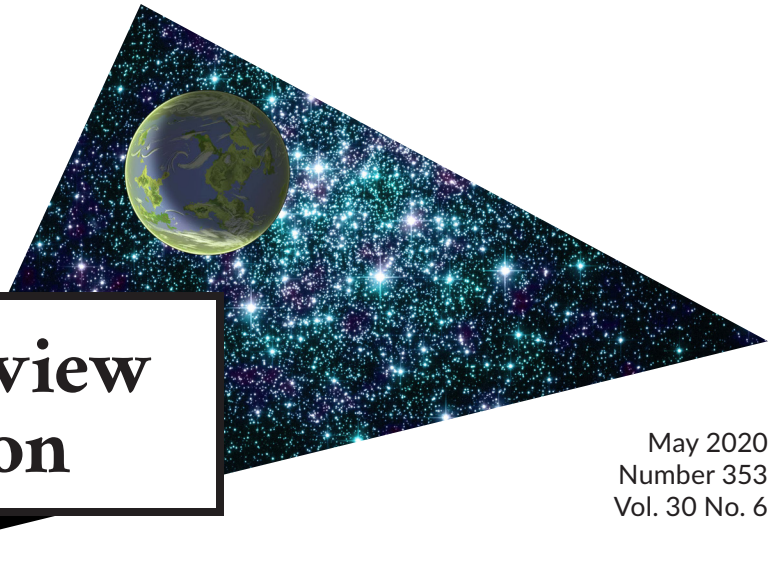
Twenty-two Time Hugo Finalist!



The New York Review of Science Fiction

May 2020
Number 353
Vol. 30 No. 6

Special Shelter in Place Issue

Victor Grech

Pandemics: Known Unknowns and Our Failure to Prevent Our Unwilling Participation in a Dystopian SF Scenario, in Two Parts

Introduction to Pt I

> Everybody knows that pestilences have a way of recurring in the world; yet somehow we find it hard to believe in ones that crash down on our heads from a blue sky.
>
> —Albert Camus, *The Plague*, 1948.

[This article was originally written in two parts and published on the NYRSF web site in March and April 2020 as the Covid-19 pandemic moved from Europe into the United States. Events have moved quickly over the last six ~~hundred years~~ weeks since it was written; Dr. Grech has continued to update the Mater Dei Hospital web site with more news, observations, and speculations. <www.ithams.com/covid19/updates.html#content4-q> —the editors]

Covid-19 is currently a global pandemic. A pandemic is a disease outbreak that is prevalent over a wide area, from a group of countries to the entire world. The current pandemic disease, Covid-19, is caused by a novel coronavirus, SARS-CoV-2. The global spread is following an approximately exponential curve: it took 67 days to reach the first 100,000 cases; 11 more days to reach 200,000; and just 4 more to reach 300,000 cases. This virus's deadliness lies in its stealth, spreading silently with an incubation period of weeks. It kills slowly, weeks after infection (Chen et al., Ferguson *et al.*).

This essay will briefly review the literature vis-à-vis epidemic disease in myth, in literature, and in science fiction.

Continued on page 8

Harry Martinson

The Star Song

Translator's Introduction

The Swedish author and Nobel Laureate Harry Martinson (1904–1978) wrote only one work that can be considered sf, yet it remains his most well-known. The epic poem *Aniara: En revy om människan i tid och rum* (1956) has been adapted into an opera (1959), a ballet (1988), a musical (2010), a feature film (2018), and several plays. It has been translated into English twice—in 1963 as *Aniara: A Review of Man in Time and Space* by Hugh MacDiarmid and Elspeth Harley Schubert, and in 1999 as *Aniara: An Epic Science Fiction Poem* by Stephen Klass and Leif Sjöberg. Set in a future marked by environmental destruction, *Aniara* tells the story of an evacuation from Earth to Mars gone awry: the spaceship *Aniara*, carrying 8,000 refugees, gets thrown off course and drifts off helplessly into the depths of space. In addition to being a critique of nuclear armament and technological civilization, *Aniara* contains stunning poetry that captures the incompre-

Continued on page 4

Harry Martinson: The Star Song

continued from page 1

hensibility of the universe of modern science, including deep time and the vast distances of interstellar space.

Martinson had been preoccupied with the limitations and possibilities of poetry vis-à-vis modern science for a long time. Almost two decades before *Aniara*, he wrote the essay "Stjärnsången" (1938) ("The Star Song"), presented here in English for the first time. Martinson saw the theories and results of physics and astronomy as posing unique challenges not only to human comprehension in general, but to the poet's craft in particular. "There are no longer only stars out there," Martinson says, "but thousands of galaxies. Astronomers no longer speak of light-years, incomprehensible in and of themselves, but of millions of light-years." He asks what this means for poetry: "Using hyperboles and overtones was an ancient right of poetry, but where can poets find exaggerations with regard to the worldview of modern astrophysics?" Even though parts of "The Star Song" may seem slightly dated—for example, Martinson's sharp distinction between humans and other animals—most of his questions and reflections are as relevant today as they were in his time. "The Star Song" remains one of the most perceptive and beautiful formulations of the challenges of writing poetry about science and the universe in our time. Not only does it defamiliarize habitual ways of thinking about space and poetry—it is poetic in itself, at times even rivaling *Aniara*. "The Star Song" is a hidden gem of sf poetics, and I have done my best to convey a sense of Martinson's striking questions and poetic language.

"The Star Song" also contains the first known use of the word "aniara." In a discussion of the inability of ordinary language to capture atomic processes, Martinson refers to a passage in Arthur Eddington's popular science book *The Nature of the Physical World* (1929), where Eddington quotes two lines from Lewis Carroll's poem "Jabberwocky," included in *Through the Looking-Glass, and What Alice Found There* (1871): "The slithy toves / Did gyre and gimble in the wabe." Eddington suggests that this grammatical sounding yet nonsensical language parallels our understanding of the atomic world; we can describe what is going on to some extent using the language of mathematics, but we lack concepts for truly imagining it. Martinson follows Eddington in this line of thought, but instead of translating Carroll's lines directly, Martinson formulates his own version: "de löjande glomenarerna / gölja och vanja genom aniara," which I have translated as: "the loging clomenares / gole and veineer through aniara." While Martinson scholars have argued that Martinson constructed the word from a Greek word that means "sad" or "despairing," the first appearance of "aniara" is thus as a nonsense word illustrating the difficulty of understanding the worldview of modern science—which, as it happens, also parallels the confusion aboard Aniara.

—Daniel Helsing, 2019

I

To begin with: what is clarity? And what do we mean by the requirement to be clear?

The answer is a counterquestion: is not the concept of clarity just one image among other images? And confronted with the oppressive mystery of the universe, are we not justified in asking whether clarity itself is also a kind of cataract—a crystalline cataract?

If you have said *clarity*, then you have also indirectly and implicitly said something about a particular approach. Ideas are clear only to the extent that the methods by which clarity is achieved are valid. Thus, the ideal of the thinkers, the crystalline thought, is, properly understood, only a beautiful image, a symbolic figure or an abstract idea. Cultivating the ideal of clarity and obeying its laws amount to nothing more than an aesthetics of thought. There are limits to what this kind of thought can achieve.

And if these limits are felt on Earth, how much more acutely are they not felt among the stars, among the nebulae and the galaxies? Certainly, when interacting with the stars we do not have to deal with the torments of physical congestion, but the experience of our limitation is not compensated by telescopes and mathematics. Our quiet thoughts during a starry night swing from sensations of being in a canopy of liberation to being in a canopy of anxiety.

What the astronomers find during their strenuous nightly work, when they point the giant tubes toward openings in the star jungle toward star clearings and boskets of fire, is a bottomless space of oddities and properties, whose reflections are transformed, via the scientists and the methods of science, into a language comprehensible by human thought.

Thus, now less than ever can astronomically illiterate human beings feel at home in the bottomless star garden of the universe. They know too much to be able to return to the old ways yet too little to be able to digest the astrophysical perspectives in their thoughts, their views, their songs. Rather than embarrass themselves they abstain from star songs, no matter how their thoughts may gather and whisper when the autumn stars begin to sparkle. Star songs are no longer seamlessly composable and singable.

The star songs of today's poets, like the conversations about stars during autumn and winter nights, submit to the authority of modern astronomy yet not without a sense of alienation. Many view the firmament of the new astronomical worldview as a province forever destined to be devoid of songs. Others, however, are not deterred—not even in the face of the expanded perspectives according to which not only stars, nebulae, and suns make themselves known in the scientific field of vision but also thousands upon thousands of galaxies. But to not be deterred can only mean one thing, namely to speculate and to dare to speculate. And here, as in many other areas where new theories and perspectives have transformed the requirement to be clear, you can discern a new kind of inspiration that traces its roots to the speculative, or, if you prefer, the quasi-scientific. "Tragic" appears to be the only appropriate designation of our situation: being forced to speculate because the old worldviews are no longer

credible while the new perspectives are incomprehensible. This is the situation of the star song today.

Casting a seine net in the sum total of world literature produced between 1900 and 1938 would not, I believe, produce a noteworthy draft of truly fresh and sparkling star poetry. The star song has become hampered and impoverished.

But since modern astronomy has expanded our view of the totality of reality, the tension caused by that expansion must be discernible in a new, hitherto unknown modulation of being.

There are no longer only stars out there but thousands of galaxies. Astronomers no longer speak of light-years, incomprehensible in and of themselves, but of millions of light-years. In addition, there is the development of the scientific views of the nature of light, quanta, and mass, and the theories of the astronomical schools, which are being crossed like quiet mathematical blades over the dizzying depths of the universe.

Using hyperboles and overtones was an ancient right of poetry, but where can poets find exaggerations with regard to the worldview of modern astrophysics? The temperature in the cores of suns (up to 50 million degrees Celsius)—one cannot but ask: can this inner heat in the cores of the universe even be called a state of matter? These gigantic suns, which one would like to conceive of as quivering titanic spheres of lightning in whose interiors musical storm scales interweave to create crescendos that surpass all comprehension. They could only be comprehensible through properties that lie beyond every possible form of human imagination. For us, they are only comprehensible via scientific methods, tempered by mathematical equations or cooled off on a blackboard. Only in this way can the unfathomable leave perfectly precise yet unreal traces because truly grasping something requires grasping it with your senses, your mind, your feelings. Reality, in this sense, requires delimitation. The unlimited cannot be experienced as real. To me, this is, if not the greatest, then at least the closest of all the paradoxes in the riddle of the universe. The senses of immensity and mysteriousness exist by virtue of the limits of our imagination and comprehension.

Generally speaking, the life of the poet is to wander around and wonder. And why does he or she wonder? Where does the sense of wonder come from? It comes from an awareness of one's own limitations. The world of a poem exists on one boundary or other. If the world of the poem were not limited, then it would not exist as a world because the source of poetry is wonder and without a sense of limitation there can be no sense of wonder.

With this in mind one would think that the astronomical findings from the nineteenth century to today would have precipitated an unprecedented flood of wonderstruck, universalistic poetry. When in the course of history has one ever had the opportunity to have such a profound sense of one's own limitation? You might think that, but it has not happened. The most likely explanation is probably that the development of scientific perspectives was febrile not only in the field of astronomy but in all fields of research.

The changes on the surface of the Earth were not only large but utterly strange. There were thousands of opportunities to painfully encounter, in various guises, the sense of limitation. You did not have to seek out this source of poetic creativity; you were given it in ample amounts despite repeated renunciations. When it comes to the desire and ability to make the world a better place, your neighbor typically demands limitation and inability of you. Against this backdrop—or rather, against the backdrop of starlight millions of blue miles beyond this stile—both astronomy and the firmament persisted, displaying wild and clear autumn beauty (autumn is the spring time of constellations, seen from the Northern hemisphere).

II

If you have said *clarity*, then you have also said something about a particular approach, a particular viewpoint, and consequently you have also indirectly recognized that the concept of clarity is a symbolic figure or an abstract idea that always appeals to the sense of sight. We see clearly, or we think we see clearly. External experiences, clear visual proofs, or striking visual expressions prompt us to "see" with an inner eye. This, if anything, is evidence for how the logic of the eye has permeated thought. Thus, it would be more universally accurate to use the words discernibility or detectability instead of clarity, because the universe that surrounds us is completely independent of our "viewpoints"—it is not subject to restrictions laid down in the world of the senses.

For the first few thousand years, astronomy developed primarily by compiling visual testimonies. Now astronomy and astrophysics are at least as preoccupied with electrons as with giant suns, and you cannot see the electron; you can see only its traces.

The reflecting telescope is an enhanced artificial eye; photographic magnifications extend the eyesight. Only in conjunction with mathematical astronomy do large telescopes become something more than complicated and grandiose magnifying instruments.

For mere mortals, however, the question boils down to whether any kind of language that is not rooted in imagery is possible at all. Yes, someone might reply: the people of the future could potentially think in terms of frequencies and, so to speak, conduct research using musical tones. A similar idea seems to have been sensed by those who dreamt about the harmony of the spheres. Perhaps one can also imagine that future instincts, raised to a new power, will produce a mathematical, tonal mode of thought completely divorced from imagery. The question, though, is whether the sense of sight will still be the leading sense, whichever "future" we may imagine. For even if we, through thought experiments, may reduce the "five" senses to just one—the sense—the most heightened of all modes of sensory perception is still eyesight. The ear is primitive compared to the eye, whose cells are able to transform almost unimaginably high frequencies into visual nuance. Indeed, how often have we not noticed how the inner eyesight aids the ears in constructing an internal image from external auditory stimuli (radio theater)? When we hear the stridulation of grasshoppers scattered on a meadow, we see it through our ears; the sounds are trans-

formed by the inner eyesight into a kind of image.

When you are sitting in a concert hall or by a radio receiver and listening to music, you close your eyes and engage the sense of sight inwardly. If you find the music shallow, you visualize the different instruments, how they are situated in the room and how they produce music. But if the music moves you, then these inner images fade away and dissolve into streams and currents in which sensations of emerging, blossoming, and disappearing shapes and colors merge with the sounds. Or rather, the sensations arise from the sounds and are transformed into visual sensations, into inwardly visible variations and abstractions.

Image comprehension is perhaps, in the end, the highest form of sensory perception and thus the most elastic limit for determining what can become real to us. The limits of thought mark the boundary beyond which our thinking and imagination is unable to take shape using the colors and structures of our eyesight, whether externally or internally. What we call, using a specious image, the swift flight of thought to the outermost nebulae remains a process of interior borrowing: the thought borrows from the eye. You imagine seeing the thought hurtling through the millennia. And you do this involuntarily and against your own will, for no matter how much you would wish to disregard your eyes, you cannot do so. Every day of our lives we experience, if we think about it, the dominion of the sense of sight in the brain's view of reality as well as over the psyche during our nightly dreams.

The concept of distance is not only relative—it is also, through our knowledge about our limitations, absolute. To acquire the color of reality at all—and without color it cannot live—the world of sensory experience creates, through self-preservation, the "provisional absolutes." The sense of limitation defines them. The sense of limitation, the understanding that eyesight is the catcher but also the boundary picket of the sensory world—this, and nothing else, is the origin and source of the imagination. Only through the sense of limitation does the creative desire of the imagination spring forth, and it continues its activity, unbeknownst to us, during our sleep. We dream because we, knowing the limits, wish to transcend them. How we succeed in expanding the absolutes can be discerned afterwards when we reflect upon the dream. Mostly, the dream turns out to consist of images; because of our eyes' incessant preoccupation with shapes, colors, and nuances, our internal creations during sleep routinely mimic the wakeful activity of our eyes. Like a child playing with building blocks, so our psyche at night plays with fragments, magnifications, distortions, and horrors derived from visual forms of perception. Thus, dreams too create their paradoxes on the racetrack of visual perception—rarely, if ever, beyond that domain. If we were ever to experience something during our nightly dreams that we cannot describe using images derived from the sense of sight, then it becomes apparent that it cannot be described in any form. We are left with dim attempts to gesture at indeterminate experiences in the dream. It can be compared to how events in the atomic world are described in the language of modern astrophysics. Equations describe processes for which no verbs, nouns, or adjectives have been invented. It is as though we would say:

> the loging clomenares
> gole and veineer through aniara.

I've taken the liberty to construct this phrase on the basis of a similar phrase in English in *Alice in Wonderland*, quoted by [Arthur] Eddington.

Life with all its principles and limitations is, in a way as of now unknown, cut off from understanding totality, cut off from the possibility of transforming the principles of totality into graspable forms in the world of sensory experience.

But life cannot settle, neither biologically nor philosophically, for a fundamentally indefensible relativism. Through its very nature, life therefore institutes what I previously called the provisional absolutes.

It may be appropriate to illustrate, using a few examples, how the provisional absolutes appear. We will choose some of the most common kinds.

A man is looking at a star located 51 light-years away, according to what he has read and learnt. This does not shake him up notably. At a geography lecture an hour later he experiences dizziness when learning about the distance to Australia, which he has always wanted to visit.

Everything is relative, but longing contradicts this because a second later you have forgotten, or by means of the imagination subjectively circumvented, the fact that everything is relative. In such phenomena we get a glimpse of the absoluteness of the will to live. That it is provisional only makes it even more poignant. Yes, I would go so far as to claim that our entire sense of life rests upon the float switches of the provisional absolutes. The thinking person can uncover them, can realize that everything is relative, but can still manage to disregard this fact from time to time, all the while carrying the conviction deep down that everything is relative.

If we wanted to give this yet another name, we could say that the modern worldview combines with the provisional absolutes to yield the "dual perspective" and the "both-conviction" as a fifth dimension. It is present also in animals and plants but unconsciously and blindly. Animals have not managed to poke a hole in the absoluteness of the instincts, so to speak. For them, the provisionals reign absolutely throughout life. This might seem to contradict the notion of provisionals, but it does not, because the difference between the thinking person and the animal is, in this case, that while the person can discover that the absolutes are provisional, animals and plants never do. They live blindly with the provisionals.

In other words, we humans are bearers of a secret, of a confidence. Sometimes we feel this as an anxiety-inducing secret, sometimes as a shocking confidence.

Generally speaking, the thinking person leads a double life with two separate yet united imaginary worlds that repel each other. In the future people might take this into

account more than presently, and it will most likely lead to upheavals. A new and better world can only be one that manages to felicitously agree on the interpretation of the provisional absolutes, for upon them rests the universal self-regard of life; and from the point of view of the art of living, the provisional absolutes form the foundation, the only humanly true foundation, for understanding the relative—and thus also for understanding the waviness and perpetually fresh indifference of the unfathomable. Our world remains a world of possibilities, freedom, and responsibility. The external conditions of relevance to humanity are amenable to fundamental transformations, and they should be transformed. Yet the fundamental feature of human life remains. It is our fate and our joy.

The provisional absolutes are the unconscious articulations of the drive to self-preservation and hence of the drive to self-cohesion in life. They bestow upon life its very own, specific dimension (a fifth dimension); they are poignant and touching as a creation but also poignant and perpetually thought-provoking through being seamlessly inserted at the heart of the unfathomable. And that is why we seem to transcend ourselves every time we cautiously speak about astronomy with each other in the twilight hours; the imagination hurtles incessantly through dark, light-pierced space, beyond good and evil. For at least as a matter of practice, we still speak of good and evil. Fire burning our skin is bad, and cool water is good for our throat. We will never escape the fact that our physical and psychological reactions color our thoughts. They are the measure of the self-preservation of our limitations, and thought images are instinctively cut using this measure.

Thus we return to the question of the nature of thought images and figurative thought. And let us see whether it is possible to invent new images—less frightening images—to counter the immeasurable scales of astronomical distances. It is obvious that images can never supersede or even figuratively intimate the unfathomable and ungraspable depths of the bottomless universe. In this regard, compression is the only possible function of figurative thought. It condenses the intimations of bottomlessness to images, to limited, graspable notions. Such images are produced yearly; some of them are stupid, for example, the image of a train or a race car or an airplane traveling next to a beam of light. Such images are stupid because the quantity that is supposed to exemplify the magnitude of a light-year in turn becomes unfathomably big, a long, dead sequence of digits that does not tell you anything. No, the condensing thought image—again, an exaggerating image is out the question—must be constituted differently. Perhaps it must be constructed in such a way that it simultaneously condenses astronomical distances and puts figurative language itself under discussion. An image along these lines could, for example, begin its condensing activity with the claim that the concept of distance is itself an image, as is the concept of proximity, and that, furthermore, the concept of distance (or unfathomable distance) has religious connotations, just as the concept of depth acquires moral connotations for someone who is described as shallow. The concept of height—the dimension of ascension—has always been the most efficient term of actuation in world history; the term has always appealed to or instigated the primitive fear of descent (into the swamp).

I repeat: if we commence sketching our image in this way, then we will rescind a major part of the crushing feeling that can overwhelm us at the thought of the unfathomability of the universe.

Thus, by inner necessity astronomy leads the awake or easily awoken layperson to philosophy (or quasi-philosophy) and hence to conceptual discussions. But nothing prevents astronomy from also steering in the opposite direction toward cosmic or chaotic emotive viewing. The swimming strokes of speculative minds also constitute a mode of rescue, and there are always desolate lands longing to be filled with voices. But regardless of what surprises are yet to come, human beings will always be enthused and enchanted, because the sense of wonder always springs from a sense of the fate of one's own limitation.

The fate of everyone is death—and this certitude compensates itself by providing the widest of wings.

Harry Martinson won the Nobel Prize for Literature in 1974. Daniel Helsing lives in Goleta, California.