Stanislaw Lem, *Solaris* (1961, US trans. 1970)

Official site: http://lem.pl/

Bio: Abraham Kawa, "Stanis aw Lem (1921-2006)", in Mark Bould et al, *Fifty Key Figures in Science Fiction* (London: Routledge, 2010)

Some Questions for Class/Further Study

These questions are *not* definitive. We won't be able to cover them all in one class. They are selectively based on my reading of the novel – and some selected criticism. The interpretive nature of literary study ensures there are other angles/perspectives. Use the questions as a platform, from where to leap into your own Alien planet.

(NB: Page numbers refer to my Faber & Faber copy.)

1. The Opening. Read pages 1-2 (from "At 19.00 hours ... mounting heat." How does this set up Kelvin's character and the nature of his mission? Given that so much of Lem's novel utilises metaphor and meta-commentary, what can you discern from elements of the setting, objects, spatial positioning, etc. that gesture to general and specific themes and concerns of the novel? Does the opening set up the novel as a recognisable form of sf?

2. Chapter 2 ("The Solarists") Skim the opening of the chapter. What genre are we in here?

3. Kelvin. Is he paranoid? (15, 26, 29, 34, 139); "Mad"? (49-53 [end of "Sartorius"], 159) Is it all a dream/hallucination? 9-11, 159, What kind of 'scientist' is he? How do we read the "visitors", for example? Are they scientifically 'real' or 'dreams'? (See conversation between Kelvin and Snow on p. 37; the explanation for Berton's breakdown, p. 42; the 'scientific' explanation for the "phi-creatures" 104-109) Is this not principally a story of psychic repression? See p. 74

4. To what extent is 'science' and 'scientific practice' critical to the novel's main themes – and formal style? Is 'science' attacked/parodied in the novel? Is it failed / irrelevant as a human practice? It is seen as unhelpful, 19, 23, for example. See also for example 'The Thinkers' chapter. (pps. 172-183; the edge of satire on the theorising 125; 'working through' K's trauma on p. 152-153.

5. Many critics have identified Snow's speech on humanity and its mirrors to reveal the fulcrum of the novel's concerns. Read it over again – what is he arguing and do you agree? (Chapter 'The Little Apoccrypha': pps. 74-76: "'And you call yourself a psychologist, Kelvin! ...Snow, you can't believe anything so absurd!'"; See also p. 164; 166; 176)

6. Is the novel as (or more) interested in the 'weird/monstrous/supra-natural'? There are ghosts and phantoms /revenants and doubles/haunting footsteps, violent screams and echoes throughout. Why don't we, for example, find out what is behind Sartorius's door? (43; 46) There are general elements of 'The Weird' throughout. ("terrifying and incomprehensible" 62;

7. Is The Ocean a 'character'? In what sense is it 'Alien'? Provide an example. 18; 20-21; 24; 77; 179

How do we interpret the "monstrous/beautiful" mimoids? As metaphors? "Scientific phenomena?: 85; Berton's log: 88-89; 116-120; 122; 124-5; 127)

8. Rheya – what is her role in the novel? Is she a 'character'? Her first appearance – 54-55. An 'alien' (162)? A 'superhuman force' (66-67)? A 'zombie' 147; A 'monster'? What is the symbolism of her dress? 65; 97.

9. How do you interpret the end 212-14? Is this principally a novel of 'contact' 21; 40; 129; 152; 178?

10. "The preconceptions of Earth offer no assistance in unravelling the mysteries of Solaris." 129

Is the principal 'explanation' Kelvin's retrospective conjecture on p.186? Is it, in the end a "mystery", with all the baggage that implies?

Similarly, Tarkovsky uses *Solaris* first-contact narrative to explore questions about memory, guilt, and remorse. Rather than develop an overt first-contact story as seen in many Hollywood films from *The Day the Earth Stood Still* (Wise 1951) to *Star Trek: First Contact* (Frakes 1996), which present the first encounter between humans and aliens as either a direct meeting or an alien invasion, *Solaris* first contact is metaphysical. Following experiments upon the oceans of Solaris, the crew of the station are haunted by corporeal visitations of people from their past. The scientists speculate that the (Neale 1981: 13). In *Solaris*, this is manifested in the muted and introspective Kelvin. His initial reaction to the impossible sight of his dead wife is one of fear and revulsion, conveyed not through histrionics but rather his decision to eject her into space. However, when she reappears the next day he becomes increasingly preoccupied by her, but does not question how and why she can be there. Through her, he explores his own remorse for his role in the demise of their relationship and her subsequent suicide. Furthermore, as she becomes aware that she is not the real Hari, the film also focuses upon questions of humanity and the nature of being. If she is not Hari, then who is she? As with most arthouse sf, *Solaris* does not provide any clear answers to the many questions it poses, but instead uses the genre as a means of exploring these existential themes. Stacey Abbott, "Arthouse SF Film", in Bould et al, *Routledge Companion.*

Solaris (1961) mercilessly ridicules the anthropocentric presumption of scientific attitudes, evident in most sf, that draw the universe in the image of humanity. Any "attempt to understand the motivation" of the sentient ocean covering the eponymous alien world "is blocked by the most abstract achievements of science, the most advanced theories and victories of mathematics" (Lem, 2003: 178). If one attempts to transpose the alien "into any human language, the values and meanings involved lose all substance; they cannot be brought intact through the barrier" (Lem 2003: 180). Tarkovsky's 1972 film adaptation culminates in a remarkably bleak visual reiteration of the idea that "We are only seeking Man . . . . We don't know what to do with other worlds" (Lem 2003: 75). Solaris's ocean appears to attempt communication. Other nonhumans do not, either not noticing our existence of preferring just to kill us (eg JH Rosny aine's "The Xipehuz (1887); HG Wells's *The War of the Worlds* (1898); Alun Llewellyn's *The Strange Invaders* (1934); John W. Campbell Jr's *The Genocides* (1965); Boris and Arkady Strugatsky's *Roadside Picnic* (1972); *Alien* (Scott 1979); *Cloverfield* (Reeves 2008). Mark Bould, "Language and Linguistics", in Bould et al, *The Routledge Companion..*

SF has always had room for natural phenomena whose dominion over civilization teaches us a lesson [...] But more and more of contemporary sf is devoted to object-worlds that do not yield. *Solaris* is, once again, exemplary. The planet frustrates its explorers because it does not yield anything useful to them — no minerals, no nourishment, no answers to astrophysical puzzles. When it does seem to produce something in response to technoscientific assault (that is, the Phi creatures), these simulacra are the quintessential antire- sources, the very images of shame and repression that the Solaris scientists have removed from their psychic circulation of goods. Though Lem took conscious care to avoid marking the planet in gender terms, its

association with female qualities is incontestable. In a similar vein is the Zone in the Strugatskys's *Roadside Picnic* (1972), the weirdly blasted space left by what can only be inferred to have been a landing by alien spacecraft. The Zone is a rationalized enchanted circle, filled with miraculous objects that professional smugglers, or "stalkers," bring out into the world, selling them to nations and criminal gangs [...] The harvesting of these alien artifacts brings inexhaustible energies into the world. But all the new technologies derived from them lead to increased alien-ation and violence. The Strugatskys, like Lem, endow the Zone with feminine dimensions, primarily in its effects, such as the horrifically destructive "witch's jelly," and its mysterious transformation of the protagonist's young daughter.

As technology saturates the resource, it becomes animate, and differences elide...

"The Wife at Home" - The function of the Wife at Home to secure the stability of domestic relations evaporates. Indeed, practically any form of stable bourgeois family relationship lasting from the origin of the adventure to its conclusion is extremely rare in sf, reflecting the real-world mobility veritably forced on human communities by technoscientific modernization. The exceptions tend to be found in sf that critiques the genre for exactly this reason. The protagonist Kris Kelvin of Lem's *Solaris* is "visited" on Solaris Station by a simulacrum of his dead wife. At first she is merely an embodiment of his bundled memories; gradually, however, she gains autonomy, self-awareness, dignity, and even some power to resist both the planet and Kelvin himself. After she has herself altruistically annihilated to free Kelvin from his obsession with her, Kelvin resolves at first to return to Earth as a failed romantic. Following a last-minute ambiguous encounter with the planet's fluid surface, however, he changes his mind, perhaps hoping for a new manifestation of his memories.
Istvan Csicsery-Ronay, *The Seven Beauties of Science Fiction*

A convenience of beginning with Lem's *Solaris* (1961) is that in this novel cognition and estrangement figure not only as conceptual and aesthetic qualities but as overt themes as well. One way to define much of the novel's achieve- ment is to note that it represents the fusion of two and in some ways almost antithetical tendencies within Lem's work. On the one hand, Lem—the heir, in this respect, of both Voltaire and Kafka—is a master of high-spirited and militantly arealistic philosophic satire, satire that, among other things, at- tempts to problematize the epistemological assumptions of unreflective, pre- critical common sense. An example of such (largely parabolic and even allegorical) work is *The Cyberiad* (1956), a series of science-fictional fables that work to estrange many of the most taken-for-granted assumptions that govern everyday life, perhaps most notably by foregrounding the constitutive, con- structive function of language and the indispensable role that difference plays within representation itself. Another is *The Futurological Congress* (1971), a paranoid and frequently hallucinatory tale that again and again insists upon the extreme difficulty, or indeed the impossibility, of establishing any unproblematic baseline "reality."

On the other hand, Lem seems equally at home with a certain kind of precise, sober, understated factual (or rather pseudofactual) solidity.....

This factological solidity in *Solaris*—the establishment, in and by the text, of a counterfactual yet quasi-factual locus that is cognitively plausible in im- mense detail—ultimately works, however, to enforce and embody an estranging conceptual fable at least as radical and intellectually ambitious as anything in *The Cyberiad* or *The Futurological Congress.* Indeed, we may note in passing that Lem illustrates, more richly than probably any other science-fiction au- thor since Stapledon, the capacity of the genre to incorporate unabashed phil- osophical speculation: a novelistic element common in major classical real- ism (think of George Eliot, or Tolstoy) but that in the twentieth century has been largely confined to science fiction (the heir, as we have already seen, of much of the critical historical sense of classical realism). But the philosophi- cal thrust of *Solaris* is not merely to estrange. It also takes as its very subject

matter the category of estrangement, the relationship, that is, between the fa- miliar and the other, between identity and alterity; and it explores the function and limits of cognition itself in coming to terms with this relationship. At the same time, the elaborate pseudorealism of the text concretizes these wide- ranging speculations in a genuinely novelistic manner. The result is one of the most *radically* science-fictional texts that we possess— [...]The point made most emphatically by Lem's invention of Solaristic sci- ence is the dialectical *provisionality* of all genuine knowledge and cognition, most definitely including even the physical or "hard" sciences.

It is characteristic of Lem's rigor, however, that the antiscientific view- point is represented and engaged within the text itself, in the work of the anti- Solarist Muntius. Muntius has denounced Solaristics as a religious faith camouflaged as science; he would, at least implicitly, deconstruct the distinction between religion and science in general. He invents a series of ingenious analogies between Solaristics and traditional Western religion—for instance, the central Solarist goal of contact between humanity and the mysterious ocean recalls mystical communion or the Second Coming—and on this basis offers to conflate the one with the other: "Solaristics is a revival of long- vanished myths, the expression of mystical nostalgias which men are unwilling to confess openly" ... Nonetheless, Muntius's position is decisively rejected—not because it is offensive, but because it is simplistic.... Science, as Lem constructs it, has little to satisfy those precritical minds (a category that, of course, includes at least some part of *all* minds) that hunger after certainty and finality. .... Science, in sum, is an immensely difficult project, and this difficulty is novelistically crystallized in the *supremely* difficult science—almost the metascience—of Solaristics.

[Kelvin] attains what some commentators have construed as a moment of un- precedented empathy or psychological breakthrough with the ocean. The text thus allows the possibility that Kelvin may be the greatest of all Solarists in history, at least in the sense that he may be the first to achieve the long-awaited goal of contact. ... Yet neither Kelvin nor the reader can be certain and the last two sentences of the novel strike a note of pointed ambiguity: "I did not know what achievements, what mockery, even what tortures still awaited me. *I knew nothing.*

It is just at this point in *Solaris,* however, that the (pragmatically resolved) problem of solipsism opens out onto a related but much larger problem, one that constitutes the most prominent cognitive issue of the novel: the hypothetical *collective* solipsism of humanity as a whole, or, in other words, the question of whether the radically other is by definition beyond the power of the human mind to grasp. This is, of course, the philosophic crux that haunts the entire science of Solaristics, with its goal of establishing contact with the strange ocean; and it is this mystery that, in various ways, most threatens Kelvin's balance after he has succeeded in reassuring himself about his own personal mental health.

The Ocean

Indeed, it is in this context that the conceptual superiority of Lem's novel to many more weakly science-fictional texts is particularly evident. Contact with extraterrestrial beings is a familiar literary motif. But contact has most often been silently and simplistically equated (or nearly equated) with mere *meet- ing.* In *Solaris,* however, meeting has occurred almost a century before the time present of the novel, and by no means simply or inevitably implies genuine contact. ... is it 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 uaccept- ably geocentric?) In fine, is the project of establishing contact with the ocean merely difficult, or is it intrinsically meaningless from the start? .... Characteristically, the novel offers only partial, tentative, and provisional answers to this question. At some points, Lem's text inclines toward epistemo- logical pessimism, implying (in a way that strongly suggests certain tendencies within poststructuralist philosophy) that the ocean is so utterly other as to be quite ungraspable through any variety of dialectic whatever

Before entering into this passionate communion with the phantom Rheya, Kelvin (though professionally trained as a psychologist) had generally appeared to be a cold, rather unempathic person. As he finds within himself unexpected capacities for love and commitment, he perhaps attains the kind of *self*-knowledge that has so often been one of the outcomes of the traditional humanistic quest.

The entire novel may thus be read as essentially a love story.

In this antihumanistic reading, then, Kelvin's ultimate abandonment of earth signifies not the fulfillment of his Solaristic quest, but his excruciating defeat by the quest's insuperable difficulty. Yet the novel does not allow us to repose in the epistemological comforts of pessimism. Lem's text is deliberately ambiguous and provisional in its conclusions, and the tension between humanistic and antihumanistic readings remains a subtle and delicate dialectic

To attempt contact with the radically other is thus to involve one's own unconscious desires, as the Solarists discover when the Phi-creatures are mate- rialized out of their most painful and repressed memories. The scientific project of understanding the ocean is not, it turns out, a positivistic process of mastery occurring on a high level of conscious resolution—as their conventional training had led the Solarists to expect—but is much more like the psychoanalytic situation as theorized by Freud and, even more, by Lacan.

text as a whole transcends both options, suggesting that the quest for contact is not wholly vain, but also that contact can be at- tained only in such tentative, fragmentary, ambiguous, oblique, and *unexpected* ways that the notion of contact itself is in serious need of rethinking. Is Kelvin at the end of the novel a successful quester who has attained hard-won knowledge? Or is he a man broken and rendered rather absurd by the encounter with the sheerly other? The only adequate answer is that (like the Lacanian analyst) he is both, or neither.

Solaris must therefore be seen as not only a deeply and strongly science- fictional text, but virtually a meta–science-fictional text as well. A work of profound cognitive estrangement, what it cognitively estranges with greatest force is precisely the nature of cognitive estrangement itself. The encounter of the Solarists with the fundamentally other estranges for them the taken-for-granted category of the human.

Carl Freedman, "Solaris: *Stanis aw Lem and the Structure of Cognition*", in his *Critical Theory and Science Fiction* (Middleton: Wesleyan, 2013)

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Nothingness, emptiness, and also negation are among his most peren- nial motifs and approaches. Something similar can be said of Arkadii and Boris Strugatskii, the Russians often mentioned in the same sentence as Lem. As in Lem's oeuvre, 'nothing' and 'nothingness' also appear in many different guises throughout their work. As nothingness has a particularly intimate connection to the absolute, this recurrent theme lends itself to reflection on the theoretical context in which it is embedded.

Stanis aw Lem writes that science fiction and fantasy are particularly prone to 'kitsch', for the reason that it is easy to dream up completely arbitrary worlds.[6] He also comments on the development of the genre, particularly in the US, where science fiction evolved very early on as unchallenging popular fiction and literature for young adults. Both Lem and the Strugatskii brothers see themselves unequivocally as part of a movement presenting an alternative to this mainstream. This lends their works a certain 'negative' character, in the sense that they define

themselves by dissociation. They frequently baffle the expectations of readers of this genre. ....Although Lem began in the 1940s and the Strugatskiis did not start until the late 1950s, they all began with the same gung-ho communist belief in a bright new future, in irreversible technical and social progress, and in the ideality of a future world. However, both Lem and the Strugatskiis departed from this model around 1960 or earlier, and only then did their works, that are still read today, emerge. These works are consequently characterized by a two-pronged negation – that of mass literature and that of the official optimism about the future. ...As the enthusiasm about a bright new future spread, Lem and the Strugatskiis tirelessly demonstrated in their stories that technical progress is by no means automatically coupled to social and human progress

The confrontation with the void is also always a confrontation with oneself...So, despite the adventurous subject matter, the place of the 'other' remains vacant, and this emptiness reflects all human ruminations back onto themselves.

Of our authors, Lem can most unequivocally be called a cybernetician – this is also clear from his theoretical writings. He began to explore these theories very early in his career. Lem prided himself on being conversant with very diverse scientific fields. This does not so much correspond to the old idea of the Renaissance man as reflect the cross-discipline, metascientific approach of cybernetics. Lem played out all the basic elements of cybernetic thought. He particularly loved circular reasoning, self-referentiality and reflexivity, exaggerated reflexive structures that he frequently follows through to their paradoxical conclusion.

One of the most important cybernetic paradigms, how- ever, is self-regulation – the notion that systems evolve and transform themselves and that this evolution is unpredictable. (This was to be developed much later in what came to be known as 'chaos theory'.) The latter is precisely what interested Lem and the Strugatskiis: not the 'plannability' of complex systems, but rather their unpredictability.

the quasi-religious models in our novels present themselves as simulation exercises, as an invariably relative way of looking at the world, as an exploration of the cultural limits of the comprehensible. The fascination with negativity and emptiness is more than just a criticism of the prevailing ideology of progress.

Thomas Grob, "Into the Void: Philosophical Fantasy and Fantastic Philosophy in the Works of Stanis aw Lem and the Strugatskii Brothers" in *Soviet Space Culture* edited by Eva Maurer, Julia Richers, Monica Rüthers and Carmen Scheide (London: Palgrave, 2014)

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Istvan Csicsery-Ronay, Jr

The Book is the Alien: On Certain and Uncertain Readings of Lem's *Solaris*

1. Contemporary science describes a world that is neither a rational cosmos, nor a roiling cosmos, but something in between: a source of paradox, allowing for complementary, but contradictory, interpretations of humanity's relationship with non-human reality. The "classical" myth of the rational cosmos had shared with the prescientific myths underlying humanistic culture the conception that the human and natural realms were in some ways co-ordinated. Both worked according to intelligible, self-consistent, determining laws. In the system of modern atomic physics, however, scientists have succeeded, according to Planck, in purging science of determinism and "all anthropomorphic elements" (Arendt: 269). But as Heisenberg observed, in such a deanthropomorphized universe human beings always "confront themselves alone" (*ibid.*, p. 277). Since every answer they attain in their investigations into nature is a specific answer to a specific question, the sum of these answers allows the application of otherwise quite incompatible types of natural laws to one and the same physical event. Science's answers reflect the questions scientists are impelled to ask of nature; and thus anthropomorphism is reintroduced at the level of hypothesis formation that preselects the data to be studied. Beyond this, it remains extremely problematic whether the seemingly unbridgeable gulf between the languages of human culture and quantum physics' purely probabilistic and mathematical expressions of the universe will produce "an appropriate widening of the conceptual framework" to resolve all the present paradoxes and disharmonies in a new "logical frame," as Niels Bohr hoped (see Arendt: 277)—and as radical holistic physicists like Fritjof Capra have proposed—or whether the gulf is inherent in the new physics. The conclusions of the 20th century's science have thus introduced an alienation from the cosmos more radical than any previously conceived in human culture. Whether this alienation is the beginning of a dialectical process of conceptual synthesis or an enormous stalemate, we cannot know. We cannot summarily reject either historical hypothesis.

SF characteristically transforms scientific and technological ideas into metaphors, by which those ideas are given cultural relevance. It works very much like historical fiction in this respect. It takes a body of extratextual propositions believed to be true, with no inherent ethical-cultural significance, and endows it with meaning by incorporating it in fictional stories about characters representing typical values of the author's culture. Although the historical facts limit what can happen in historical fiction (in the realistic mode, at least), these facts are embedded among purely fictional facts to imply a metaphorical meaning beyond historiography's customary function of describing "what really happened." In historical fiction, history is no longer true history, even if it is

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in fact true. It is metaphorical, and hence "more than true"; it is culturally significant.

The same can be said, *mutatis mutandis*, about SF. Furthermore, in works of artistic interest, we also expect the fictional action and the process of reading to correspond analogically to the fiction's metaphorized scientific ideas. Reading the fiction should act as a metaphor for the process of cognition implied by the science. In general, it is futile to look for this sort of harmony of scientific ideas and aesthetic design in contemporary SF. Several commentators have noted that SF writers usually adhere to the paradigms of romance (cf. Rose: 7; Frye: 49). The paradigmatic forms of SF are usually more archaic, indeed prescientific, than much of so-called mainstream fiction.

One book is an exception, however: Stanislaw Lem's *Solaris*, one of the philosophically most sophisticated works of SF. Lem has often dismissed the suggestion that SF should be judged by criteria different from the rest of literature.[1] Yet most of *Solaris'* commentators have discussed the novel as a work of "meta-SF," a virtuoso example of generic criticism and the exploration of the possibilities inherent in the genre.[2] In these pages, I will consider *Solaris* somewhat differently, as an elaborate metaphor for the cultural and philosophical implications of scientific uncertainty for Western culture.

2. *Solaris* invites several parallel, and even contradictory, interpretations. It can be read as a Swiftian satire, a tragic love story, a Kafkaesque existentialist parable, a metafictional parody of hermeneutics, a Cervantean ironic romance, and a Kantian meditation on the nature of human consciousness. But none of these readings is completely satisfactory, and Lem intended it to be so. The simultaneously incompatible and mutually reinforcing readings make the process of interpreting the text a metaphor for the scientific problem of articulating a manifestly paradoxical natural universe.

This inbuilt indeterminancy notwithstanding, most of *Solaris'* commentators agree on a common reading of the novel's action and point. According to this reading, *Solaris* is about the problem of whether human beings will ever be able to make contact with a truly alien intelligence, and thus transcend the anthropomorphism and anthropocentrism apparently inherent in human cognition. In the novel, a century of attempts by the most advanced human scientists to understand the mysterious, sentient ocean-planet, Solaris, has produced only a chain-reaction of paradoxes. The instruments that the early Solarists take to the planet to measure certain phenomena return to them physically transformed by Solaris; the researchers thus cannot know what it is they have measured (*Solaris*, 2:27). The methodological paradoxes produced by the exploration of Solaris, which are extrapolations of classical scientific method, come to occupy most of the Solarists' time. The inscrutable and opaque planet gradually becomes a macrocosmic mirror of the human image. The Solarists' obsession with the mysteries of Solaris dissolves into the broader struggle to understand human reflection and identity. When it appears impossible that human scientists will ever break out of the enclosure of human consciousness, their space exploration appears to be a religious quest for "Contact," mystical union with a godlike intelligence that might reveal the purpose of the "mission of Mankind" in the universe, and redeem it from cosmic alienation.

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> I had never felt the gigantic presence so strongly, or its powerful changeless silence, or the secret forces that gave the waves their regular rise and fall. I sat unseeing and sank into a universe of inertia, glided down an invisible slope, and identified myself with the dumb, fluid colossus; it was as if I had forgiven it everything, without the slightest effort or thought. (14:210)

Kelvin does not leave after all. He allows himself to believe in "a chance, perhaps an infinitesimal one, perhaps only imaginary" (14:211), that some new manifestation of contact or shared creation will occur. We surmise his egoistic projections are spent: "I hoped for nothing, and yet lived in expectation. I did not know what achievements, what mockery, even what tortures awaited me. I knew nothing and persisted in the faith that the time of cruel miracles was not past" (14:211).

Most critics agree that in his concluding words Kelvin has attained a new state of alertness and awareness. His formerly aggressive drive for Contact has given way to a more serene receptivity. Stephen J. Potts (p. 51) believes that at this point Kelvin "has become. . . an empty slate ready to receive the universe on its own terms." For Mark Rose, Kelvin finally comes to the recognition that the Other does in fact exist separately from himself: "he knows that the ocean is real and he is willing to commit himself to whatever the future may bring" (p. 95). For Darko Suvin, "Kelvin wins through to a painfully gained, provisional and relative faith in an 'imperfect god' " (p. 220). Even David Ketterer, who argues persuasively for the hermetic closure of *Solaris*, writes that "Kelvin does learn something of man's limits: they are circumscribed by the reality of Solaris" (p. 197).

The gist of *Solaris* in this reading is that human consciousness could not proceed to a new cognition as long as it was trapped in its own human-centered, 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. This reading (which I have admittedly fleshed out a bit) involves not so much a paradox as a hidden contradiction. If we are to believe that Kelvin is actually purged of illusions at the end of the tale, we must accept the reality of Solaris as a determinate Other, whose "not-humanness" defines Kelvin for himself, and the reader. But how did Kelvin come by this new ability to see himself objectively, if human cognition is *a priori* anthropomorphic? To see himself determinately—that is, "to learn something of man's limits," as Ketterer writes—Kelvin must have been able to see himself as a "not-human," an ability that he could only have learned from contact with Solaris. The critics who hold that Kelvin arrives at a new state of humbled and purified cognition consequently also approve the quest for "Holy Contact," since only the acquisition of the Other's point of view could have both dispelled Kelvin's illusions *and* given him knowledge of himself. If this is true, then Kelvin has redeemed the romantic impulses of Solaristics by proving their truths. His identification with the alien might be read as the necessary inversion that concludes the successful religious quest, just as the discovery of the Grail was to end in translation and absorption into God.

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Before coming to Solaris Station, Kelvin's contribution to Solaristics had been the discovery of possible correlations between encephalographic patterns indicative of certain human emotions with formally similar patterns taken from Solaris (11:182-83). To put it another way, Kelvin had discovered what could be construed as "personal" and emotional activity in the planet. At the conclusion of the novel, the situation is reversed. He substitutes for the personification of the alien his own self-identification with the alien—i.e., alienation from the human. The quasi-religious quest for Contact, rather than being an illusion to keep humanity from despair, apparently paid off after all: miracles have occurred, even if they are cruel ones, and Man has placed one foot beyond his human limits, albeit into a mysterious and undefined dimension. It is an apocalypse, of sorts. Therefore, man's knowledge is not limited to himself and his creations.

But is this reading valid? Is Kelvin really as empty at the end of the novel as Potts claims, "ready to accept the universe on its own terms"? Does not the universe include Kelvin, and the human species, among its terms? Doesn't Kelvin's identification with the alien leave us once again with no way of determining where the human ends and the Other begins?

Only Patrick Parrinder has, to my knowledge, challenged the prevailing idea that Kelvin ultimately succeeds in breaking out of the anthropocentric hall of mirrors to the doorway of new cognition. For Parrinder, Kelvin's decision to stay by the alien planet parallels Gulliver's infatuation with the rational horses in his last journey. The novel's ending, Parrinder writes, shows

> the fate of a man who has abandoned humanity for the alien, and so is tragic but also absurd, a symbolic gesture holding at bay the recognition of despair. Kelvin has followed through the logic of the scientist-explorer in the liberal-humanist tradition, until he is finally a victim of an isolating romantic obsession. (p. 54)

To carry Parrinder's reading a step further: Kelvin deserts humanity in order not to face the despair of knowing that his species is a singularity in the cosmos, and that reason, desire, love, and truth—even the ideas of self and other—are merely tautologies in the isolated, self-reinforcing system of the "human."

If, as Kelvin tells us, he is completely committed to awaiting new interactions with Solaris, are we to admire his renewed spirit of sacrifice and dedication in the cause of Contact, or to suspect it? How are we to judge what we read? To choose either interpretation, Kelvin as Grail Knight or as Gulliver, we must have a standard against which to compare each interpretation—and that is precisely what we cannot have in *Solaris*, just as the Solarists have no reality against which to compare humanity and the ocean-planet.

Solaris's alienness is so threatening to the Solarists' scientific egoism that none of their conscious hypotheses regarding the planet can be taken at face value. Still, there is evidence in the novel to support the idea that some mysterious and significant contact has been achieved between Kelvin and the planet. There are moments in the action not interpreted by the protagonists (particularly having to do with Rheya, and with Kelvin's dreams), and these bear hints of a special, non-rational relationship between Solaris and Kelvin that could easily go by the name of Contact. In the first place, Rheya appears to be the co-

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3. These are suggestive passages, and they resist interpretation as anything other than moments of non-rational, non-conscious exchange—true moments of contact so surpassing the common run of human communication that they could well be mistaken for religious inspiration. Still, the fundamental indeterminacy of *Solaris* will not let us accept any interpretation based only on what Kelvin, our sole informant, tells us. Once the question is raised whether we can "see" something that is not a projection of human consciousness, we cannot make a purely rational or objective determination one way or the other. Readers of *Solaris* are Solarists, too—the phenomena of the novel's action reach us in the language of a Solarist and psychologist whose own reflections on how hypotheses are generated anticipate and subsume most of the hypotheses the reader might come up with independently. Just as the indeterminacy of Solaris deflects its explorers back into doubt about their methods of interpreting phenomena, the indeterminacy of the evidence in *Solaris* deflects us back into doubt about our own methods of reading.

Lem has constructed *Solaris* in such a way that every apparently significant element in the text corresponds to other significant elements, creating a hall of mirrors with no windows from which to observe some privileged non-corresponding structure of things. Rose and Ketterer have demonstrated in their readings of the novel that symbolic images reflect one another to a suffocating degree; in *Solaris*, Ketterer writes (evoking Heisenberg), "man confronts only analogues of his own image" (p. 201). Allusions to the literature of illusion extend this doubling from the internal action of the tale to the status of the book and reader in the world outside the text. For example, Lem requires us to accept Romanticism's favorite devices of doubling and self-reflection simply to follow the manifestly realistic plot. Ghosts, mirrors, dreams, unconscious memories and impulses, a web of symbolic correspondences, eerily enclosed spaces and sublime voids all function as empirically concrete "objects" in a scientific mystery. Names appear to be allusive, and perhaps even allegorical: Kelvin, Rheya,[4] Sartorius, Snaut, Andre Berton, Fechner, the designations of the spaceships (*Prometheus*, *Ulysses*, *Laocöon*, *Alaric*), even Solaris itself. But since we cannot be sure exactly how these allusions work or whether they all work the same way, or even whether they are arbitrary red-herrings just imitating allusions,[5] the extratextual things to which they refer also lose their solidity, and are absorbed into the book's world of indeterminate elements. We know only that they correspond. We do not know what these correspondences mean.

To create even broader ironies, Lem invokes a whole library of romance, satire, and myth: Don Quixote, Gulliver, Poe's phantom lovers, the Grail Quest, the tale of Eros and Psyche, Echo and Narcissus, the Passion and the Creation. Since the manifest problem of the Solarists and readers is how to determine whether human consciousness can know anything other than itself, each of the myths and stories invoked in the book becomes a version of the same problem—and thus each is transformed into a version of *Solaris*. Again, we are shown Western culture's problems and the creations responding to them reflecting one another. But what do these reflections signify? The infinite play of mutually reflecting projections, or the appropriation of transcendental knowledge?

The problem is raised vividly, never to be dispelled, when Kelvin comes

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Solaristics as messianism and as science may, however, be only a projection of erotic repression and narcissism, which founders when the Solarists have to confront their Freudian ghosts, the repressed "others" inside themselves. Snow tells Kelvin:

> We think of ourselves as Knights of the Holy Contact. This is another lie. We are only seeking Man. We have no need for other worlds. We need mirrors.... We are searching for an ideal image of our world.... At the same time there is something inside us which we don't like to face up to, from which we try to protect ourselves, but which nevertheless remains, since we don't leave the Earth in primal innocence. (6:81)

Like the Solarist commentators, we can go further. All these ideological and psychological projections may be the inevitable projection of the physical definition of the human body onto the universe. So the eccentric Solarist Grastrom speculates in discerning the anthropomorphisms "in the equations of the theory of relativity, the theorem of magnetic fields, and the various unified field theories" (11:178). The ideal systems of reason come gradually to be seen as versions of human limitation disguised as transcendence. Lem's Solarists, all men of science and hard common sense, are compelled to entertain an idea that necessarily casts grave doubts on the basis of their lives as scientists: that there is no clear line between reason and unreason, reality and illusion.

6. Because readers of *Solaris* approach it as fiction, and expect the science to be metaphorical, an educated reader cannot be as upset by the idea of science as a systematized form of despair as the Solarists are. The literary form offers a kind of comfort, deriving from the sense that the story's order is distinct from that of the ideas it "uses." And since these ideas are transformed by fiction into metaphors at the outset, the reader already starts out expecting some of the collapse of quasi-rationalistic systems into one another that the professional scientists of the tale experience in the action. As the possibility of a realistic interpretation of *Solaris* dissolves for the reader, and the scientists themselves seem to turn to religious and psychoanalytic explanations, the reader looks for clues of more traditional mythic structures. Lem provides such clues abundantly in various kinds of allusions: in names, situations, and explicit speculations. But these mythic structures, too, are subject to the novel's underlying indeterminacy. They also suffer the same mutual deformation and incongruous motivation as the quasi-rationalistic explanatory models.

The whole Solarist enterprise seems trapped in a Myth of the Will—a myth designed to explain and support humanity's appropriation of the material universe. This myth appears gross and absurd when confronted by a manifestly more powerful alien being. Into this stalemate come the Visitors, whom Lem clearly identifies with Myths of Love. Although we never learn who Snow's and Sartorius's Visitors are, we can infer from Gibarian's African woman and from Rheya, as well as from some of Snow's guarded comments, that all the Visitors are incarnations of repressed objects of erotic desire. The situation implies that the Solarists have drawn their power to explore and their love of adventure from this repression, and that the shock of seeing their shadow-selves so concretely in front of them saps their egoistic resolve. The ironic exception

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His Master's Voice, the alien messages are discovered by a character who "made his living as a supplier, and banker, and even spiritual comforter for the kind of maniacs who in earlier times confined themselves to building perpetual-motion machines and squaring the circle" (36), and by a bogus scientist who belongs to the "multitude of con men and crackpots [who] inhabit the domain that lies halfway between contemporary science and the insane asylum" (38).

The pseudo-scientific book in *Solaris* contains the log and interrogation of the pilot Andre Berton.[9] Berton is a pilot on a mission to find a lost Solarist, but he himself gets lost in the fog. Perhaps the most uncanny part of the story occurs when he glimpses the giant face of a two or three year old child, a face "like a doll in a museum" in the ocean (82). Freud, in "The Uncanny," analyzes E.T.A. Hoffmann's "The Sandman," in which a source of fear is a doll, an automaton that evokes the "[u]ncertainty whether an object is living or inanimate" (230). The doll is another sf icon, a not-too-distant relative or precursor of the image of the robot or that of the monster. In the case of robots, it often becomes problematic to draw a distinction between human and artificial, mechanical operation and human reasoning, authentic and synthetic life forms. Self and the other becomes indistinguishable from each other, evoking a long-established sf convention, a tradition manifested by, for example, the androids in Philip K. Dick's *Do Androids Dream of Electric Sheep?* (1968).[10]

The "visitors" can also be read as monsters, as their bodies are almost indestructible and they seem for a while invincible. The monsters are the manifestations of our repressed fears and almost non-rational abhorrence of the Other. As Wolfe argues, "[w]e see ourselves reflected in science fiction's visions of robots and monsters and aliens, and if these reflections are initially unsettling, they also serve to remind us that we are still part of the fantastic universe that science fiction holds up to us" (151).

Science and sf describe the Other, the alien, but the scientific descriptions on Solaris manifest the constant disappearance of the Other in language. Although Kelvin believes that eventually he has reached a limitless discourse, the communion with the Other, he "in fact, merely succeeded in driving the limits further away" (Foucault, "The Father's" 83). The Other can be approached only through the limit of the self (via madness, for example), but transgressing the limit only ends up sustaining the limit. Limit and transgression depend on each other, create and obliterate each other simultaneously. As Foucault argues in "A Preface to Transgression," "transgression incessantly crosses and recrosses a line which closes up behind it in a wave of extremely short duration, and thus it is made to return once more right to the horizon of the uncrossable" (34).[11]

Lem's novel describes the universe without the presence of meanings, without an all-encompassing code that would clarify the relationship of self

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Ann Weinstone

Resisting Monsters: Notes on *Solaris*

Our monsters have always resisted us, and until recently, resistance was futile.[1] Beginning with the earliest Greek texts, the Western narrative encounter between man and monster has done the work of reinforcing the political and cultural hegemony of propertied males. In the Greco-Roman canon, man fought against monsters so that he might return home, reanointed as lord over property, women, and armies. Ontologically, these stories placed the beast outside of the social, heterosexual domestic and human modes of production. Monsters were made, like men, by gods. They lived, geographically, at a distance from human society; the hero had to leave home to do battle with them. Monsters took up positions at the boundaries between society and nature, man and animal, and male and female, threatening contagion between dualistic categories, but ultimately affording opportunities for men to reinforce these boundaries.

The ur-text of this master narrative is obviously Homer's *Odyssey*. Odysseus' sovereignty over wife and property is threatened when the hero is detained in foreign lands after fighting in the Trojan war. In order to return home and reinstate his domestic power, Odysseus must pass through a zone filled with semi-human monsters: the Sirens, Cyclops, et al. In this borderland, categories such as human/nonhuman, male/female, and animal/man are confused. Odysseus gains in strength as he defeats these monster-threats to the dualistic categories he employs to enforce his unequal dominion at home, i.e., the oppositional, hierarchically ordered categories which ensconce the propertied male in the topmost position. Odysseus' claim to his land is preserved; his wife is delivered from the sexual claims of her would-be suitors. The borderland monsters have played out their cautionary roles in this deeply conservative account; they disappear until the next time they are needed as foils for enforcing the hero-male's rule.

Today, our monsters are robots, cyborgs, genetically altered creatures, and aliens who attempt to take up residence within a *necessarily altered* human domestic sphere or within human sites of production, including human bodies. Instead of enforcing cultural and political norms, these constructed beings function as interpolators: their presence *within* causes breakdowns, interrupting, disrupting, and redistributing power. Unlike the god-made monsters faced by Odysseus, contemporary monsters are products of human technology, or are alien constructs produced by their authors for the express purpose of creating opportunities to *successfully* confuse, destroy, or recombine oppositional dualisms such as human/nonhuman, biological/mechanical, male/ female, and

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2. *Solaris*. The subject of *Solaris* is colonization, especially those colonizing activities that proceed from hegemonic science. In *Solaris,* Lem positions *oversignification* as the essence of scientific colonization. Oversignification, in Lemian terms, is a one-way relationship of naming, describing, explaining, defining, and identifying. In other words, the medium of colonization is representation. Edward Said might have been giving a precis of *Solaris* when, in "Representing the Colonized," he wrote that "To represent someone or even something has now become an endeavor as complex and as problematic as an asymptote, with consequences for certainty and decidability as fraught with difficulties as can be imagined" (206). In *Solaris,* these "difficulties" have everything to do with the resistance of those who are the objects of representation.

Lem pits a manufactured alien being, Rheya, against her sentient Ocean-creator and a group of male scientists, whose relentless categorizing and anthropomorphizing activities supply much of the narrative's humor. Like Frankenstein's daemon and the cyborg in Piercy's *He, She and It,* Rheya resists oversignification by disrupting totalizing categories such as subject/object, human/nonhuman, and biological entity/machine. As a result, the scientists are forced to confront the limitations of their unidirectional world view and must grapple with the possibility that they inhabit a world of multiple, constitutive, and sometimes unalterably alien agencies.

Solaris begins, like all our stories of rebelling robots, cyborgs, and marginalized "others," with colonization at the point of refusal: with the story of the resistance of a constructed being to both scientific and other forms of subjugation. Briefly, *Solaris* tells of four scientists in a space station orbiting an alien planet, Solaris, whose surface is almost entirely covered by a stubbornly generative, sentient Ocean. The Ocean engages in a "never-ending process of transformation" (§2:23). It is "bewilderingly alive with movement" (§8:112), producing canyons of "yeasty colloids," "gelatinous walls," and "ranks of waves...like contorted, fleshy mouths..." (§8:112-13). Generations of scientists try to make contact with the Ocean and fail, eerily reiterating some of the same questions that Shelley asked in relation to her daemon, questions that have always been asked by colonizers about the colonized: Is 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?

The Ocean resists interpretation via the scientific method promulgated by the scientists orbiting in the space station; it never repeats itself, which makes scientific verification of its forms impossible. Nonetheless, the "Solarists" continue their categorizing activities, pointlessly creating a new classification for this species of one ("Type: Polythers; Class: Syncytialia; Category: Metamorph" [§2:20]) and busily naming parts of the Ocean's tumultuous surface after themselves. Carl Malmgren says of Lem that he "systematically interrogates the frames of intelligibility that human beings, scientists in particular, bring to the encounter [with the alien]; invariably he demonstrates how such frames are limited, or subjective, or emotionally colored, or simply inappro-

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George E. Slusser

by cosmologists. It is that property of a black hole where, as Lem says in "Cosmology and Science Fiction," fiction "goes to pieces": "What heroic characters, what plot can there be where no body, however strong or hard, could exist longer than a few fractions of a second?" (p. 207). Even physics as descriptive system, Lem fears, may go to pieces here too. On one level, these two models—science and fiction—are oppositional. On another, they can be complementary (in the Bohrian sense). But finally, in the face of the cosmos, both may be, for Lem, futilely inadequate.

In the light of epistemology, then, is *science* fiction possible at all? True SF, Lem tells us in his essay on Philip K. Dick, should "reflect on the place that reason can occupy in the universe, on the outer limits of concepts formed on earth as instruments of cognition" (p. 111). Most existing SF Lem finds sadly wanting in such reflection. And the little he does see engaging the dilemma of human reason appears assured of defeat. His man of reason is Pascal's man without God. Limited by his lowly placement "on Earth," all he can ultimately know is that he is sentient, can think. Beyond this he cannot go—either to Pascal's despairing conclusion that the rest of the universe does not know or to the affirmation in faith that the other sentient form "out there" is God.

Indeed, if (as Lem tells us) the eternal silence of these infinite spaces need no longer frighten us, their eternity can no longer console us either. He cannot rid his speculations of the existential anxiety that accompanies the Pascalian dilemma. His structures of cognition are what I would call structures of apprehension. In the case of epistemology and of fiction, both of which Lem sees hopelessly fixed in its "earthly" modalities, apprehension seems the richer term. It means to perceive. But it adds to this a sense of physically taking hold of something and a further sense of feeling anxiety, which results from the tension between this need to take hold, to ground our speculations, and the apparently ever-growing epistemological gap between reason and nature. If SF, in the light of modern science, is to have status as epistemological fiction, Lem is surely right to invoke as yardstick Pascal's terrible sense of the unknowable, of the limits of human knowledge, rather than the simplistic opposition of known and unknown.

Lem's pursuit of the "possibilities" of SF would place us at the limits of fiction as well. Yet scientific description, as long as it remains part of fiction, will by the very human nature of the vehicle continue to convey the terror of knowledge as well as the silence of the infinite spaces it scrutinizes. If we are to examine the epistemological nature of SF as it exists today, it must be as a structure of apprehension.

The first test, of course, is the degree to which Lem's own fiction reveals the hold of "mythical" forms on SF's epistemological possibilities. His essays (and to a large degree his later "fictions") offer thought-experiments without human actors. Eschewing Pascal's recourse to "transcendence," Lem gives us, in "Metafantasia," the scenario of a cosmos governed by

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