gap is simultaneously instantiated and another one crossed. The removal of inertness, the observed passivity of the planet and its ocean (or rather the ocean and its planet) is ruptured by its rather startling activity. With these discoveries, Lem

shows, steadily and in much detail, how Solaris moves upward in terms of scales of both thingness and aliveness, going from a distant planet, to a distant planet with an ocean, to a distant planet with a radically active and complex ocean. Despite the openings such ontological uncertainty necessitates and allows, Lem also draws attention to the discomfort and dissatisfaction such an impasse between life and life-like elicits to scientific thought:

There were some who continued to support the Gamow-Shapley contentions, to the effect that the ocean had nothing to do with life, that it was neither 'parabiological' nor 'prebiological' but a geological formation – of extreme rarity, it is true – with the unique ability to stabilize the orbit of Solaris, despite the variations in the forces of attraction. (18)

While these views are certainly interesting, Lem shows them to be incomplete and, further, uses this radical incompleteness to maintain and extend the tension that holds the ontological questions at the heart of the text both open and obscure: two of which are what is it, and is it alive? At this point in the text, all speculations and science fail to disclose, to bring forward from withholding, not just what Solaris is, but how Solaris is. It is here where this withholding can be read through the OOO inflection of the term. Graham Harman, OOO's progenitor and prominent contemporary speculative materialist, uses the term 'withheld' or 'withholding' in various settings – often in conjunction with the term 'withdrawal' – to ultimately refer to the same thing; namely, the inexhaustibility of objects or phenomena under the force, presence, action, or erasure of observation. Drawing from Martin Heidegger's tool-analysis developed in *Being and Time* (1927), Harman delineates, with references to a range of philosophers, the excessiveness of objects. By excess, Harman is driving at the fact that objects do not appear to be fully accounted for, known, measured, used, or exhausted by the ways they appear and change. There is always active in the relation between an observer and an object a third thing that cannot fully or even meaningfully be accounted for – something one could think of as a fundamental alienness of things. In *Tool-Being: Heidegger & the Metaphysics of Objects* (2002), Harman describes withdrawal as the somewhat paradoxical, recessive core of OOO, which ultimately seeks to reorient phenomenological

relationality away from subject-object frameworks to object-oriented ones – in essence, to give rise to an ontology of objects:

What is first at stake is an absolute gulf between the things and any interaction we might have with them, no matter whether that interaction be intellectual or merely manipulative. But my argument goes another step further. When the things withdraw from presence into their dark subterranean reality, they distance themselves not only from human beings, but from each other as well. (2002, 1)

Harman later offers a refinement of the central tenet of OOO, specifically concerning the ontology of anti-ontology or, in other words, the way things are withheld or withdrawn:

Perhaps a more helpful formulation would be that OOO in my version – as opposed to that of Levi R. Bryant – stresses the intersection of two distinct dualities. The first of these is indeed the Heideggerian distinction between the revealed and the concealed, which I now prefer to call “withholding” rather than “withdrawal,” given that the latter term falsely suggests a supplemental act of movement rather than the non-presence of entities from the outset. Perhaps the bigger problem is that for Heidegger as for Kant, finitude is treated as a unique burden haunting human beings alone, while for OOO even brute causal relations fail to deploy the full reality of the objects taking part in them. OOO’s second main duality is that between objects and their qualities. The model and inspiration on this point is Edmund Husserl, who distinguishes between the “intentional object” of experience (OOO’s “sensual object”) and two different types of qualities: the accidental qualities found in the “adumbrations” (Abschattungen) of objects as perceived by the senses, and the deeper and more important qualities that Husserl – though not OOO – holds can be intuited by the intellect. (2019, 592)

In *Speculative Realism: An Introduction*, Harman offers a succinct reiteration of the precise *translatory* function and meaning of “withdrawal” in OOO:

“withdrawal” does not refer to some needlessly mystical disappearance of things from the immanent earth but is simply another way of saying that a form can exist in only one place; it cannot be moved – into a mind or anywhere else – *without being translated into something different from what it was*. This misunderstanding is so frequent that I

have recently begun to use the term “withhold” instead of withdraw; time will tell which is better. (2018, 93; emphasis mine)

The central classification or taxonomy of Solaris developed in the specifically system-focussed second volume of the fictitious history of Solaristics is made up of tripartite definitions which, although reliant on fictitious inventions of contemporary-sounding taxonomies, do ring with the austere sonorousness of ‘scientificity’: ‘Type: Polythera; Class: Syncytialia; Category: Metamorph’ (20). In recognizing these terms and how they might apply to a variety of terrestrial examples of life, the reader might be inclined to scoff at Lem and suggest that his project of a descriptive and speculative encounter with true Otherness, however rich, fails precisely because of its reliance on geocentric ontological categories. Lem counters with the suggestion that “[i]t might have been thought that we knew of an infinite number of examples of the species, whereas in reality there was only the one—weighing, it is true, some seven hundred billion tons” (20). Here, Lem interestingly forecloses solutions to the ontological problem of Solaris by constantly drawing attention not only to its strangeness, but specifically to the unique singularity of that strangeness. Lem sets up Solaris like a type of alien prime number that, while engaging with other mathematical forces and operations thereof, ultimately is divisible only by itself, reducible to the one of its own unique being. The appeal to or invocation of prime numbers here and a mathematical approach reflects the same in the entirety of the second volume. Lem states that the text not only provides Kelvin with detailed descriptions, illustrations, graphs, summaries, and diagrams concerning Solaris and its “fundamental transformations as well as the chemical reactions”, its serves to lead “the reader on to the solid ground of mathematical certitude” (20). Here is the clearest instance of an attempt to (partially) solve the problems of Solarian ontology by reterritorializing the outer mysteries of Solaris to the inner familiarity of terrestrial science including observational physics, biology, and mathematics in particular. It is an attempt to flatten or reduce the ontological mystery of Solaris to solvable mathematical and biological constituents that can be calculated, plotted, graphed, diagrammed, and ultimately understood. Doing so leaves the uncertainties, debates, and inconclusiveness of Solaristic hermeneutics at bay, firmly categorizing the ontological problems of the ocean as computational and

not interpretive problems, despite the resounding lack of consensus surrounding possible solutions of either.

The third volume of the history of Solaristics opens with the issues and debates concerning First Contact (20). There are two distinctions concerning First Contact that this paper recognizes. One is that First Contact can refer to nothing more than encounter, so that the first expeditions to Solaris that observe the ocean from orbit and on its surface are best described as a series of primary encounters where no communication was established between observer and observed. The other is that First Contact refers to an attempt to establish communication of some kind within the space of encounter between two entities that suggests not only mutual awareness, but mutual recognition of both self and/as Other. In other words, the second level of First Contact can only occur when the observer and observed recognize both themselves and the Other as being both observer and observed within the space of any given encounter. By far the most interesting and important descriptions Lem gives of these early attempts at second order First Contact and the results thereof, specifically in terms of their ontological implications, is as follows:

The ocean itself took an active part in these operations by remodelling the instruments. All this, however, remained somewhat obscure. What exactly did the ocean's 'participation' consist of? It modified certain elements in the submerged instruments, as a result of which the normal discharge frequency was completely disrupted and the recording instruments registered a profusion of signals – fragmentary indications of some outlandish activity, which in fact defeated all attempts at analysis. (21)

The ontological implication here is that the ocean not only perceived or was in some way aware of the introduction of these apparatuses into it, but also in some way seems to have been able to interpret and/or understand their nature, purpose, and the observational intent behind their deployment. Not only this, but its activity, which Lem refers to rather euphemistically as 'participation', is also disruptive, anticipatory, and ostensibly defensive – all three of which, by Terrestrial standards, denote intelligence of some kind. The fact that the ocean modifies, alters, changes, and/or restructures these instruments in a disruptive way has profound ontological implications. Understanding something

of Solaris' 'participation', it naturally then follows to inquire as to why Solaris does this in this way? What, if at all, is the purpose? Are these phenomena reducible to a defensive instinct, as much a reflex as camouflage is to a cuttlefish? Things get stranger still when Lem asks:

Did these data point to a momentary condition of stimulation, or to regular impulses correlated with the gigantic structures which the ocean was in the process of creating elsewhere, at the antipodes of the region under investigation? 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? (21)

It is clear from Lem's description that there are spatial and temporal correspondences between input and output that would seemingly affirm causality. However, if one of the preconditions of knowing something is the stability of that thing, then inconsistency in that thing disrupts any attempts at predicating an ontology based on seemingly causal correspondences. Lem's descriptions suggest that inconsistency is perhaps the first truly hard problem when it comes to Solarian ontology:

no two reactions to the stimuli were the same. Sometimes the instruments almost exploded under the violence of the impulses, sometimes there was total silence; it was impossible to obtain a repetition of any previously observed phenomenon. Constantly, it seemed, the experts were on the brink of deciphering the ever-growing mass of information. Was it not, after all, with this object in mind that computers had been built of virtually limitless capacity, such as no previous problem had ever demanded? (21)

Despite these indices of radical progress in terms of computing and storage power, the seemingly irreducible inconsistency observed to be in some way produced by the ocean precludes rigorous ontological definitions and solutions despite the rigorousness of the attempts to do so. In short, it is able to do, to appear, to behave in ways that are in excess of human frames of reference. Harman suggests that "[t]here is always a surplus in things that is not exhausted by either theoretical or practical activity. Objects withdraw from every form of human activity, not just the perceptual and theoretical kinds [and] objects themselves must do this to each other no less than humans must do this to objects"

(2012, 79).⁵ In this way, the planet is not exhausted by the ocean, the space-time around both is not exhausted by the presence of the ocean-planet, gravity is not exhausted by the ocean's manipulation thereof, nor is the full ontology of the ocean-planet exhausted by the century-long epistemological and scientific trivia produced by the respective projects of human investigation, measurement, data acquisition, and the various interdisciplinary hermeneutics thereof. What truly results from the uncertainty of this scientific and hermeneutic milieu is a proliferation of multiple Solarist ontologies: 'Solarist-cybernetics', 'Solarist-symmetriadology'. Their complexities, nuances, and referents, however, are ultimately unimportant. Lem goes out of his way to make clear that neither singularly nor jointly can these flows of thought provide an unambiguous line of communication between humankind and Solaris.

III. The Solarian Ocean as Object: Towards a New Object-Oriented Solaristics Through Object-Oriented-Ontology

There is an openness, a flatness, an objectivity to Lem's writing, which simultaneously grounds and elevates, as well as centralizes and disperses, his entanglement with the concept of true Otherness; a category of thought and praxis – in art, science, philosophy, ethics, economics, politics, culture, and ecology – that is so terse with meaning, while also presenting such a paucity of consensus, commonality, or certainty. It is in the centralization of the flatness of objectivity at the core of Harman's OOO that makes it useful in speculating on the xenontology of an alien entity/Other. Harman offers a succinct outline of the 'triontology' (being-three) of OOO:

First, philosophy must deal with every type of object rather than reducing all objects to one privileged type: zebras, leprechauns, and armies are just as worthy of philosophical discussion as atoms and brains. Second, objects are deeper than their appearance to the human

⁵This concept of the paradoxical germane void reflects, for example, the Lacanian concept of *manque* or lack as described in *Écrits* (London: Tavistock Publications) p. 281; and from this lack, and as a direct result thereof, a type of exorbitancy as discussed by Jacques Derrida in *Of Grammatology* trans. Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press, 2016 [1974]).

mind but also deeper than their relations to one another, so that all contact between objects must be indirect or vicarious. Third, objects are polarized in two ways: there is a distinction between objects and their qualities, and a distinction between real objects withdrawn from all access and sensual objects that exist only for some observer, whether human or inhuman. Finally, the basic problems of ontology must be reformulated in terms of the fourfold structure that results from these two polarizations in the core of objects. (2012, 4)

In the introduction to his 1927 Gifford Lectures, British astrophysicist Arthur Stanley Eddington presents his philosophical parable of “Two Tables”, the familiar table of everyday use and the same table as described by the laws of physics. Eddington places his allegiance firmly with the second table: “I need not tell you that modern physics has by delicate test and remorseless logic assured me that my second scientific table is the only one which is really there – wherever ‘there’ may be” (xii). However, Eddington does acknowledge the exigency of the emergent table: “On the other hand, I need not tell you that modern physics will never succeed in exorcising that first table – strange compound of external nature, mental imagery and inherited prejudice – which lies visible to my eyes and tangible to my grasp” (xii). The ontological question and all its ancillary issues and debates concerning what a thing is, in Eddington’s case a table, cannot escape these two hermeneutic antipodes, descriptive permutations, perceptual manifestations, and linguistic expressions of and/or degrees of ‘thingness’.⁶

Describing the ontological tension between the emergent and physical tables in Eddington’s example, Harman states that one might be “tempted to reverse Eddington’s conclusions and claim that the table of everyday life is just as real, or even more real, than the scientific table. The first table and first culture would thereby be opposed to the second, and the result would be the usual trench war between science and the humanities” (2012, 6). For Harman, the assumed conflict between the ontological veracity and accessibility of either the ephemeral table of everyday life and the concrete table of science represents a false binary. It is a fallacy predicated on an

⁶See for example Martin Heidegger, *Being and Time* trans. Joan Stanbaugh (Albany: State University of New York Press 2010 [1953]) for a detailed discussion of ontology concerning the concepts and approaches to thingness.

undifferentiating unreality. “When weighing the respective merits of the everyday and scientific tables”, writes Harman,

we shall find that both are equally unreal, since both amount simply to opposite forms of reductionism. The scientist reduces the table downward to tiny particles invisible to the eye; the humanist reduces it upward to a series of effects on people and other things. To put it bluntly, both of Eddington’s tables are utter shams that confuse the table with its internal and external environments, respectively. (6)

For Harman, the reality of the situation is located in a third position wherein exists a third table (which in its thirdness is also ontologically prime) that also cannot be accessed directly, only obliquely: “[t]he real table is in fact a third table lying between these two others” (6–7). Harman’s third table is not the synthetic result of a dialectic, where the table of everyday use and the table of atomistic science are synthesized in this in-between space (un)occupied by the third table. Instead, the third table’s definitive reality evades signification in a way that the other two tables do not. It is also radically always-Also new, that is, the third table is not reducible to “either quarks and electrons or to table-effects on humans” (7).

When applied to *Solaris*, the obvious conclusion here is that the real ontology of the Solarian ocean exists in some third space, or can be read as the reified manifestation of a third space in itself. Being that Lem spends a not insignificant amount of time trying to both present and parse the mystery of *Solaris* in scientific terms, we are invited to ask not necessarily if scientific thought can elucidate an ontology of the Solarian ocean, but rather more fundamentally how Lem treats science itself. Unlike it is for Eddington, who holds firm to the reality of the scientific table, there is a superficial necessity of science and scientific praxes in the novel for Lem. Lem is very conscious, perhaps exhaustively so, of the scientific method and currents of its reputation. He uses scientism to ‘ground’ the more xenologically speculative assertions he makes about alienness or the idea of true Otherness. However, he also sets up the limits of science by establishing an important dichotomy between the known, knowable, and the tools (science and mathematics) human beings most rely on and trust to establish a modicum of both. Lem understands that there is a comfort people take in science, in the straight-forward weight and simple

complexity of its jargon, in its declarative register, even if used to declare its own sustained ignorance. In this way, the scientific formal style Lem employs creates a gap and a tension, a closedness and openness which simultaneously holds together and apart a friction between oddity, some of it very subtle, and a scientized way of thinking about it.

In quite another direction, Lem simultaneously uses this style in latently satirical and even parodic ways. Over the century-long enterprise of *Solaristics*, Lem shows that the entire Solarian episteme redounds to one sentence: we're not sure. In this sense, the scientific attempt to proffer a robust, reliable, consistent, and comprehensive ontology of the ocean fails. However, I would not go as far as to say that it is unhelpful or irrelevant. This epistemic, ontological, and phenomenological impasse between the various things the ocean does and our limited comprehension thereof necessitates humanity's increased, and in fact inescapable awareness, of the finitude of its own thinking and the need to broaden, deepen, and reassess its determinants, assumptions, and results. In short, the novel describes a First Contact scenario where it is unclear whether Contact has been made at all. It is the uncertainty thereof, much like the real space in which Harman's withheld/withdrawn albeit real third table exists, that produces, facilitates, and problematizes this paradoxical sense of open closedness Lem brings to the description of the ontology of Otherness. In view of Harman's suggestion that the reality of things can only be approached indirectly, one of the lessons of *Solaris* is that this kind of openness of literature, of medium, as something through which partial relations pass but is itself an instantiation of an impasse, is far more important not only in science but also philosophy than initially appears.

Lastly, Lem, when viewed through Harman, is a genius for intimations of scale in and through succinctness of the volume of prose used to present them. I would venture a guess and say that when thinking of or encountering withholding or withdrawal, many would think the concept in prosaic terms, with anthropocentric references of scale. A hammer, a giraffe, a car, an atom. Despite the last of this sequence being immense when perceived at its own relative scale, what Lem's ocean-alien shows is that withdrawal can and must also be *at least* planet-sized. The alienness of the ocean-planet is not simply rendered ingeniously because of its confounding description that

seems to delimit an upper threshold which separates observation and comprehension. While it may productively be thought of this way, it is always-Also a description of the meeting of these two domains of discourse joined by the tension that separates them. In this way, *l'écart* and withholding are a paradoxical type of productive vacuity, an immense presence of the absence of understanding, shining and shimmering, like a scratch of shape and movement in the enveloping dark, or like a wet tooth erupting from the black gum of a dog. While Harman does his consistent best to offer a plethora of objects in examples of withholding in object-object relations as a way to disrupt and expand any tendency toward a maintenance of what I call the anthroscale of anthropocentric reductionism when thinking of the ontology of objects – from cars to cathedrals to blood, smoke, cinema, and the state – Lem effectively shows that the relationality of all of these objects or similar objects are, in themselves, alien worlds, and the world in, on, and through which they occur, is equally as alien. The novelty of an OOO approach in the reading of the alienness of Lem's ocean-world inheres in the vastitude and scale of the alienness of world-objects, object-worlds, and each in (relation to) each. It is, therefore, narratively sound, in my estimation, that the modes of contact that establish anthro-object/alien-object relations in the text's narrative should not only be framed as a meeting of aliens, but a meeting instantiated and sustained under the aegis of exploration.

IV. Lost and Found in Lem's State of Play⁷

In Robert Zemeckis' 1997 adaptation of Carl Sagan's *Contact*, Elli (Jodie Foster), while suspended over a newly born star system, dumbstruck by the beauty of the spectacle she witnesses, states in an overawed tone "they should have sent a poet." Lem sends a psychologist. Through Kelvin, Lem successfully executes an ontological trick, one reflective of the paradoxically solid vacuity at the centre of ontology more

⁷Originally, I had wanted to think of *l'écart* and withdrawal as co-constitutive indeterminacies that describe, among other things, a type of play. However, 'play' is used here as a placeholder of that which refuses to hold its place, not as signifying levity or jest per se. Something mobile, alive, complex, and simple. Something that resists exhaustion though being rich in presence. This meaning relates to the abovementioned term *lukatory*, from the Polish word *luka* meaning 'gap', 'lacuna', 'vacancy', 'opening' or 'loophole' as more apt a way of symbolizing what I'm driving at, namely the *lukatory* relationship the Solarian ocean has to observers specifically as an object of observation.

broadly. The more detailed his descriptions of Solaristic 'knowledge' become, the more uncertain it becomes that the ontological question concerning Solaris can be answered. In this sense, there is an inversely proportional relationship between discovery, observation, and collation and ignorance, uncertainty, and ontological impenetrability. In other words, concerning Solaris, the more you know the less you know; or the more you know about it, the less you know what it is. This is why the text is such a virtuosic masterclass of speculative fiction: its speculations feel not only grounded by a sense of 'xeno-empirical' weight, but also that the idea of 'xeno-empirical' weight does not sound, read, or feel absurd. The absurdity of a human being writing about human beings writing about an alien life-form is, under Lem's pen, rendered logical, methodological, creative, and broad. It is able to do so precisely because of its radical poetics of radical alterity. Its ontology and epistemology are paradoxically, in the language of set theory, 'clopen'. The brilliance of Lem's xenontology is (im)precisely how it vacillates, how it fluctuates between a sensation of being 'on the right path' in terms of the ontological question(s) of Solaris, and being 'lost in a thicket', so to speak. With the breakneck opening description of the history of Solaristics at the beginning of the text, one that does not linger or hold the reader's hand through the weird attempt at describing true alienness, Lem introduces perplexity, aporia, and conundrums to the typical frames of human reference, scales of time and space that, while partially computable in terms of human mathematics, ultimately open beyond the most robust apparatuses of signification available to/manufactured by humankind, be they scientific, artistic, or religious.

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