

Alien Elements: A Bachelardian Reading of Lem.

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I was first drawn to Lem's work about twenty-five years ago by a claim I heard often: that in *Solaris*, he constructed the first extraterrestrial being that was *truly* alien, that is, that could not be understood and classified in human categories. In fact, that is what drew me to sf as a field: the question of how can sf be used to represent true difference? Darko Suvin, who was deeply influenced by Lem's fiction, identified this sense of science-fictional difference as a version of Ernst Bloch's *novum* — and we can elaborate Suvin's idea by saying that the imaginary *novum* in sf represents the thing that distinguishes historical existence from mythology: namely, that something new can emerge from or arrive in material existence, that will globally transform human life. The *novum* need not be a scientific innovation or discovery — though it often is. A *novum* might also be a new religion capable of transforming whole populations' world views, or a set of secular ideas and imperatives. It might be a new description of the human mind. All that is required of the *novum* is that it create a profound difference in human history, and that it be immanent in the material world, not a supernatural intervention.

Sf is, as Lem himself has often written, a genre trapped in contradiction. Its themes revolve around radical transformations in time and space (historical differences from the present, and from other worlds and beings). Yet sf is tied historically to traditional literary plots derived from myth and romance, that inevitably pull the different back into the powerful gravitation of the archaic and the familiar. The pull is so strong that very little sf breaks free.

To return to the alien, this earth-boundedness may simply derive from the fact that sf is fundamentally bound by logic and ratiocination, no matter how imaginative it might be. An alien is the product of a different evolution from the human, yet it is also in some ways equivalent to the human. The term alien implies that the non-terrestrial being has mind and intention, even if these are not conscious. It depends on some deeper understanding by the reader of ideas of *structural* difference and equivalence — rational categories that a surrealist, for example, need

not bother with. (I am oversimplifying, since difference and equivalence are fundamental aspects of any design.) And for such beings to matter to human readers, they must be linked to human concerns through stories. These stories may be explicitly narrated, or they may be implied, but for humans to be concerned with the alien (i.e., for the alien to be recognized as such), there must be — *will be* — an assumption that the different being has a history that has been different from human history (personal or species), and that the two sets of stories are becoming enmeshed at the point-moment of contact. The usual procedure — and perhaps the necessary one — is to embed the alien into a familiar story, essentially turning the different being into a manifestation of the human unconscious, a being alien to the conscious mind, yet deeply familiar to the whole human domain. I have found in fact that most sf-aliens are modeled on certain classes of earthly beings that have been dominated and marginalized by the privileged subject of sf: the Western, rationalistic male ego. These classes of the abject are animals (and occasionally mobile plants that act as animals), women, children, machines, and non-Western peoples. One need not go far for examples — think of the traditional Bug-Eyed Monster and insectoid aliens of the 30s and 40s, Amazon planets, the Village of the Damned, Frankenstein computers like HAL, and the Vulcans and Klingons of *Star Trek*. We might also include materialized dreams and psychotic manifestations/hallucinations, as long as there are technical explanations for their appearance in the intersubjective reality.

As the prestige of the imperial logocentric male ego withers in the postmodern era, we should expect to find displacements. Europeans, males, adults, organic beings are becoming models for postmodern aliens as the subject-positions of women, children, machines, animals and non-European peoples are asserted. Indeed, we should expect that some of the as-yet uncriticized categories of privilege in Western thought will be dislodged and become “alienated” — for example Artificial Life and virtual reality research will make organic life and reality itself available for alienation.

Sophisticated aliens are usually imaginative combinations of elements from different classes — the alien of the *Alien* films is part machine, part insect, part lizard, part male (a highly original *penis dentata*). The Predator of the popular film and computer game combines stereotypical elements of Jamaican rastafarians, Japanese samurai, and the physiognomy of a

humanized warthog. The Klingon combines saurian features with the customs of male Zulus under Shaka, female Amazons, and an artificial language that combines elements of earthly languages most “alien” to English — the Bantu click, Dutch gutturals, South Slavic consonant-clusters, and East Asian tonal pronunciation.

Invaluable as these creations may be for the psychoanalysis of culture, they cannot satisfy the question that draws so many readers to sf, with so little reward: how does one deal with, or even recognize, a truly alien being? Lem articulates this philosophical problem in the clearest terms in *Solaris*: something truly alien is by definition what cannot be transposed into human categories and experience. But how can such a being be known except by negation, by what it is *not*? Is there anything more to say about it than that it is different? The effect is to throw consciousness back into an examination of itself. The true alien is a “pure object” — but since there must be a sense of equivalence, and even intention, in the alien, a certain minimal subjectivity is inferred. It is also “pure subject.” Its purity comes from its autonomy. This also implies the equivalent autonomy of human consciousness — which is a tragic implication, since, in sf and most human constructions, human consciousness aspires to *communicate*, which is impossible if beings have nothing in common.

Lem comes closest of all sf writers in my reading to creating an image of the alien that satisfies these philosophical requirements. We cannot expect a writer to be able to represent a “true” alien — since we would not know it was that. The sf alien must fit certain rationalistic, scientific parameters. *Solaris* impresses the reader by the rigorous, logical process by which Lem goes about imagining how human scientists arrive at a rational understanding of difference. The planet may be read as a psychoanalytic projection, but that does not make it irrational; psychoanalysis is also a rationalistic method.

One of the first essays I wrote on Lem was called “The Book is the Alien: On certain and Uncertain Readings of *Solaris*.” My point was that readers of the book go through the same process of interpretive testing and failure that the Solarists do — i.e., the interpretation of the object is the same process as the reading of the story. I still believe that *Solaris* is a model of this rigorous sort and formal alien-construction. Still, there is a lot left over, a reservoir of surplus

meaning and pleasure that the rationalistic fantastic account does not account for. The Soviet critic Kagarlitsky called the novel the most romantic in all sf, Tarkovsky used it to create a languorous, visually stunning spectacle of psychoanalytic nostalgia. The love story between Kelvin and Harey is singular in its power, almost a new archetype of sf-romance. Is all this merely decoration, or part of a plan to mock human pride?

The next problem for me arrived when I began a careful study of *The Invincible* — published five years after *Solaris*. It appeared to me that *The Invincible* can be read as a precise formal inversion of *Solaris*. *The Invincible* is generally read as one of Lem's most classical works of sf — following the conventions of hard sf as scientific problem-solving in the face of threatening forces never encountered before. It is written in a spare, no nonsense style without romance, only the restrained manly solidarity typical of military and expedition fiction. As in *Solaris*, the aliens of the planet Regis III appear unknowable — the novum here is that these “cyberflies,” the products of the planet's “necroevolution,” behave as if they have a form of collective mind, yet the human protagonists find they must not project their mental world onto them. As sf, *The Invincible* appears to be rather a boy's book than a sophisticated game with rationality. It lacks complex human relationships — other than the Oedipal displacement of the father/commander Horpach by the protagonist Rohan. And the simplicity of the alien makes the book seem elegant as sf, but unambitious. Further, compared with *Solaris*, *The Invincible's* solutions seem banal, even forced. The alien world is not really a “necrosphere,” for the cybernetic quasi-organisms are not *dead*, they are simply not *organically* alive. The ghost-story devices that *The Invincible* shares with *Solaris* are not as appropriate — for neither the human consciousness nor unconsciousness are truly penetrated by the alien. Nor is the alien as powerfully strange as *Solaris's* ocean-brain. The latter's exact nature is never persuasively explained. Solarists, we should recall, always define the planet in terms that fall outside their areas of expertise. The physicists consider it a pre-biological form, a single gigantic quasi-cell; the biologists hypothesize that it is a homeostatic mechanism. No one can explain how an otherwise normal material structure, made of atoms, can control neutrinos sufficiently to create exact replicas of human beings, capable of growth, such as the Phi creatures. Kelvin — whose terrestrial work was on finding electro-encephalographic analogies between human emotions and *Solaris's*

“states” — discovers only that the planet is capable of manifesting the *Solarists’s* psychic states. Neither how Solaris evolved, nor how it is constructed can be known. The necroevolution of *The Invincible*, by contrast, is not very ambiguous. The ship’s officers, and the book’s readers, are offered a persuasive theory with no real alternatives: it is the familiar history of a Darwinian struggle for survival of the fittest, transposed to artificial intelligence devices. It is a witty displacement — from living organisms to cybernetic quasi-organisms — but it is evolutionary theory nonetheless, which is not only familiar to most readers, but constitutes contemporary scientific orthodoxy.

However, a comparison of the two books brought a surprise. The very qualities that make *The Invincible* so flat and tame beside the earlier novel appear to be systematic inversions of the constitutive elements of *Solaris*. That is, it was not a lessening of imaginative energy that made Lem create a more prosaic story, and a less alien extraterrestrial, but something like a decision to imagine the *opposite* of *Solaris*, both the planet and the book.

Solaris commands our attention as readers and interpreters because of the surprising consistency and unity of its many elements — all unified, as it were, by the principle of unknowability. It is an intellectual and literary pastiche, but its initial conditions of possibility require that it be a pastiche. Solaris, the alien, is not really unknowable, because it is not an extraterrestrial being, but an imaginative creation, and hence we are not only permitted to make analogical connections for which the Solarists would be criticized, but we *must* do so. In his important essay on the semantic interpretation of *Solaris*, Manfred Geier points out how the alien is constructed from words and images irresistibly connoting plasma, vagina, and Deleuzian desiring-machine. Most important for me are the first two — which set up an opposition in the text between the exclusively male crew and the ocean coded as feminine. Harey cannot be considered much of a mediator, because her function in the romance plot is to sacrifice herself to liberate Kelvin from his quixotic imagination. In a word, she acts as a traditional female actant in pre-modern fiction, sacrificing herself for her man. The alien ocean-mind is undeniably coded as feminine. And Kelvin’s last-minute decision to stay comes after what we might call a cosmic flirtation during his first visit to the surface of the planet.

The Invincible stands in sharp contrast. No women, indeed nothing coded as feminine enters the plot at all. Nothing evinces the plasticity, fluidity, irrationality, and mystery associated with *Solaris* (to use only the most obvious clichés). Regis III is a barren planet; the aliens are hard little geometric solids that cluster and short-circuit brains; the material substrate is never in question, nor is the centrality of technological intelligence; the plot and language (indeed the planet, the alien and the human protagonists all) allow no excess. Except for a moment when the cyberclouds act as if they are engaged in self-reflection, mirroring a moment of mimoid behavior in *Solaris*, nothing is created by either the humans or the aliens in *The Invincible*.

The consistency with which these two novels, so similar in formal design, are inverted mirrors of each other draws attention to what I now take as their imaginative principle of difference: to wit, they are novelistic elaborations of the difference between primary elements — they are transformations of the same process: human minds' collisions with objects that are projections of different material elements. Here I do not mean "elements" metaphorically, but literally. The alien ocean of *Solaris* is an elaboration of the principle of water, a Thalian phantasmagoria. The alien of *The Invincible* is an elaboration of earth. This is a leap to a new set of considerations altogether. For if this hypothesis is correct, it is not primarily the imaginative and skeptical use of scientific method and history that makes these novels memorable, it is their elemental imagery. Here I need the help of critic who is revered, but who has little place in the contemporary critical pantheon, Gaston Bachelard. After a career as professor of the philosophy of science, Bachelard turned to the study of poetic imagination, proposing a "psychoanalysis of objective knowledge." Bachelard argues for the primacy of non-rational images that derive from our early experiences of qualities of matter. These relation with matter Bachelard sees as organized into the four basic elements of Indo-European proto-science. Bachelard stresses that these early formative material experiences are powerful precisely to the degree that they resist abstraction — although whole sciences may develop out of the elaboration of such imaginative substrates.

I'd like to deviate a bit from Bachelard here and stress how these fundamental elements — the sacred categories of the Pre-Socratics — represent the beginning of scientific abstraction.

They have mystical powers of transformation, they are at work in all levels of being at all times. They are in the soul as they are in the movements of the planets as they are in the trails of a snail. They are the form and substance of all change and all rest. They are the causes of strife, repulsion, love and gravity. They are Eros, Thanatos, and *moira*. Each in its own way. Thus, to say that Lem constructs his aliens out of primary elements, and then forces his humans to confront their worlds, is not to call into question that Lem is a rationalistic fantasist. It is to say that his imagination accesses the images where rational categorization and poetic reverie meet. This may help explain why the images of the ocean-planet Solaris and its excrescences — the mimoids, symmetriads, and symmetriads — are so powerful, as are the cyberflies and their cloud-clusters.

Much more might be said about the ways in which *Solaris's* water-principle and *The Invincible's* earth-principle relate to each other. The immediate problem, however is: if these two examples are not merely accidents of the imagination, are there other aliens that complete the elemental system? Are there fire-aliens and air-aliens in Lem's oeuvre? One must be very careful here not to force texts into a Procrustean formula. Any study of Lem's work must make it clear that a) elemental imagery is not a conscious strategy on Lem's part, and b) that already in *The Invincible* Lem ceased to show interest in aliens as the products of extraterrestrial natural history. Rather than dealing with alien creatures directly, Lem concentrates on their effects and creations. In a sense, he loses interest in the problem of representing the truly alien being and devotes himself to imagining alternative *civilizations* — i.e., effects that imply intelligence similar to the human at least in its desire to create elaborate systems of externalized communication and control.

We will not have access to beings evolved from air and fire — only, possibly, their effects, from which we might infer an affinity with those elements. I am confident that air beings can be found (to the extent that they can be decoded) in *His Master's Voice*. One of the lasting images of that novel is that of a cosmic neutrino stream pouring onto the earth from the regions of alpha-Canis Minoris. The neutrino, as becomes clear not only in Hogarth's explanation, but through its effects, is an element of matter almost completely lacking in "crude substantiality." It passes through the most solid earth, and indeed in the novel it has only two functions, both of which, I

submit, are elemental functions of what Bachelard calls the “aerial imagination.” These are the transmission of pure information and the inspiration of life in inert matter. I must leave aside the question of how “pure” information can be — but it is clear that Lem chose as his vehicle for the Message from the Stars an element that has qualities of purity among subatomic particles. With zero rest-mass, the neutrino fulfills the physical requirement of being mobility incarnate, which is for Bachelard the essence of the air-image. One might say that the neutrino is almost immaterial, as air in the traditional mythology of elements is the closest an element can become to being disincarnate spirit. It is a central motif of “pneumatology” that the source of life is breath breathed into the inert clay by God or Prometheus; and Lem’s neutrino stream is similarly discovered to have biophilic properties. In this materialistic version of the Western monotheistic creation myth, the neutrino stream arriving from the Cosmic Senders may be responsible for tipping the balance in the Earth’s dynamical material system over into the disequilibrium of life — if not precisely creating it, then statistically contributing to the likelihood of its emergence. And of course also to the emergence of intelligence and the organization of creatures potentially capable of decoding further meanings of the Message. This interpretation is favored by Hogarth, for whom, as a mathematician, an immaterial foundation of material reality has a deeply professional attraction. For all his surface pessimism, Hogarth would prefer the idea, and the idea of the good, to be a cosmic principle, and his gradually developing desire to believe in Senders so advanced that they act as angelic messengers for the Universe itself, is an affirmation of aspiration, “purified” of the changeability of water, the inertia of earth, and the destructiveness of fire. Long extinct, existing only in their refined effects, the putative Cosmic Senders persist only as the Idea behind the neutrino stream, as beings who have almost defeated mutability and death.

The remaining element is, of course, fire, and there is no doubt that the last of Lem’s great extraterrestrial contact novels, *Fiasco*, develops its world almost exclusively in terms of fire. But we must be careful here, for unlike the case of the other aliens, the elemental principle underlies not only the war sphere of the Quintans, but of humanity as well. This should not really come as a surprise, since the theme of the novel is the blackly ironic convergence of the Quintans and the heroic human Knights of Contact. Fire, in the novel’s universe, is ineluctably a destructive fire —

it is the source of the utopian technology of sidereal engineering, and it ends inexorably in holocaust.

Practically every aspect of technological progress in *Fiasco* seems to be based of destructive fire. The interstellar spaceships use flowstream engines to gather up dispersed inert hydrogen from the vacuum of space and convert it into fuel, all to take destruction to Quinta. The *Eurydice* itself has been built by melting millions of tons of the Moon's mass, by literally melting down mountains, foreshadowing the selenoclastism above Quinta. The ship is propelled into intergalactic space by an array of laser cannons that threaten to destabilize the moon Titan. Even when he calls the *Hermes* a home, Tempe describes it in fire terms, as a great engine propelled by fires greater than solar heat. As the human expedition becomes increasingly involved with Quinta's war-sphere, the human are forced to confront models of comparative technological evolution that predict the necessary collapse and explosion of civilization — all on the model of sidereal engineering, the imitation and manipulation of stellar-scale physics. Once stellar-physics has been used it leads — on analogy with nuclear fission — to the ever-widening destabilization. Trading fire for fire, the utopian humans gradually burn and melt each layer of Quinta's cosmic sphere: they cavitate its moon, they catastrophically melt its atmospheric ice-rings, and in the final holocaust, they bore through to the planet's core with their stellar laser.

Interestingly, *Fiasco's* fire world can be read as an inversion of *His Master's Voice's* air world just as easily as *The Invincible* can be read as an inversion of *Solaris*. The quasi-angelic neutrino *pneuma*, which aids the creation of life by strengthening the statistical probability of its emergence has its demonic counterpart in the Promethean or Luciferic stellar cannons that beam down annihilation. Where the Senders send a message that seems to have profound brakes inscribed in it, preventing it from being turned into a weapon, there is no reliable way to convert the stellar laser cannons into messaging devices. And while the Senders can offer hope in a sort of inexhaustible benevolence, toward not only humanity but the cosmos as a whole, the utopian human explorers of *Fiasco* cannot avoid bringing destruction to a planet which is, in my view, merely an image of the Earth's alternate evolution.

I believe I can demonstrate that Lem, perhaps unconsciously, constructed his extraterrestrial worlds via the elements. We can at least say this: Lem has consistently constructed his unknowable aliens through one of the most familiar, albeit rationally irreducible category systems of human thought, the four elements. I believe it is this, and not any putative logical imaginary, that makes his sf of extraterrestrial contact so memorable. This is the dimensions — romantic, if you will — that gives these works a foundation stronger than ratiocination and adventure plotting. These are the lyric sources of Lem's novels, the poetry upon which reason rests.