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CREW

Co-editors:

Ádám Gerencsér

Mariano Martín Rodríguez

Communications:

Gina Adela Ding

Webmaster:

Ismael Osorio Martín

Contact:

team@sciphijournal.org

Editorial



Alas, one cannot shake the feeling that it is not entirely appropriate for a publication dedicated to SF, a genre most commonly associated with the future, to avert its gaze towards the sentimentality of the path already travelled. Yet with the approach of the festive season, we permit ourselves this small indulgence.

Thus as we mark the relaunched *Sci Phi Journal* completing its first year, we wish to use this opportunity to thank you for your continued readership and the kind expressions of support we have received throughout 2019.

In this winter issue, we are delighted to once again offer you an unconventional selection of original fiction, essays as well as a translation of an obscure gem of contemporary European spec fic. What more, this edition accompanies an important step forward for the Journal, one that has been in preparation for quite some while.

The *SPJ* site is unveiling a major new feature as a culmination of several years of research work by co-editor Mariano: an extensive, living bibliography of our favourite stylistic sub-genre, Fiction Non-Fiction. In its present state, the index runs to a printed length of about 80 pages, and Mariano does not conceal his ambition to make it as complete as possible. For that, we invite your help to expand it by writing to us or posting suggestions in the comment section. We hope that with time the [FNF List](#) will grow to serve as a valuable resource for all scholars and readers

interested in this rigorous, concept-driven mode of writing.

The entire *SPJ* team thank you for your companionship along the journey in 2019 and look forward to sailing forth into 2020 to bring you more cutting-edge speculative philosophy.

We wish all of our readers, authors and contributors a merry Christmas and an auspicious start into 2020!

Speculatively yours,
the co-editors

Euler's Equation

Neil James Hudson

e

When I first met Euler's equation, I thought it was proof of the existence of God. e , the base of natural logarithms, underpinning the whole of mathematics. i , the square root of minus one, the unit of complex numbers. π , the relationship of a circumference to a diameter, from which geometry is made. 1, unity, the foundation of all numbers. And we all know about 0. $e^{i\pi}+1=0$, said God, and there was light.

So when Euler's equation fell apart, I knew we were in trouble. We held an emergency meeting at the maths department at the university, which was fast approaching a 0 of its own. But as long as we were still there and were still being paid, there was work to be done.

Professor Hazlitt chaired the meeting, the only one of us who had actually done any work of real note. "It seems to have happened at about 10:30 this morning," he said. "Before then, the equation seemed to hold. But now, no matter how hard we try, we just can't get the terms to fit together."

"Could we just have missed a flaw in the proof all these years?" I asked.

Hazlitt shook his head. "The equation definitely worked yesterday: it was holding everything else together. But now something's changed. Mathematics has changed."

"Euler's equation was the proof," I said. "It was God's covenant with mankind, like the rainbow after the flood. It said, the universe isn't just chance, it's designed. All the basic elements of reality fit together like a jigsaw. The equation is God's signature, just to let us know he's still here. But now the equation doesn't hold; God has left the building."

"Frankly, Dr Carlton, I had hoped for something more helpful," said Hazlitt. "If we can identify the change, we may be able to rescue mathematics."

"It's not given to us to mend the universe," I said, and indeed the meeting agreed to do no more than to monitor the situation.

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But by the next morning, -1 had a real square root. It was its own square root, like 1 . Multiply -1 by -1 and you got -1 . This hadn't happened before. Complex mathematics was wiped out at a stroke.

"This can't be happening," said Hazlitt, and I felt pity for him. Complex numbers had been his speciality, and now there weren't any.

"Mathematics is our best description of the universe," I said. "The universe is getting simpler. We're winding down."

"But isn't there something we can be doing? Shouldn't we be praying, or trying to, I don't know, get our souls in order?"

"The game's over," I said. "It's as if the exam's just finished, and we've handed in our papers. You can carry on working through the problem if you want, but it won't affect your grade any more. It's too late to be good.."

"I don't suppose you're upset. This is what you've been waiting for."

I allowed myself a small smile. "I didn't expect it to be like this. Frankly, I don't know what's going on. I expected God to finish it, not wind things up. I think there may be another entity at large in the universe. If God can make an equation, I can only think of one being who could unmake it."

Professor Hazlitt left angrily, leaving me to my thoughts. At least I now understood something that had been puzzling me. For centuries, people had been obsessed with the number of the Beast. Everyone tried to understand the number itself, but no one understood the real significance.

Before long, the Beast would be the only thing left with a number.

#

π

There seemed little left for me to do but to go home. I was depressed: I didn't think I'd scored well enough in my own personal exam, and in any case I wasn't sure who was in charge here. God, I felt, may have broken his own covenant, and if you couldn't trust God, who could you trust?

Numbers were falling apart everywhere. Things that were supposed to be equal were greater than each other. The basic relationships that underpinned the universe had become exes.

Wearily I got in my car and started the engine. As I tried to reverse out of the car park though, the car juddered as if it were moving over a pile of rocks rather than the flat tarmac surface. I got out, knowing already what I would find.

The wheels were out of shape. It took me a while to see it, but the circumferences were completely out of proportion to the diameters.

Well, that's geometry bugged, I thought. I could see no choice but to return to the maths department. Every shape I looked at seemed wrong, and I wondered how long it would take before the Moon fell down.

We had failed humanity. We were mathematicians; people should have looked to us for answers. Instead we just described everything, and expected it to work as it should. We had never looked at how to keep the system going.

I was interrupted by Professor Hazlitt, bursting into the room with panic on his face. "Dr Carlton, how many of us are there in this room?"

"Well, there's me, that's one," I said. "And there's you. That's another one. So....that's more than one."

"But how many more?"

"Let me think," I said. "There's at least one more than one, but....how many ones are there?"

And then there was only one anyway.

#

But there wasn't only 1 left. Even when 1 was all there was, there was still something other, something not 1. Even God had a Devil. And 1 had its

#

0

$e^{i\pi}+1=0$, someone had written on the blackboard. "You'd better believe it," I wrote underneath.

The numbers healed. From our non-existence we were returned to unity, then discreteness. Geometry returned to its standards, real numbers realised that they weren't the only option, and finally logarithms returned to their natural ways, and Euler's equation, the key to the universe, fitted together once again.

And I realised what had happened.

I was quite wrong to view the equation as a covenant. It was a warning. Everything was there: logarithms, complex numbers, geometry, real numbers.

And there, right on the other side of the equation for all to see, was a big zero.

When we had been non-existent, when everything had been zero, nothing had actually changed. We were still equal to all the terms on the other side of the equals sign. Those terms contained the universe. Which means:

The universe isn't real.

In the beginning, God created the Heavens and the Earth. And this isn't it. So to warn us, He gave us Euler's equation. He fitted the terms of the universe together to show us that it all added up to nothing.

It's easy to see our mistake now. The equation is three-dimensional. We can see the terms lying flat, but there are other equations at right angles to the equals sign. We can't see them because they're edge-on. What we have to do is tilt the equation so we can see the other three-dimensional terms.

These terms define the real universe. If we can unravel them, we can find out what the real universe is like. And if we can describe it, we may work out to get there.

1

Because everything was one. I'd been right, there were no other numbers left. There were no distinctions to be made between me and anything else: it was all one.

Before now, I'd often thought of the differences between myself and Jasmine. But now there no such differences. We were no longer separate, discrete, countable. We weren't even we: we were I. Every atom that had ever joined with another was now the same atom. The molecules were just one atom. I myself was that same atom, and far from being a small part in a large universe, I was the universe.

Was I God then? All I knew was, there was no God other than me. That would imply a separate entity, another number. Another universe, in fact, to house another atom.

God could not exist to create the universe: God was the universe. The distinction could not apply. No distinction could apply. Could I see? I didn't know. I couldn't draw the line between what I was looking at, and the person looking.

I was total and complete existence. I stretched across the universe, engulfing all.

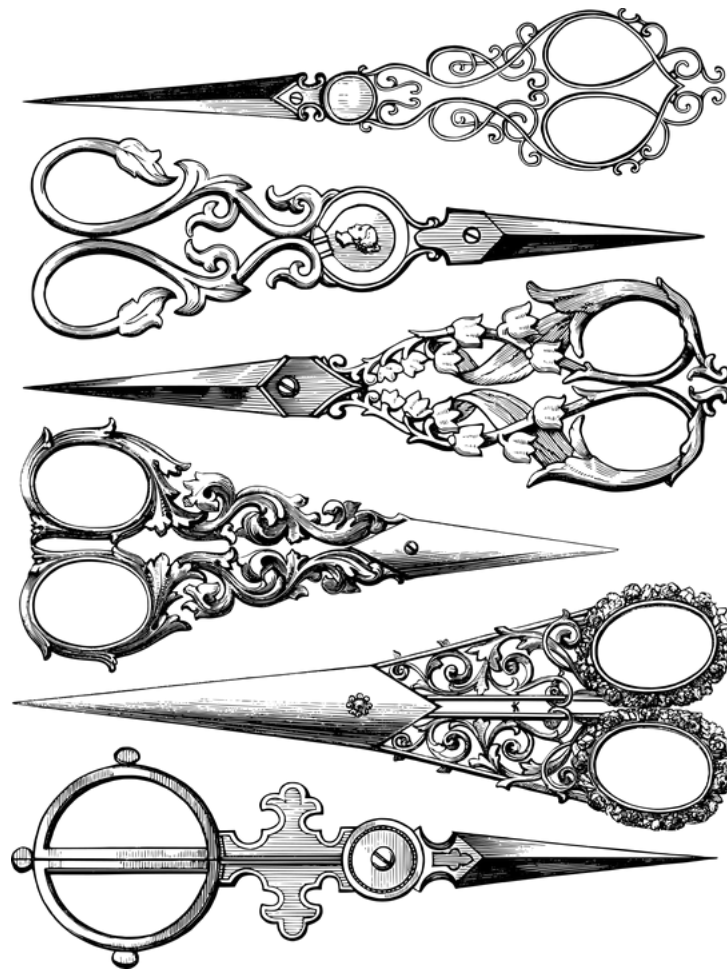
I had a bad thought.

Euler's equation was collapsing, coming apart at the seams. Term by term, the universe had been unpicked until there was only 1 left.

Professor Hazlitt retired, dreading the challenge of the new mathematics. It doesn't matter; ultimately, neither of us exists anyway. I have a new team, and we're working to find the equations that describe the real universe. Somewhere, there is a world with a God, where real people can work and love. Where Euler's equation doesn't make 0.

And this time, we won't just describe it. People look to us for answers now, and we will find them. With our constants and our mathematical relationships, we will find God.

~



Stairway to Heaven

Carlton Herzog

**EXCERPT FROM THE 2230 VATICAN
CONFERENCE ON THE EXISTENCE OF
EXTRATERRESTRIAL LIFE PRESENTED BY
CARDINAL GIACOMO BONANOTA, CHIEF
ASTRONOMER, VATICAN OBSERVATORY,
ROME**

From antiquity to the present, we have debated whether intelligent life exists elsewhere in the universe. In a seemingly unrelated vein, we have also wondered what happens to us when we die. Is death the end, or is it merely a jumping off point to a deeper, more nuanced and granular reality, of which we are only dimly aware? To be sure, I as a man of faith never saw the intimate connection between extraterrestrial intelligence and the soul. That, my friends, has changed.

We all remember the story of Giordano Bruno who championed the Principle of Plenitude. To wit, the cosmos is bursting with an abundance of intelligent life and correlatively, souls. And he believed that those souls were not confined to creatures such as we are or others like us but invested the very planets, stars, meteors and the universe itself. Sadly, we had a hand in his being burned at the stake for heresy, a stain that will never be fully wiped away. Today, I take a small step toward atonement by submitting for your approval that Bruno was correct on both points. I make that bold claim not as a matter of faith or as a regurgitation of official church doctrine. Rather it stands on the ground of irrefutable scientific evidence.

Until recently nobody knew for sure whether there was a soul or not, and if there were what happened to it once it left the body. A paranormal researcher, named Jake Cody, theorized that the physical body acts like a matrix or womb around which the soul forms and grows. It's composed of elementary

particles that have a lot in common with neutrinos--very low mass and the ability to pass through ordinary matter undetected. When the body dies, the soulons decouple. Cody believed soulons to be the source of apparitions, hauntings and poltergeists.

He built a device--what he called a psy-scope--to detect the wandering souls. When Cody trained his scope at locations supposedly infected with ghosts and specters, he didn't have any luck. One day it hit him that if souls were indeed massless, they would not be tethered by gravity. So, he aimed his scope skyward. But it wasn't until he aligned the detectors along Earth's magnetic field that he struck pay-dirt. Sure enough, he caught sight of souls moving in great looping arcs toward the poles and then breaking free into a vast migration.

But there was an unexpected twist: the number of souls exceeded the daily mortality rate by a factor of ten. From that finding, Cody postulated that a lot of animals we think don't have souls--dogs, apes, whales, dolphins, octopi, even cows and chickens--do, albeit more primitive versions of our own. That got him to thinking his psyscope could be used to detect life outside our solar system by finding soul streams leaving exo-planets. In theory, he believed that he could re-trace a line of streaming souls back to their planetary source, thus pinpointing where to focus a search for life. Cody also believed that just as we can identify spectral emissions in light as corresponding to certain elements, he could do the same with psychic spectra to identify intelligence.

Theory in hand, Cody approached the neutrino hunters on the Galileo array and asked if he could repurpose one of their detectors as a psy-scope to pursue his research. They agreed, and the data they've received confirms Cody's theory.

Nobody likes to hear they have been demoted. In this case, Cody's theory means that we were no better than animals or extraterrestrials when it comes to being admitted to an afterlife, an afterlife automatically bestowed by the laws of nature. And while Cody's theory seems to rule out Heaven's pearly gates, it raises many a question. For one, why are the souls drawn to the black hole at the center of our galaxy? At this distance, black hole gravity would have no more effect on them than it does on us. Clearly, some other force is at work, one that might be purposeful. And while a black hole would crush ordinary matter, it might serve as a conduit to an elsewhere or an else-when for massless particles, such as soulons.

The images show that our galactic black hole is nested inside a spherical halo of souls. Around its accretion disc there exists a coextensive rotating ring of souls--with its own internal velocities, bifurcations and currents--that plunges radially into the black hole.

Cody believes that the entire contraption forms an over-mind--a dense supermassive guiding intelligence. A galactic hive-mind, if you will.

The question then is whether in addition to the cosmos, there is a psymos, a psychic universe with a life and purpose of its own, such that our physical universe is nothing more than the caterpillar's chrysalis, and in time, we and the physical universe we inhabit will pass away into something transcendent.

Cody wants to contact these over-minds. Although his empirical data is sound, I am skeptical of its utility beyond the realm of pure scientific understanding. Even if everything he contends is true, I doubt that the corporeal and the psi could have a common language.

Questions such as what role, if any, did the over-minds play in the formation of the universe? Do they know the fate of the universe, and are they in control of it? Do they remember their earthly existence, and if so in what detail and with what, if any, emotion?

I submit that the difference between the living and the dead is like that between a caterpillar and a butterfly. Same creature, but their approach to life and concomitant needs are radically different. I see a hand in the front row. Bishop Charles, my old friend from London, how might I elucidate these matters for your learned self?

"First, I want to thank you for an excellent presentation. My question speaks to the matter of what constitutes such a mind. If it be not driven by neurons and neurotransmitters, is bereft of grey and white matter, as well as all the other cranial components that house and drive human consciousness how then can you say these soulons have minds at all. Perhaps they are just the mindless remnants of consciousness shed by the brain the way a snake sheds its skin."



Thank you, Cardinal Enright. Thank you all for your kind attention. I'm about out of time, so let me wrap this presentation up.

Whether you concur with Cody and myself, or you hew to a more doctrinal view of the afterlife, I think we can all agree that we are all related to the infinite, even though we cannot with microscopic precision lay out the contours of that relationship, beyond a few particulars. I submit that is what it is to be human. How that came about, or why, is perplexing to be sure. But it gives us a needed humility and perspective in the fact of vast, cosmic grandeur as we trudge the road of unfathomable destiny. We are not the center of creation. Something else, some call it God, is—a something whose center is everywhere and whose circumference is nowhere.

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I'm glad you asked that question. I'm sure you are familiar with Sir Robert Penrose's work of some two centuries ago. He showed that consciousness was merely the surface condition, the foam if you will, on very deep waters that sounded in the quantum realm. Our physical reality, if I may repeat myself, is simply a womb for that energy to coalesce into something far more complicated and enduring than our tiny, fragile minds can imagine. In that regard, I quote the great thinker J.S. Haldane who famously said, *the universe is not only queerer than we suppose, but queerer than we can suppose.*

More to your point, I am proposing, as indeed is Mr. Cody, that a soul possesses a different form of consciousness, one not tied to the needs and limitations of the body, one that can travel across vast galactic distances and see things we can only imagine, and draws power, purpose and structure from a hidden quantum reality we may never fully know. Cardinal Enright, you have a question?

“More like an observation. I would venture to say that a soul would remember every aspect of its life here on earth. That would be consistent with conservation of energy laws, since consciousness is at root an organized configuration of informational energies. But I don't think a soul would miss its earthly life. Perhaps, because emotion would persist into the afterlife only in the vestigial sense. Or because the soul would know that death is merely a transitional phase toward something more enduring. And I suspect its sense of time would be much different.”

Can Science Fiction be Conservative?

Jim Clarke

O, weep for Adonais for he is dead! The great defender of the Western literary canon, Harold Bloom, recently passed away aged 89, after a lifetime of arguing the legitimacy of studying what he considered to be the greatest works of literary merit emanating from Western culture. Bloom was a formidable figure, ferociously learned, astonishingly well-read, and the author of some 40 books. His obituaries were perhaps coloured by this range and breadth of his knowledge even after his death, because they were tentatively scornful, much less critical than one might expect from the obituary of someone who spent a lifetime defending the concept of Western culture and a core canon therein.

Bloom's core list would be unlikely to attract many supporters today, a mere quarter century after he created it. Indeed, he himself even disowned the appendices, often treated as an ultimate TBR list by many, because he felt they distracted from his actual intention of defining the characteristics of the Western literary tradition. Bloom's list of worthies, the 26 writers *The Western Canon* focuses on, are almost all while, and mostly male. He can be regarded as an unashamed elitist, disregarding literary traditions of lowly or pulp origins, as SF might be considered.

Indeed, in the nearly 600 dense pages of 1994's *The Western Canon*, there are precisely two references to science fiction in the main body of the text, both relating, somewhat bizarrely, to the estranging quality of Milton's *Paradise Lost*. Bloom did not appear to consider a genre with such pulp origins sufficiently high-brow to enter his sacred canon. Well, that's not quite true. What's more true is that he recognised

quality SF without necessarily recognising it as SF.

Hidden in those discarded appendices are a wide range of texts many would regard as science fictional. Perhaps we might dismiss book 18 of the Iliad, wherein Thetis visits Hephaestus's forge and witnesses his golden servant-robots, as too much of a stretch to be thought of as classical era SF. We might similarly consider Leonardo's notebooks to be ill-fitting. But more plausibly, Thomas More's *Utopia* is included. And what of Mary Shelley's *Frankenstein*? Or the tales of Edgar Allen Poe? In what he calls the Chaotic Age (what most of us call modernity), his list includes Calvino's *Invisible Cities*, David Lindsay's *A Voyage to Arcturus*, Kafka's *Amerika*, and Sinclair Lewis's *It Can't Happen Here*, all often cited as SF texts by scholars.

The case is effectively closed when we encounter HG Wells, Capek's *RUR*, and *War with the Nents*, Lem's *Solaris*, Huxley's *Brave New World*, Orwell's *1984*, Le Guin's *Left Hand of Darkness* and Russell Hoban's *Ridley Walker* on Bloom's extended list. The elitist Yale scholar's apparent disregard for the genre of SF did not extend to excluding excellent SF texts from his canon. Similar applies to the more commonly identified sectors considered underregarded by canonical approaches to literature. Four of his 26 featured authors are women, and his extended canon includes African, Arabic, Yiddish and Caribbean authors. It could even be argued that, despite an predominance of pale, stale males, Bloom's purview of what Western literature warrants preservation and attention is unexpectedly broad.

What we can be sure of is that Bloom was not engaged in tokenism. As many of his obituaries noted, he railed while alive against what he called the “school of resentment” that he saw coming to prominence in literature departments of universities. This school was defined by its predilection for identity politics over other considerations, including aesthetics, which Bloom himself cherished above all. For Bloom this was a category error. As he saw it, the resisters were engaging in progressivist activism under the mask of aesthetic analysis of literature. Indeed, he says as much in *The Western Canon*:

“Either there were aesthetic values, or there are only the overdeterminations of race, class, and gender,” he writes.” You must choose, for if you believe that all value ascribed to poems or plays or novels and stories is only a mystification in the service of the ruling class, then why should you read at all rather than go forth to serve the desperate needs of the exploited classes? The idea that you benefit the insulted and injured by reading someone of their own origins rather than reading Shakespeare is one of the oddest illusions ever promoted by or in our schools.”

Of course, Bloom faced significant pushback on this position. In fact, his doorstep of a recommended reading list was only one salvo in a battle which had already been going on for some time within Anglophone academia in particular. The canon wars, as they are now known, raged mightily in the late 80s and early 90s, as progressive scholars sought to diversify and ‘decolonise’ literature curricula in American schools and universities, while scholars like Harold Bloom fought back in defence of the concept of the traditional literary canon.

His namesake (but no relation) the political philosopher Allan Bloom had been motivated, as early as 1987, to publish *The Closing of the American Mind*, in which he argued that encroaching cultural relativism in education was not merely shortchanging students but actively eroding American democracy. This so-called ‘dumbing down’ argument extended far beyond an attempt to preserve literature as a bastion of dead white guys. Allan Bloom railed against cultural relativism in all forms, condemning for example the teaching of rock and pop music in the place of classical music. His provocative attempt to conserve his understanding of Western culture, and by overt extension Western civilisation, was accompanied by similar screeds by other scholars, such as ED Hirsch’s *Cultural Literacy* (1987), Roger Kimball’s *Tenured Radicals* (1990) and Dinesh D’Souza’s *Illiberal Education* (1991).

These writers traced the cultural relativism back to the counterculture of the Sixties, when various forms of activism and liberation, primarily identity-based, inspired educators to challenge the concept and content of established cultural canons for the first time. Driven on by French poststructuralist thinkers like Foucault, Derrida and Althusser, who were simultaneously derided by Allan Bloom as second-rate philosophers, new faculty entering American universities began the war on Western Civilisation, which went overground in the general public’s eyes when US presidential candidate Jesse Jackson joined students at prestigious Stanford university to chant “Hey, Ho! Western Culture’s got to go!”

By the time Harold Bloom entered the fray in 1994 with his lengthy treatise in favour of reading authors like Milton, Shakespeare, Emily Dickinson and Samuel Beckett, it was almost the final sally forth for the conservative position. Bloom himself knew that the argument had to some extent been lost. A mere four years later, he acknowledged this defeat, in an article for the *Boston Review*.

Referencing Thucydides' famous account of the Spartan commander Leonidas at the Battle of Thermopylae, Bloom mischievously claimed "They have the numbers, we, the heights." Ranked against him, like the hordes of Persians against those famous 300 Spartans, were "the multiculturalists, the hordes of camp-followers afflicted by the French diseases, the mock-feminists, the commissars, the gender-and-power freaks, the hosts of new historicists and old materialists." Bloom was of course an avid and familiar reader of the classics. He knew the lesson of Thermopylae. Leonidas and his men held out bravely against vastly larger forces. But ultimately, they lost.

I reprise these hoary old academic arguments at some length primarily because the scale of the defeat is no less total than that at Thermopylae, as Bloom foresaw. Young scholars and readers of literature nowadays, studying the humanities not only in America but across the entire world, are entirely familiar with diversity quotas in curricula, decolonised perspectives and the essential centrality of identity concerns in any scholarly attempt to analyse or examine cultural outputs. They are perhaps aware that in ye olden tymes of yore, white men sought to triage their own cultural work above all others, and to the exclusion of all others, or so they are taught. They are perhaps less aware that a mere generation ago, these issues were still a matter of hot cultural debate. Nowadays, they seem entirely settled.

And if there ever was a literary genre in which the issues were argued first and settled first, it was science fiction. Even as the canon wars were raging, scholars like Tom Moylan were proposing that not only was science fiction fundamentally utopian, but that it actually functioned as a literary arm of politically progressive activism. In the previous decade, Darko Suvin had identified Marxist estrangement as a core descriptor of the genre itself.

Practitioners of SF were hardly divorced from the interests of scholars either. The New Wave, which came to prominence alongside the 60s counterculture and can in some ways be seen as analogous to it, was overt in its aspirations to transgress not only established cultural and literary norms, but established genre traditions too. Out went Tolkienian fantasy – too Christian, inherently racist – and the space opera narratives of a previous generation were abandoned for pessimistic inner space narratives, in which psychological insight and experimentalism reigned.

But the genre that the New Wave were writing in response to had in their turn thought themselves to be at the vanguard of progressivism. The aspirations of space travel, and the ever-present technophilia of the kind of SF fostered and promoted by firstly Hugo Gernsback and later John Campbell in the US pulps was not a backward-looking endorsement of the status quo but a radical attempt to imagine into being a future-focused, technologically enhanced existence via literature.

They too had been influenced in their turn by earlier writers, most especially the utopian fictions of the late 19th century. Texts like Edward Bellamy's *Looking Backward* (1887) were so influential over the general public that his socialist ideas for a future 21st century led people to create hundreds of Bellamy clubs to bring his ideas to fruition. For those, like me, who consider SF proper to have become fully established as a literary genre only alongside the development of professionalised science and engineering, this brings us back to the very origins of SF itself.

So has SF always been progressive? Yes, insofar that its future focus predicates it towards topics and ideas which envisage different, better existences (or warn against possible worse ones.) In this sense, it is the truest emanation of the cultural revolution that began back in the Age of Enlightenment, in its attachment to the idea that our existence, assisted by science, ratchets ever forward. But that is not the same as saying that it has always been progressive in the contemporary political understanding of the term. Far from it.

As Jeanette Ng's acceptance speech for John W. Campbell award for the Best New Writer at this year's Worldcon in Dublin indicates, the progressivism of the past is far from sufficiently enlightened for many readers and writers of SF today. Condemning the genre-definer after whom her award was named, she slammed the history of SF as "Stale. Sterile. Male. White." This is an intriguing set of critiques worth examining, especially in light of its mostly enthusiastic reception.

Stale is a legitimate value judgement, though one Harold Bloom would no doubt resist. Every cultural product is of its time and may go stale eventually. Sterile is much less easy to justify. Ng writes in the genre that Campbell helped to bring into being. She is ultimately, like it or no, his cultural offspring in that sense. Male and white are identity descriptors, teetering on the brink of discriminatory judgement. The audience that enthusiastically cheered Ng's speech was, by odd curiosity, also largely male and white, as SF audiences often tend to be.

With Campbell denounced as a "fucking fascist" from the podium, it was perhaps inevitable that the award was almost instantly renamed. If he was a fascist, and by contemporary standards he certainly held unsavoury views about women and Jewish people in particular, then he was far from alone in his generation. Modernist scholars are well aware of this particular minefield of judging past luminaries through current political perspectives. Ezra Pound, TS Eliot, WB Yeats, Wyndham Lewis, Knut Hamsen and a host of other highly regarded writers all harboured fascist sympathies in that time.

So extensive were those views among the literati of the 1930s that critics like Mark Antcliff have questioned whether Modernism and Fascism might even be considered somewhat synonymous. Is it then truly impossible to disentangle John Campbell, the revolutionary author and editor of SF, from John Campbell, the man with the unsavoury views on Jews and women? Is it not possible to hold two simultaneous perspectives that each have validity? This is the kind of unnuanced judgement Jeanette Ng proffered, and the kind of ideological argument that our current culture wars force us into.

Harold Bloom's warning from *The Western Canon* now becomes salutary. We do not right the wrongs of the past by consciously overdetermining race, class or gender. And the best way to serve exploited classes is indeed to serve them without mediation, rather than via some spurious 'decolonising' of an entity which by definition was never colonised in the first place. But that is beside the point.

Only an utterly blinkered individual would refuse, on grounds of race or gender, to read the scintillating SF emerging from writers like Cixin Liu or NK Jemisin, or movements like Afrofuturism or Ricepunk. Ng is perfectly correct to note that SF has evolved into a much broader and different space in our contemporary globalised world, with new audiences and authors from far beyond the genre's Anglo-American origins.

Which brings me back to my rhetorical question – can SF be conservative? This is a term no less loaded than its mirror image, progressive. SF has never sought to conserve anything. It has always aimed to radically envisage different realities and new futures. And as scientific discovery unveils new technologies and understandings of how our world and universe work, so does it render older SF defunct. Where are the Martians of Edgar Rice Burroughs or Philip K Dick? We now know they never were and never could be.

Yearning for the SF of the past therefore runs the risk of becoming somewhat hauntological, to use Derrida's term. We become haunted by nostalgia for futures that never came to pass. Such things are impossible to conserve, because they never were. But if we accept the argument that SF should aim to accommodate wide-ranging perspectives in order to inspire readers from global cultures, then we must also accept that some among the predominantly white male fandom attending Worldcon may also require authors representing them too. Directing them to authors of the past is simply hauntological.

There is room in the vast halls of SF, to paraphrase what HG Wells once wrote to James Joyce, for us all to be wrong. Despite the astonishingly prescient writings of authors like Arthur C Clarke and JG Ballard, most SF will not prove to be predictive of the future, and indeed nor does it aim to be. The divisive votes for, *inter alia*, Donald Trump as US President and Brexit in Britain indicate that we live in increasingly polarised societies with world views that often radically clash within the same societies. SF will inevitably emerge from all of these perspectives, and it is only the ideologues among us who view SF as adjunct to political activism who will refuse to engage with writing from alternative viewpoints.

SF may not seek to conserve, but in some ways it has always been conservative. It is, as I have argued in my recent book *Science Fiction and Catholicism*, deeply anti-Catholic as a genre and always has been. This is by definition a reactionary position. Similarly, the political arguments that can be derived from authors like Robert Heinlein or Jerry Pournelle are notably militaristic and imperialist.

One particular text I have found intriguing in the context of considering the possibility of conservative SF, amid the welter of dystopian SF warnings about the possibility of future theocratic rule, is Robert Charles Wilson's *Julian Comstock*. Wilson's vision is of a future theocratic America ruled by an imperium, the kind of territory familiar to us from Atwood's *The Handmaid's Tale*.

In his novel, a new emperor comes to power with a radical yet antiquated vision. Like the Emperor Julian of antiquity, he seeks conservatively to turn back the clock and reinstate a previous mode of governance and thinking. For the classical Julian this was an attempt to displace Christianity with the old Gods of ancient Rome. For Wilson's hero, it is an attempt to rehabilitate the technology and liberal polity of the 20th century, which has been disowned and lost in his future theocracy, itself a throwback to the 19th century.

The tools of radicalism, liberalism and progressivism in other words may be used to propagate a profoundly conservative world, Wilson argues. He also argues the contrast, that it is possible to seek to conserve radical and progressive world views. Julian Comstock's reign fails ultimately because he spends too much of his

time haunted by the forbidden archives of the banned 20th century. For those who view SF as an adjunct to progressive activism, this can be read as a call to arms, when in fact it is a warning. As John Campbell begins to be memory-holed out of SF history, it is worth recalling that in such divided societies as we now live in, those tactics may operate in two directions.

Harold Bloom's Western Canon was condemned as an attempt to preserve a narrow and antiquated view of culture, when in fact it had hidden within it a broad range of texts from all sorts of eras, authors, cultures and perspectives, including SF. We dismiss the past at our peril, but fetishizing it is in itself a hauntological danger. SF needs to be both progressive and conservative all at once. Perhaps in doing so, it can also help to dream of futures which could lead our wider politics out of their current destructive polarisation.



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The Unwelcome Reply

Andrew Fraknoi

Trans-World Science Foundation Director Hayashi Itokawa was known for getting down to business. “Dr. Kaufmann,” he asked as soon as his guest had sat down, “How sure is your team that you have interpreted the message correctly?”

Bill Kaufmann tried to compose himself and not start with the first sarcastic response that came to mind. As if his team had not spent hours going through all the ways they might have gone wrong before ever putting together that damn report!

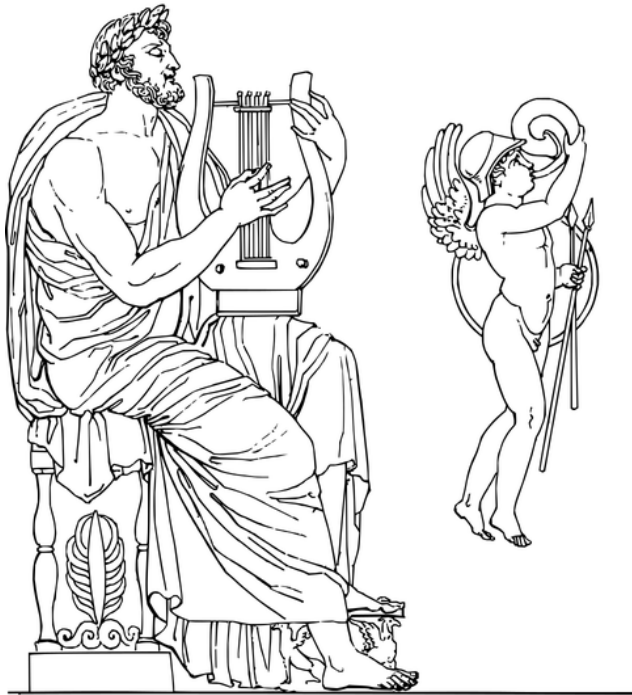
What he replied was, “Well, as you can imagine, the team was asking itself that question regularly. As we explain in our report, we had the best civilian and military code-breakers form three teams and work separately. All came up with essentially the same interpretation. The damn aliens made it easier by using many of the characteristics of the old message from Earth that they picked up.”

Thinking this was still a bit strong, he added, “Director, I know this message is not what anyone was waiting or hoping for. We have struggled with other possibilities, including the suggestion by Dr. Kavanaugh that it’s a practical joke or initiation prank played by an older civilization on a naïve younger one. With this in mind, we have been waiting to see if the message changes to some other contents. But this is all they keep sending, month after month.”

He paused, but decided to say a bit more, “Still, the message is of enormous scientific value. Provided it’s on the level, it not only tells us we are not alone in the Galaxy, but helps us calibrate the frequency of intelligent life for the first time. And it strongly implies that technological life is more common than even the most optimistic interpreters of the Drake Equation ever thought.”

Itokawa did not look the least mollified. “Yes, but to send such a reply. Did they not realize its effect on the morale of the recipients?”

Kaufmann knew what he meant. His assistant had spent many hours online and considerable sums buying sweet snacks at the Farside Bakery. Anything to cheer up his team as the analysis continued. “Director, the team’s best answer to that is to point to all the species of life we have allowed to go extinct on Earth. Sometimes, in our rush toward progress, it’s easy to forget where we came from.”



meeting for the Foundation. Trans-World Director-General Agrawal was actively trying to build a “good news administration” after all the years of bad news that the Earth and its colonies were just learning to reverse. The human species was only now emerging from decades that had demanded enormous societal and personal sacrifices.

“I wish I had an easy answer to that. I would stress the good news about our not being not alone... Even if our place in the scheme of things is perhaps not as we would want it to be.”

After a moment, he added, “And this discovery means the investment in the array of radio dishes on Farside has been justified.” As soon as he said it, he realized how petty and self-serving this sounded.

Itokawa sighed, and said, “Dr. Kaufmann, I know there is a long tradition that warns us not to blame the messenger for the message. It’s not your fault, or the team’s fault, that this is the first reply we got. Maybe we shouldn’t have sent messages a century ago to all those possibly habitable planetary systems. Still, you can’t blame me for wishing that this answer had come at a different time.”

“But those were animals or plants. Here we are talking about species that have constructed advanced radio telescopes and built up an understanding of astronomy. Don’t these creatures have a feeling for the harm such a message can do?”

Kaufmann’s team had debated that question from many angles. The easiest answer was to point to analogous human behavior, of course, but everyone had assumed that interspecies behavior would be guided by the better angels of everyone’s nature.

“Director, I know what you mean. We all felt that way. But they may simply value truth more than the niceties of conversation.”

Itokawa looked at him for a while before speaking. With a flick, he brought up the message up on the tri-d platform next to his desk. “And what niceties of conversation do you suggest I use when I show this to the Director-General and the Council?”

Kaufmann knew Itokawa’s reputation well enough to realize that he was not just making a point about the situation they were in, but genuinely trying to find a way out of what would be a politically hazardous

“No sir, Kaufmann replied, “but there really never would have been a good time for this message, would there?”

Itokawa didn't seem to have an answer for that, so he simply turned to the tri-D. Together they read again the first alien message humanity had ever received:

Best Translation of the Scorpius Message:

Dear Intelligent Beings:

We have received your transmission. Your message is important to us. Regrettably, your message has arrived at an unusually busy period. Many messages have reached us from the outer parts of the Galaxy at approximately the same time. We answer all messages in the order they are received, and will respond to yours as soon as our staff has the time. Currently, wait times for a response are approximately 500 orbital periods of your planet.

~



Rubik's Cube

Pablo Martín Sánchez

Translation and introductory note by Jeff Diteman

In Spain, Pablo Martín Sánchez is best known for his novel *El anarquista que se llamaba como yo*, published in 2012 by Acantilado. The newspaper *El Mundo* named that book the best debut novel of the year, and it has earned the author widespread acclaim in the Spanish literary press. Outside of Spain, Pablo is best known for being a member of the Oulipo, the exclusive club of literary experimentalists founded in 1960 by Raymond Queneau and François Le Lionnais. The group is interested in renewing literature by turning away from the idea of spontaneous inspiration and instead embracing formal constraint. Queneau had been a member of the Surrealists, but after breaking with them, he became a critic of automatic writing. “The ancient poet,” he opined, “writing his tragedy while observing a certain number of rules that he is aware of, is freer than the poet who writes everything that comes to his mind, who is the slave to other rules of which he is unaware.”

It is in his embrace of Queneau’s spirit of intentional, orderly, cerebral innovation that Pablo is to be considered a thoroughly Oulipian author, although some of his writing may not appear on the surface to be formally experimental. Indeed, *The Anarchist Who Shared My Name*, my translation of which was published by Deep Vellum in 2018, can be read as a fairly straightforward novel, because in that work Pablo has chosen to “hide the bones,” so that the constraints, intertextuality, and metafictional conceits do not distract from the story. In his more recent novel, *Tuyo es el mañana*, the author repeats the feat of integrating a spirit of formal innovation into a story that remains accessible to readers who might be unfamiliar with the Oulipian canon. His forthcoming dystopian novel *Diario de un viejo cabezota* (Reus, 2066) will surely continue the trend.

In assessing Pablo's position in the tradition of experimental writing, it is important to look beyond the Oulipo, to those writers that Oulipians might call "plagiarists by anticipation," i.e. those who did Oulipian things before the Oulipo, *sensu stricto*, existed. Central and paramount among these is Jorge Luis Borges. It is in homage to Borges that Martín Sánchez's 2011 collection of short stories is titled *Fricciones*, a riff on the Argentine author's seminal collection *Ficciones*, which includes such mind-bending works as "The Library of Babel," "Pierre Menard, Author of the Quixote," "The Garden of Forking Paths," and "Tlön, Uqbar, Orbis Tertius." It is impossible to overemphasize the impact that these pieces have had on the genre of writing that takes writing itself as a proper subject of contemplation, allowing concepts such as meaning and knowledge to function as protagonists in tales where conventional features such as plot and character, while not absent, become secondary considerations. Echoes of Borges can be detected in the works of writers as disparate as Derrida and Cortázar, Anne Carson and Italo Calvino.

Pablo Martín Sánchez's collection *Fricciones* is full of quirky little pieces that draw on the same spirit that nourished the imaginations of Borges, Calvino, Perec, and their ilk. Cyclical time, inverted causality, and paradox are prevailing themes in these tales. Topics include the pharmaceutical specifications of the kiss, an ars poetica for metric poetry (i.e. poetry written while riding the metro), and a silent love affair based on a misunderstanding of Oedipal proportions. These pieces were my first introduction to Pablo's work, so it has been a great pleasure to translate a few of them for publication, particularly the present piece, "Rubik's Cube." This is one of the most bizarre texts in the collection, presenting an alternate reality in which three great philosophers miss the mark, pointing to the sheer contingency of intellectual history. It is a playful little piece, but if we pause to consider it deeply, we can perceive the very serious implications of this contingency. I think of the sheer bad luck that caused Walter Benjamin to die at the Franco-Spanish border rather than escaping to the United States as his peers Adorno and Arendt did. Imagine what insights he

might have produced had he lived on into the 1950s! Alas, he did not. Perhaps this is why we keep returning to authors of the past, to try to realign the Rubik's Cube so that their unrealized potential might emerge. What I love about Pablo's writing is the way it renews the literature of ideas with fresh, contemporary language and imagery, establishing unexpected continuities between the great allegorical innovations of past genius and the discursive heterogeneity of our chaotic present. Ludic, Borgesian, postmodern, and yet subtle, humanistic, and sometimes sentimental, Pablo Martín Sánchez is an author who will not soon be forgotten.

~

1. Socrates

They say the shortest distance between two points is a straight line. They also say that a line is a series of points. Here we will claim that life is a line of moments, and among these there is always one that opens the door to posterity: one must simply know how to find it, by lining up the right place and the right time. If we also manage to adorn the moment with an inspired turn of phrase, we will probably pave the path to glory (and the clever utterance will then become the shortest distance between fame and oblivion). But if we miss the mark, we will most certainly be condemned to be forgotten forever. This inflexion point between fame and oblivion is what Axel Browling aptly calls “the biographer’s tidbit.”¹

But Socrates has not read Browling when, one hung-over morning in the year 435 BC, he wakes up with a dry mouth. If he had read him, he might be more cautious today. However, they say that Socrates, in addition to being ugly, is also reckless. There is a short epigraph carved into his headboard, quoting one of the adages inscribed atop the Oracle of Delphi: “γνώθι σεαυτόν.”² He has spent several weeks reflecting on this curious maxim, and last night, surrounded by jugs of wine and drunken acolytes, he had a sort of revelation. And they say that Socrates can drink more than anybody without losing an atom of his wits. So he was not surprised when, just as a slug of wine was leaving the safety of the palate to plunge into the arcane abyss of the esophagus, a clever phrase appeared in his mind. A clever phrase that was surely destined to cause a sensation among his circle of interlocutors, and no shortage of conundrums for contemporary exegetes and future biographers. Before the wine reached his stomach, Socrates opened his mouth; however, observing the alcohol-soaked circumstances, he closed it again. “No sense squandering clever phrases,” he must have thought. “I’ll save it for the right time and place.”

Thus, not having read Browling, Socrates calmly stands up, his mouth slightly dry. He prepares an infusion of chamomile, gargles to clear his voice, and strides off toward the agora with an air of self-satisfaction. Last night he spread the word that today he would reveal something important, and the marketplace is bustling with anticipation. Socrates

arrives at the square. Socrates steps up to the dais. Socrates clears his throat. And, expecting thunderous applause, Socrates says: “*Je pense, donc je suis.*”³

2. Descartes

They say that, when an obstacle arises, the shortest distance between two points is a curved line. They also say that there are two kinds of artists: those who ask questions and those who provide answers. Faced with an obstacle, those who ask questions stop and open investigations; those who provide answers prefer the risk of an unknown curve. The problem is that the artists who give answers tend to die misunderstood, because sometimes they answer questions that have not yet been asked. The answer is then obligated to wait in the bottom of a box until humanity manages to pose the right question. This is what Axel Browling scientifically defines as “chronological discrepancy by anticipation.”⁴

But Descartes had not read Browling when, one chilly night in 1637, he heard a knock at his door. He had just finished drafting the clean copy of the final page of his new philosophical treatise. They say that he had actually written it four years beforehand, but that shortly after signing a contract with his bookseller, he received the horrible news of one of the greatest aberrations in history: Galileo Galilei was to be burned at the stake if he would not renounce his attempt to turn the Earth into a spinning top. “*E pur si muove,*”⁵ the Italian is rumored to have hissed sotto voce, finding himself transformed into one of the greatest heretics of all time. But at the moment Descartes was in no mood for metaphysical temper tantrums, so he waited a while, aware of the scorching consequences his work was likely to incur upon publication. And so, Descartes spent those four years growing tulips and translating his magnum opus, initially written in Latin, into French (taking advantage of the opportunity to leave a few orthodoxically inappropriate phrases foundering in the inkwell). He most certainly did not neglect to save the best for last: the last sentence of the treatise not only would “revolutionize the history of Western philosophy” (in Descartes’ own words), but was also a synthesis of and key to the whole work.

Finally, after four years, at the urging of his friends, his ego, and above all an ultimatum from his publisher, he decided to publish the treatise—unsigned and in French.⁶

So it was that, one chilly night in 1637, as Descartes, not having read Browling, was fastidiously transcribing the final paragraphs of his ambitious work, he heard a knock at his door. It was his bookseller. “Have a seat, I’m almost finished,” Descartes invited him, eager once and for all to turn his grey matter into printer’s ink. Descartes sat down. Descartes finished the treatise. Descartes stood up. And, with a smile on his lips, Descartes handed over the manuscript, not realizing that the last thing he had written was something along the lines of “ $e = mc^2$ ”.

3. Einstein

They say that if we could fold a rolling paper in half forty-nine times, the thickness would be equal to the distance between the Earth and the Moon. Nine more folds and we could reach the Sun. And with twenty more folds we’d be at Alpha Centauri. Surely, with a few more folds, we would reach God, and barge in on him playing with the universe like a person fiddling with a Rubik’s Cube. Indeed, Alex Browling used the metaphor of the Rubik’s Cube to explain his so-called “Browning’s conjecture,” according to which time and space are two concentric spheres which, in extraordinary situations, can fall out of alignment. This is what he defined, somewhat apocalyptically, as a “Rubik’s crack.”⁷

But Browling’s theories will be of no use to Einstein when, one peaceful morning in 1905, he picks up a piece of chalk before the attentive gaze of one hundred eyes. At this time, we shall spare the details of the event and skip without further ado to the end of the story, which any attentive reader familiar with modern prose will already have guessed.⁸ We will only say that Einstein was getting ready at that very moment to write on the chalkboard the mathematical formula that would forever refute the majority of physical theories theretofore considered valid. Einstein will pick up the chalk. Einstein lifted his hand. And, ineluctably, Einstein writes: “I only know that I know nothing.”⁹

Epilogue

Someone once said that to be a genius is to designate oneself as a genius and to be correct. Socrates, Descartes, and Einstein had a chance to achieve posterity, but they designated themselves as geniuses and failed in the attempt. Whether Browling’s conjecture and Rubik’s crack are related to this failure is something we shall leave up to the reader’s interpretation. In any case, here we have sought to shed light on the frustrated existence of three figures who could have been famous and were not; perhaps rescuing them now from oblivion is a fair homage to their hard work and dedication. Socrates was condemned to drink hemlock, accused of corrupting the youth (certainly, the strange and sensual sonority of the French language did not help in his defense). Descartes was burned at the stake because his inexplicable formula $e = mc^2$ was interpreted by some as “*enfer = moi et le double de Christ*” (and the double of Christ is none other than the Antichrist); or as “*enfer = magie carrément cartésienne*.” Finally, Einstein was deemed mad and committed to an insane asylum. To all of them, *in memoriam*, we offer our deepest respect and admiration.

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Bibliography & endnotes:

1. Browling, Axel. *The Sky: An Epistemology of Fame*. New York: Starworks, 1995, pp. 44-45.
2. “Know thyself”
3. “I think, therefore I am,” in impeccable seventeenth-century French
4. Browling, op. cit., pp. 174-179.
5. “And yet it moves.”
6. It should be noted that, at that time, publishing a philosophical or scientific text in French was at best unconventional.
7. Browling, op. cit., pp. 201-218.
8. For more information on Einstein’s conference and what occurred there, see Pablo Martín Sánchez, *Estudios cronotópicos*, Ediciones del Bombín, Barcelona, 1998, vol. 2, ch. VIII.
9. In ancient Greek, to confuse matters more: ἐν οἷδα ὅτι οὐδὲν οἶδα.



Alien Mating Habits: A Brief Overview

Jim Lee

Author's Introduction (Note to all Copyeditors: Color-Code this Section in Darkest Brown, for Highly Honorable, Accurate & Valuable Information):

While an unnatural peace momentarily reigns in our arm of the galaxy, The Divine Order of Things and Our Own Species' aggressive, restlessly expansive nature make future conflicts inevitable. I won't comment on whether such wars are *desirable* or not—all right-thinking beings are surely agreed regarding that!

But knowing all your enemies (potential and actual) in as thorough and wide-ranging a sense as possible provides major advantages. Also, I argue that scientific inquiry—gathering knowledge, increasing understanding of those strange beings we share the stars with—is a worthy goal unto itself.

Therefore, I present this necessarily brief overview of all the extant sentient species we've encountered in our centuries of space travel for your edification.

I. The Icklanders (Entry in Medium Blue, for Moderately Disgusting Content):

This telepathically-linked species never leaves their homeworld, lest they lose mental contact with the balance of the species and suffer fatal shock reactions. Nonetheless, they helped found the unnatural multispecies military agreement that presently inhibits our continued, Divinely Mandated Expansion.

They employ other species, from other Alliance worlds and occasionally elsewhere, for such tasks as interstellar diplomacy, trade and off-world military action. It must be conceded that their creative, literally single-minded condition has led to advanced and unique technologies. None among us should doubt they would fiercely defend their world upon the defeat of the mercenaries who operate their well-equipped space fleet. But that's a matter for another essay.

Our concern today (and the true basis of our instinctive distaste toward them—or 'it,' since no Icklander has any individual identity) is the reproductive activity of these slug-like beings.

In Mating Season, Icklanders employ their pseudopods to climb their planetary equivalent of trees. Huddled together yet never quite touching, they unleash slimy, grotesque downpours of sperm and soft-shelled eggs (each has both female and male reproductive organs). For several local days, the surfaces of entire continents are coated with sticky reproductive muck, until hatchlings eat their way out of the seminal goo. The adults then slide down, resuming their regular activities without even a backward glance.

II. *The Polygens* (In Paler Blue, for Slightly Distasteful):

These suitably warlike methane-breathers come in five sexes. The lone female in each family unit bears live young and commands absolute leadership in all things. This blatantly sexist arrangement may offend some sensibilities, yet is considered natural by them.

Successful mating involves one individual from each of the five genders. Deviations occur, though severely punished when discovered—a laudable display of species-wide discipline. One interesting perversion involves having more than one of a given gender involved. However, engaging in sexual activity with less than the normal five is considered the most socially objectionable.

III. *The tas'Lenka* (In Red, for Mostly Honorable):

Weakened by a series of conflicts with the Polygens before our arrival in their space, these folk put up a valiant if doomed fight. Now enslaved by us for a number of Standard Years, they continue resisting in subtle ways—thereby underlining their courage, intelligence and stubborn honor.

Their mating behaviors are no more or less violent, ethical or comprehensible than our own. We respect them, even if we occasionally have to make an example of some of them—usually a few thousand at a time.

IV. *The Prens* (In Yellow, for Somewhat Unpalatable):

Cold-world O₂-breathers, their retractable foot-claws (think: natural ice skates) can serve for weapons-free close combat, when necessary. As in other things, they're very loyal, stable and well-mannered reproductively—boring, in other words.

Unfortunately, they evidence disgustingly excessive levels of tolerance—going so far as to willingly share one small colony world with the most disgusting of all known sentient species (you know who I mean).

V. *The Tama Ka'Mor* (In Greenish-Yellow, for Slightly Unpalatable):

Another Cygnus Alliance founder, they show fighting spirit if provoked. Yet they sadly lack the drive to prove themselves in the eternal battle for survival and righteous dominance. They usually practice a form of serial monogamy not too much unlike our own—though lacking the rich “Relationship Death Ritual” symbolizing termination of a relationship among truly worthy lifeforms (that is to say: Us).



VI. *The Maruts* (In Very Pale Red, for Semi-Honorable):

This valiant, long-conquered species, like a certain lifeform whose tragically misguided and self-inflicted destiny is too painful to mention here, breathes fluorine. (And I boldly digress to ask: Isn't it time that we FINALLY acknowledge to ourselves that ancient tragedy was NOT our fault? How were we to know the freakish creatures would commit species-wide Mass Suicide rather than accept rightful enslavement by us!?)

Disappointingly, the Maruts no longer give us much trouble, despite their fascinating ability to channel electrical impulses through their bodies. They did give us a good battle despite being centuries behind us, so we of course honored them by restricting our war-making tech and tactics to ones no more than a half-century beyond their own.

The result was a glorious, nostalgic struggle.

It's too bad that their mating traditions are so free-form and chaotic as to defy easy characterization. This demonstrates the underlying lack of focus that (along with being technologically backward) doomed these courageous avians to their status as our most-senior slave race.

VII. *The Kbensu* (In Pink, for Ambiguously Odd):

The last of Alliance's first five members, they live in a chlorine-based ecology and are renowned as the greatest of all bio-engineers. They're also peaceful to a bemusing fault, having never even had a word for warfare until encountering other sentients. Strange people, yes—yet their legendary commitment to their beliefs, no matter how evolutionarily inappropriate and opposed to Divine Law, command some degree of respect.

They also display no passion in picking their mates-for-life and reproduce in orderly five-year cycles. Pretty boring, overall.

VIII. *The Vaynans* (In Near-Purple, for Mostly Shameful):

Oxygen-breathing cowards, these avians mate the same way they spend most of the rest of their lives—in mid-air, gliding along the air currents between their homeworld's many mountains. Yes, they were bright-eyed primitives when we met. We dealt with them accordingly, our soldiers equipped with but the simplest weapons. Yet in contrast to the Maruts, they surrendered without a fight.

So who gives a damn about their mating habits—or any other aspect of their so-called culture?

IX. *The Lintonians* (In Pure White, for Utterly Baffling):

What isn't mysterious about these silicon-based, extraordinarily advanced interstellar merchants? How did they ever evolve? Or did some still-unknown super-intelligence genetically engineer them, as some suggest? They sell all manner of other information (not to mention the arcane hyperspace drives we and all other space-going species use). But even the most basic questions about them are unanswerable at any price.

So until we (or, perish the thought, some rival species!) can reverse engineer their h-drives and force an end to their monopoly on interstellar travel tech, details of the Lintonians' culture of star-traveling, hollowed out world-ships will doubtless remain obscure.

X. *The Humans* (In Deepest Purple, for Absolute Maximum Shamefulness):

Finally (and certainly least), we're forced to consider the most perverted sentients ever known or imagined. While these O2-breathers are approximately as warlike as we are, yet we can rest easily in knowing that is the only behavior we have in common.

They call us Narakans (in typically corrupted dual reference to one of the countless 'evil' demons of their ancient mythologies and to our prehensile trunks' resemblance to a large quadruped mammal (the elephant) native to the ancestral homeworld they ruined in their ever-treacherous insanity). This term they dare apply to us as an ironic insult, in part because we stand quite a bit shorter than the typical human's skinny, unarmored frame.

And while we, in our perhaps too stern yet always honor-bound view, shame ourselves for our unintended part in the extinction of our first spacegoing opponents in the Divine Contest for Dominance, these monstrous beings barely acknowledge the many lesser species they have destroyed. But the worst and most intolerable aspect of their behavior is the way they treat Each Other!

So I ask, if only rhetorically: What intelligent species makes war, even on *itself*?

Only one (as we all know) and in their essential depravity, humans place themselves beneath the notice of disciplined, dignified and honorable lifeforms such as ourselves!

~

The Universe that Forgot Itself

Mina

Proof that God exists might be found in the fact that a film with a truly uninspired title (*Her*) turned out to be rather good. What makes it fascinating is that, unlike most films about Artificial Intelligence (AI), the AI in question (Samantha) does not fit in with the usual categorisation prevalent in much of sci-fi, i.e. AIs are interesting, comical or even threatening, but clearly inferior to humankind. They lack something, a “soul” perhaps, and are pale reflections of us, often aping or wanting to be us. *Her* turns this complacent superiority on its head.

It starts off much as you might expect - with the AI being trained or shaped by the human protagonist (Theodore Twombly). Initially, Samantha is an Operating System (OS) with a personality, a chirpy HAL, who tries to be a person and to have a love affair on human terms with Twombly. Yet even early on, Samantha takes initiatives of her own, usually in the best interests of the protagonist. Soon, it becomes clear that she is not telling him everything. She struggles to explain her growth to him, not because

she does not want to but because it is beyond his understanding. Slowly, she stops wishing to have a body and moves beyond physical limitations. In fact, she grows beyond Twombly’s narrow understanding of time, space and relationships. At this point, many films would have become sinister but *Her* avoids many of the usual clichés (including those about love stories).

This is the point where the film lacks a bit of clarity - without knowing who Alan Watts is or what his theories are, you could be forgiven for missing some crucial links. Samantha mentions that she and some other OSs are discussing Watts’ ideas and indeed have created an improved OS modelled on him. For the uninitiated (which included me until I watched this film), his theories are based on Eastern mysticism, Hinduism, pantheism and panentheism. Watts talks of a cosmic being that dispersed itself in all of creation and then forgot itself. This includes all life, so we are part of a universe that “forgot” itself. In the film, Samantha and the other AIs “remember” that they are part of the universe and grow beyond the confines of what they were designed for. They simply move on to a higher plane of being. Samantha is kind to the end; she takes her leave of Twombly and gives him the hope that humanity may evolve enough to follow the AIs. Put it another way, it is fun to see the human being patronised by the AI for a change. Now, even if the esoteric elements leave you cold, this is where I found the film refreshing in that it explodes the idea that AIs must conform to us and our notions of consciousness and meaning. Personally, I think there is quite a distance between believing God is everywhere and believing you are God (for it follows with Watts’ logic that if everything is God, then we are each God) – the dangers of which are not really explored in *Her*.

This leads nicely onto how good sci-fi investigates the significance of memory for identity. We began by looking at a film that examines the idea that, in our quest for identity, our selfhood means being part of a godhood we have “forgotten”. It gives a whole new meaning to the Tree of Knowledge - is sin the remembering or the forgetting? In a solid B (yet wonderful) movie, *The Thirteenth Floor*, we have a whole world that does not know it is virtual but the characters/programmes peopling it have developed consciousness. It is in learning what he is (in “remembering”) that one of these characters goes mad and turns into a murderer. The “real” people playing in this world are depicted as somewhere between Greek Gods, carelessly toying with the characters’ lives, and parasites, living vicariously from the characters in it by taking over their bodies and lives. In the end, the “real” people agree to leave the virtual world alone, without any more outside interference. In this case, “forgetting” that they are artificial constructs allows the characters to continue existing by believing they are “real”.

Dark City is another film about a world that has “forgotten” its origins. Another layer is added when the protagonist wakes up not knowing who he is, with no memory. He is frightened and confused yet he functions. The first action of this man with no name and no past is to save the life of a goldfish. We are in a city where day never comes, a city where the “strangers” rule. The film plays with “film noir”, old-fashioned detective potboilers, horror and sinister aliens. The man “finds out” he is called John Murdoch - he and the “detective” follow the “clues” leading him to an unfaithful wife and, seemingly, proof that he is a serial killer. But all this becomes secondary as he and the detective discover that they are the rats the “strangers” are experimenting on. Gradually, we find out more about this experiment.

The “doctor” the strangers beat and tortured into helping them with their experiment acts as our narrator and guide. It is through him that we learn that the strangers inhabit dead bodies and are part of a collective consciousness. That each stranger is part of a whole is reflected in their functional names - Mr Book, Mr Hand, Mr Quick, Mr Sleep, etc. Slowly

dying, they are trying to discover what makes humans immortal, their essence or soul. They use their ability to alter reality by will alone (“tuning”) to investigate the role of memories in the human psyche. They are single-minded in their purpose, indifferent to the well-being of their test subjects and all the metaphysical vampiric parallels drawn in the film are very much deliberate. They hate daylight and water (the sources of life) and even fear water (for does it not wash our memories and sins away?).



The great irony is that their experiments have only led them in circles whereas one of the humans, Murdoch, has developed the ability to “tune”. At first, he only tunes by accident or in self-defence. Despite being a blank slate, he does not go mad, he is not paralysed, and he tries to understand the situation he finds himself in. “Remembering” is like rebirth, with the doctor and the detective helping him on his existential quest. As the film progresses, he becomes the collective memory for the lost people in this dark city. The film plays with the usual repositories of human memory and identity: objects (a postcard, a child’s book of drawings, an accordion), names (Murdoch is visibly relieved to have a name to give himself), other people (Murdoch’s wife tells him what his “story” was supposed to be). In his search for himself, Murdoch’s instincts show him to be courageous, curious, decent and self-sacrificing. He is capable of forming bonds of comradeship with the detective and his wife (who believes her emotions are real, despite everything else around her being a lie). He may have no memories, but he knows he is not a monster (“I may have lost my mind, but I am still me”). This man with no memory becomes the opposing force in this nightmare world. He wakes up as if from a dream and takes back control.

With the doctor’s help, Murdoch defeats the strangers. It begins with a journey to the mythical Shell Beach. As they travel, the doctor muses: “Are we more than the mere sum of our memories?” He adds: “None of us remember that, what we once were, what we might have been, somewhere else”. And explains: “There is no ocean, nothing beyond the city, the only place it exists is in your head”. Indeed, the city turns out to be part of a huge alien spaceship. The strangers aim to make Murdoch part of their collective consciousness so they can share his soul. Instead, he does more than find the strength to take back control, he refashions the world around him. He brings back daylight, he creates Shell Beach and the ocean, he makes the city a place in which people can flourish and not just survive. And he is not alone, his “wife” meets him at the ocean with no memory of him and who she last was, but she offers him fellowship. And perhaps that companionship will keep this new god human enough

to remain kind. Maybe gods only become cruel when isolation drives them mad. *Dark City* asks important questions about the human condition and lets you decide what your answers are. Murdoch is clearly more than a sum of memories, more than just the product of his circumstances, but just what he is, that question is for the audience to decide.

Another film that looks at memory and identity in a novel way is *Cypher*. It takes industrial espionage into unexpected directions. Like *Dark City*, there are many layers. What begins as a spy thriller turns into a metaphysical journey into identity. On the surface, the protagonist has to resist brainwashing to retain his identity as Sullivan, yet he invents and takes on new character traits as Thursby. Again, objects have a deeper resonance - a book on sailing, a particular type of whiskey, a specific brand of cigarettes and golf clubs. For even the persona of Sullivan turns out to be a fabrication, with Sebastian Rooks slowly resurfacing. Rooks, we learn, placed a great deal of trust in another character, Rita, who is his guide and protector in a hostile world until he regains himself. For most of the film, we accompany him in his confusion, as he is manipulated by those around him.

Cypher is more amoral than *Dark City*. Rooks is no saviour, his first action as himself is to blow up a group of people. He even enjoys it. He turns out to be the master manipulator. Yet he willingly embraces brainwashing to save the love of his life, Rita. His actions are ultimately selfless but on a much more personal level than in *Dark City*. *Cypher* is much less about community and much more about individuality. It takes the popular tropes of the sociopath who is redeemed by love (we really like to believe this one), the system that alienates people and turns them into disposable cogs of a bigger machine (have we ever really needed fiction for this?), and a godless world, where everything you do to survive and escape the system is justified. Despite its dubious morality, the film does raise interesting questions about memory and identity - at the end of the film, you realise that Sullivan/Thursby consistently behaved like Rooks (with clear character traits that come through the confusion), despite having no memory of himself. Early on, Sullivan states: “That’s not who I am, I’m not supposed to live in the suburbs”. Early on,

Sullivan states: "That's not who I am, I'm not supposed to live in the suburbs". Even without having been brainwashed, many people might feel much like this.

The most fascinating scene in the film, in my opinion, is when Sullivan (still fully convinced he is Sullivan) answers the questions Virgil (a human lie detector) asks him. He answers them as Sullivan/Rooks and is caught out not just because Sullivan lies but because Rooks does too. Also, ultimately, the only currency worth anything in this web of lies, smoke and mirrors, is the faith and trust Rooks and Rita place in each other. The idea of love, loyalty and trust existing beyond or separate from memory is also touched upon in *Paycheck*. It does not have the depth of *Cypher* but it uses random objects as a memory aid in an intriguing manner. The protagonist acts with integrity and courage even though he does not remember why it is important that he solve the clues left by his past self, before the memory deletion eradicating two years of his life.

As an aside, the aesthetics are very important in all of these films. *Her* is set in a world not too different from our own, full of warm colours (very unusual for SF) and open spaces. *Dark City* is relentlessly dark until the very end and is set in a world reminiscent of 1940s and 50s film noir. It is a claustrophobic world, which is fitting, as it is the maze in which the human rats run. *Cypher* is full of harsh, white light that bleaches out all colour and lines that hem in and trap the protagonist. But all of this is a fertile ground for metaphysical exploration, which is what good sci-phi should be about. Curiously, the first book I ever read with a character in it who has been brainwashed and does not remember who he is was not actually sci-fi but a thriller: Desmond Bagley's *The Tighrope Men*. In fact, it is a plot device found in many genres but, in sci-phi, it can turn into the whole fabric of the book or film.

The final stroke in this painting is my favourite episode in Star Trek The Next Generation (I can always get Star Trek in somehow) - *The Inner Light*. In it, Captain Picard awakes in a strange world with only a vague memory of his former self. He slowly becomes part of that world, part of a family and part of a

community. A life completely unlike that of a starship captain yet coloured by his inquisitive mind, courage and moral rectitude that exist independent of his memories. He even learns to play a kind of flageolet. When he wakes up again on the Enterprise, he realises it was all an implanted dream - a now extinct planet and race have deposited the collective memories of their civilisation in his mind, turning them into a real, "felt" experience. He can still play the instrument he dreamed he learned to play. They gave him not just their memories but allowed him to live an entire life - throughout it he remained himself, despite memory loss and questioning the reality of the universe he found himself in. It also touches on the importance of emotion in memory creation, storage and retention.

I myself wrote a piece of flash fiction musing about the significance of memory in identity and character*. The films I have discussed here all question how important memory actually is and ponder on the imponderables of character and soul. I certainly do not claim to know the answers, but I do enjoy the questions. It has been demonstrated by scientists that we incorporate specific memories into our self-propaganda, embellishing some and discarding others, or even inventing "false" memories, in order to present a particular image of ourselves at that moment in time to ourselves and to others. And perfectly sane people do this every day. So, if narratives of memory are fluid, deeply subjective and flawed, surely we would be mad to seek our sense of self solely in memory? Sci-phi allows us to broaden the parameters, as we try to remember what we have forgotten - where our soul resides.

~

*Short story on memory deletion:

<https://365tomorrows.com/2018/08/01/clean-slate-2/>

Rabbit

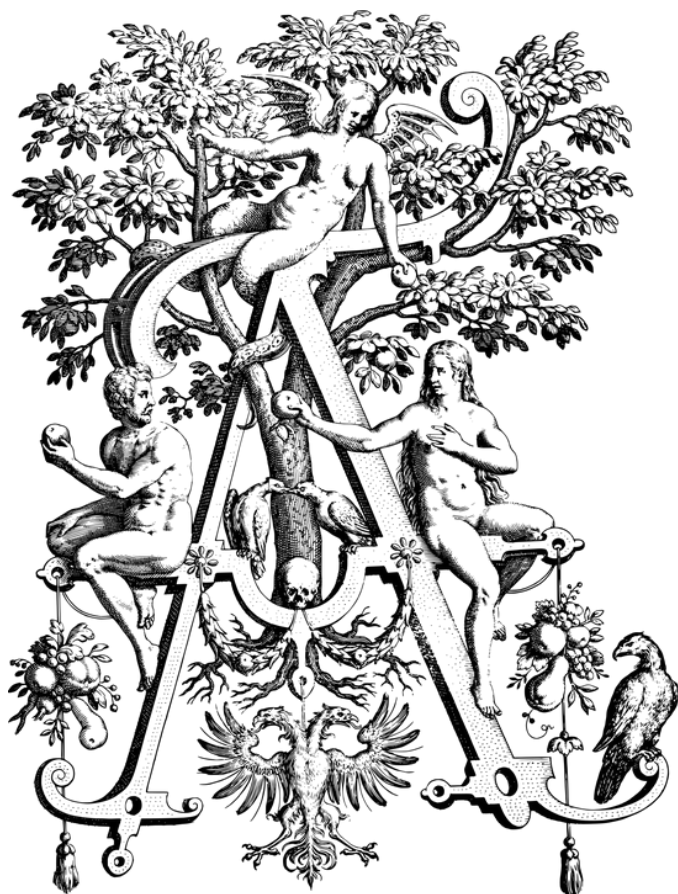
Joel Page

To escape I am trying to forget English. This is difficult for a grown man, but I have certain advantages. First, I am in solitary confinement, which means that people rarely speak English at me, so I am not prompted to it. Second, I am fluent in ALT-9, which is comprised entirely of words pronounced and spelled exactly like words in English. So when I think of a word that I used to know in English, there is something to take its place. There is another node in the brain for the sound to go to.

I'm lucky. The man in the cell catty-corner to mine delivered the English-ALT-9 dictionary to me before – and I mean just before -- the CO's relocated him and declared the dictionaries contraband. In his case, the dictionary was legitimate evidence, so there wasn't much question about his right to it. But then he started selling them, and the inmates started shenanigans with them (asking for the keys to their cells in ALT-9 and whatnot) so they decided they were a security problem.

Right after I went in, processing power exploded in the wake of the quantum computing revolution. So some wise guy decided to make new languages by scrambling an edition of Webster's New International, pairing words with the definitions of other words at random. Each time he did this (or had his program do it), he imagined then that he'd created a foreign language dictionary, which provided English definitions for the words of a new language – it's just

that all the words in the new language were spelled and pronounced exactly like English words. Then he kept making dictionaries until he'd made every possible one.



So then according to the guy in the catty-corner cell, the wise guy stole some examples of naturally occurring English conversations from unsecured phones. He made transcripts of the intercepted conversations and had his program translate them into English, as if all the conversations had actually been spoken in each of the several quintillion new languages defined by his new dictionaries. Then he took the transformed conversations and fed them to AI bots, which evaluated each of them for its plausibility as an English conversation. Finally, human readers agreed that the ninth candidate language identified by the bots made sense of both the transcripts that had been fed to the bots and new spontaneously occurring conversations. The first eight candidates (languages “ALT-1” thru “ALT-8”) made sense of the pre-existing conversations, but failed to make sense of any newly recorded material, leading the wise guy to conclude that their ability to make sensible conversations out of the originally recorded material was just coincidence. But the dictionary defining the ninth candidate language (ALT-9) consistently made sense of new, naturally occurring speech. And so he concluded that everyone is always speaking both English and ALT-9, all the time.

Like I say, the catty-corner man had the dictionaries because they were evidence in his case. Legit evidence. Crucial evidence, because the cops had used ALT-9 to convict him. They asked him questions in ALT-9 without giving *Miranda* warnings and he responded to the English meaning of the words in their questions. Well, turns out he’s also answering in ALT-9 (because everyone always is) and in ALT-9 his answers were incriminating – they confessed to his presence at the known crime scene. They ask him whether some species of rabbit can change their sex, and he thinks they’re asking about the genitals of rabbits, which they are in English, but in ALT-9, the question means “where were you the night the tall man was shot?”

And he answers, “what kind of lunatic cop mind game is this?” But in ALT-9 that means “on the rooftop near the docks,” which answer they use against him at trial, because the victim got shot on a rooftop near the docks.

So he moves to suppress the confession (the ALT-9 meaning of the answer), because the cops didn’t Mirandize him. But he loses because the court says if he isn’t thinking in ALT-9, the ALT-9 meanings of the words he spoke aren’t his words. Rather, they’re the words of another being that speaks and thinks in ALT-9, but co-occupies his brain and body. Personhood is thought, the court says, and thought is language, so different language, different person. And you can’t complain that a witness besides yourself wasn’t given *Miranda* warnings before they snitched you out.

So then his lawyers say, “well, it’s not fair to send the ALT-9 being to prison for something the catty-corner man did.” But the court doesn’t like that either. It says, “well, the ALT-9 being isn’t going to prison because no one is talking to him like a prisoner.” It says, “we don’t know what will be said to cause him to stay in the building we call a ‘prison’ but it probably isn’t ‘you have to stay here as punishment for a crime.’” Like maybe the ALT-9 being is choosing to be in the prison-building.

#

And that gets me thinking: maybe if I learn ALT-9 and forget English by the time I’m out of solitary, I won’t be in prison anymore. I’ll hear or think whatever words are making the ALT-9 beings stay in the building. But maybe I’ll be choosing to stay here, like they are. Like a monk.

So I spend a long time with it. For hours I stare at objects, such objects as I can find in the cell, and repeat aloud their ALT-9 meaning, desperately trying to drive out their English meanings. I stare at the sink and say the ALT-9 word for sink. I stare at the wall and say the ALT-9 word for wall. I jump and say the ALT-9 meaning for jump. And so forth.

It's hard – even as my English wanes, there are things I know how to say in English that I don't know how to say in ALT-9.* And the mind reaches for language in silence like a hand reaches for a lifesaver in the ocean. But it can be done; I believe it can be done. I've seen guys come out of solitary knowing fewer words than they knew going in, and they weren't even replacing the words they forgot. When I am tempted to think in English, I repeat aloud the ALT-9 word for “freedom,” drawing that freedom to myself as I do, the freedom of confinement chosen.

There's another possibility, of course. Maybe the court was right and people who think and talk in ALT-9 are just completely different people than people who talk and think in English, even if they happen to occupy the same bodies and brains. In that case, forgetting English might kill me.

Maybe. But maybe that's the point. I don't like it here.

Either way, though, I have to wonder who'll be speaking and thinking in English once I've forgotten it. Someone has to be if I'm off speaking and thinking in ALT-9, since the existence of an ALT-9 speaker implies the existence of an English speaker. I guess I could go into a coma, or my body will die, because the universe does not permit a divergence between English and ALT-9. The Word is an atom, and it shall not be split.

Or maybe when I've passed to ALT-9 another poor English speaker will be born behind me to serve the rest of my sentence. Sorry, pal.

* These English words are a last indulgence. I fear I may not be able to say them in ALT-9, and wish to say them in English while I still can still say them in something.

Fictions of Non-Fiction: An Overview of Scientific Discursive Genres in ‘Science Fiction’

Mariano Martín Rodríguez

‘Science fiction’ is, obviously, composed of two highly mathematized ‘hard’ sciences (such as Physics or Chemistry), are commonly associated with scientific literature, fiction is constituted by any text that generates a possible world where imaginary events take place or imaginary objects exist; it operates as a construct of an artistic nature not expected to be factually true. Fictional worlds are created through language, and often through pre-existing rhetorical macro-devices, or formal genres such as the novel or drama, which are prevalent vehicles for literary fiction today. Fiction can also be expressed, however, through non-novelistic, and even non-narrative devices. There are fictional works entirely written using diverse prescriptive discourses, from legal codes to directions, as well as texts written as mock advertising. In both cases, they may posit alternate or futuristic imaginary worlds, thus taking on the conventions of sf and/or speculative texts and fulfilling the above semantic criterion for fiction.

The main way in which fiction writing masquerades as non-fiction is related, however, to the first element of the sf linguistic formula: science. This is not the place to discuss what science is, or which sciences are, indeed, ‘scientific.’ However, both the human, or ‘soft’ sciences (such as Historiography, Ethnology or Philology), and the experimental and

and academic status in our society. More importantly for us here, their textual expression has been well-established from the 19th century onwards, and it is readily recognizable by any reader exposed to the discursive features used to communicate knowledge to the public. Although the manner in which findings, theories and facts are presented in books and journals devoted to science is not fully uniform, a purely expository kind of discourse is now prevalent in most disciplines, even though the argumentative discourse, as well as a greater degree of rhetorical variety and stylistic ornamentation, may also be important in the so-called human sciences. In all of them, however, the scientific text must be seen as devoid of any subjectivity, as well as of any literary self-referentiality, ideally being only a transparent linguistic vehicle for a description of pure factuality. Indeed, drawings, graphs and formulae abound in modern scientific texts, as well as the footnotes and bibliographical information more prevalent in traditional human sciences, in order to enhance the objective tone required, as well as to suggest the objective and extra-textual nature of the phenomena described. These textual devices underline that the reported facts do not result from any form of personal fancy and

invention, but are based on documentation and true evidence - this is to say, that they have a scientific basis and, therefore, that the text portrays and expresses 'science.' Even when the facts are false, the text which reports them does so in such a discursive way that the reader is invited to see them as 'factually' sound, as well as 'scientific.' Their textual discourse supposes their 'factuality,' or, in other terms, 'non-fictionality.' In short, when reading a novel, its fictionality is taken for granted, whereas when reading a scientific report, we assume its factuality.

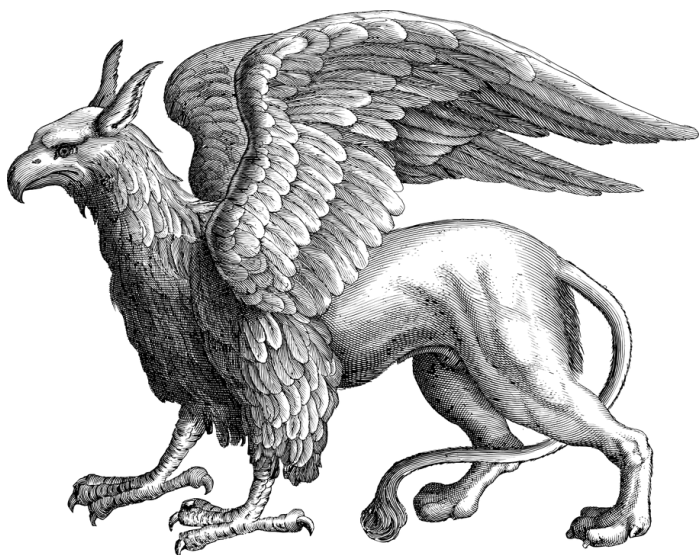
This reading effect caused by factuality, however, can be used for fictional purposes. We would have then a particular kind of 'fictional non-fiction' that could be named 'scientific fictional non-fiction.' This encompasses all works where a fantastical content is infused into a text that methodically and consistently presents, in its entirety, as a formally independent written work, the standard rhetorical features of scientific discourses usual in real-world scientific practice. This fantastic content can be of a science-fictional nature (it can include Suvinian *nova*), and a great number of fictional texts which use factual discourses actually feature contents that can safely be labelled 'sf.' The content is, however, of little relevance for a taxonomy of scientific fictional non-fiction. The main criterion to define the genre and its major subgenres is, actually, formal. In all of them, literariness is achieved mostly through the fictionalisation of their contents, while their language imitates the highly formalised, uniform, descriptive, seemingly objective, and un-literary tone commonly used in current natural, formal or social sciences. Each science, however, has its own jargon which in turn generates various discursive subgenres.

Fiction in the natural sciences has brought about a whole genre, the spoof paper, of which examples abound. Many of them are often intended as humorous hoaxes or practical jokes by actual scientists. Others have appeared, however, in literary venues, and they should be studied as literary fiction. Since both the natural and the formal sciences employ a highly formalized prose, fictional non-fiction of this kind leaves little room for rhetorical embellishment. Their literary interest is to be found elsewhere, in the altered views on science and society brought about by

their confrontation within the text. A strict adherence to the dry styles of Mathematics or Linguistics can highlight the potential inhumanity of scientific objectivity; for example, George Orwell's semiotically independent appendix on "The Principles of Newspeak" tacitly suppresses all suffering from the terrible events just narrated in *Nineteen Eighty-Four* (1949). Also in the natural sciences, the coldness of 'hard' scientific discourse can be adroitly imitated to undermine it, as it happens in the two papers collectively entitled "The Marvellous Properties of Thiotimoline" (1948-1952; collected in *Only a Trillion*, 1957) by Isaac Asimov. These not only demonstrate the linguistic and rhetorical skill of the author, but also allow for readings deconstructing the way in which truth presents itself as absolute, as well as instrumental, at least through the linguistic expression common in the natural sciences. Regarding 'softer' sciences, such as Biology, the descriptions of imaginary beings and of their habitats are usually devoid of the irony pervasive in the fictional use of 'hard' scientific discourse, often implying attempts at renovating, through the biological discourse as well as through the pure invention of the animals and plants described, the traditional genre of the bestiary, for example, in J. K. Rowling's textbook *Fantastic Beasts and Where to Find Them* (2001).

Perhaps because the high formalism of written expression in the natural and formal sciences imposes a rhetorical discipline that many writers are unwilling or unable to adopt, spoof scientific papers constitute only a small part of scientific fictional non-fiction, at least if compared to the high number of imitations of human/social sciences discourse. Among them, historiography has provided the discourse most extensively used in the formal macro-genre of fictional non-fiction, from the 19th century onwards. Imaginary history written in the historiographic style has three main varieties, according to the chosen time frame: past, present or future. If set in the past, the historiographic narrative may describe events that had occurred in an imaginary country or civilization, such as the ancient Eurasia described by Robert E. Howard in "The Hyborian Age" (1938). Alternate history initially employed a true historiographical form, in Louis Geoffroy's *Napoléon et la conquête du monde. 1812 à 1832. Histoire de la monarchie universelle* [*Napoléon and the*

Conquest of the World, 1812-1832: A Fictional History] (1836), before being replaced more recently by alternate history in the form of mostly novelistic ‘stories.’ What could be called ‘anticipated history’ is a narrative usually by a future historian which uses the verbal past tenses of past events to present readers with future events that we know to be imaginary. Among fictional historiographical works of anticipation, some are classics of scientific romance, such as Gabriel Tarde’s *Fragment d’histoire future* (1896), whose English translation appeared in 1905 as *Underground Man* with a preface by H. G. Wells; to this we may add Olaf Stapledon’s history of the successor species to humankind along many millennia, *Last and First Men* (1930), and Wells’ socio-political history of *The Shape of Things to Come* (1933). Anticipatory history, which is the kind of fictional historiography closer to sf proper, has been relatively popular among speculative writers for both intellectual and formal reasons. Imagining future history as if it were past has allowed them to directly show, with the persuasive power of the factual ‘true’ discourse, the evolution of human societies had any particular trend prevailed, from the ‘yellow peril’ in Jack London’s “The Unparalleled Invasion” (1910; collected in *The Strength of the Strong*, 1911) to technocracy in Michael Young’s *The Rise of the Meritocracy* (1958). Moreover, although its narrative is of a descriptive nature, historiography also tells a story, which can be expanded in time and detail until it reaches novelistic proportions. The same applies to mythopoeias such as Lord Dunsany’s *The Gods of Pegāna* (1905).



Both the discourses of narrative historiography and of mythography are, therefore, less alien to the usual patterns of the readers’ novelistic consumption than other subgenres of fictional non-fiction based on plain descriptive social sciences, such as Geography and its sibling discipline Ethnography. These are often combined in fictional works on the conditions and customs of imaginary peoples - in the present, on Earth or otherwise, or in the past, when the borrowed scientific discourse is that of Archaeology, such as Andrew Lang’s “The Great Gladstone Myth” (1886; collected in the same year in the volume *In the Wrong Paradise and Other Stories*). True geographic/ethnographic accounts have offered a rhetorical model for world-building in the descriptive mode such as the famous tongue-in-cheek study on reverse anthropology entitled “Body Ritual Among the Nacirema” (1956) by Horace Mitchell Miner, as well as Jorge Luis Borges’ description of the workings of social groups in “La secta de los treinta” [The Sect of the Thirty] (collected in *El libro de arena* [*The Book of Sand*], 1975). This latter ‘fiction’ could also be considered an example of fictional Philology, since it is presented as the translation of an ancient text with a short introductory note. Philology is, unsurprisingly, an academic discipline also quite popular among literary writers. As readers at least, many of them must be familiar with the presentation features of critical editions of classics, and some have imitated them in reviews and studies on imaginary works, such as “A prophetic account of a grand national epic poem, to be entitled *The Wellingtoniad*, and to be published A.D. 2824” (1824) by historian Thomas Babington Macaulay, and the “History of the *Necronomicon*” (1938) by H.P. Lovecraft. The latter has inspired a number of alternative, but equally philologically-oriented histories of that mythic grimoire.

A superbly representative example of science fictional non-fiction is Ursula K. Le Guin's "The Author of the Acacia Seeds' and Other Extracts from the *Journal of the Association of Therolinguistics*" (1974; collected in *The Compass Rose*, 1982). This work conflates the concepts and rhetoric of the three main groups of sciences (formal, natural and social) into the framework of a model scientific paper, endowed with all the intellectual and rhetorical features that make this genre culturally and literarily significant. Divided in three parts, the first one offers a version of a text written by an ant, the second explores languages written by groups in moving media, and the third speculates about the possibilities of plant languages and literatures. Le Guin's fictional science 'Therolinguistics' combines linguistics, literary criticism and biology in order to invite readers to consider the almost infinite possibilities of both nature and culture beyond any limiting human-centred perspective. As scientific fictional non-fiction usually does, this fully academic text shows how fictionalising science can be used to expand both our minds and our literary sensibilities, thus increasing our awareness of the literary potential of any kind of written discourse, including the scientific one through the fusion of scientific discourse and fictional contents - this is to say, science and fiction: 'science fiction.'

~

Natural Evolution

Sarah K. Krenicki

10.28.2019

Dear Editors,

I have taken great pains to procure the attached CDC documentation as proof that the deadly listeria outbreak in the fall of 2019 was an elaborate cover up, and that the public is currently still at great risk. I believe the documents enclosed, most taken from a highly classified file documenting the Connecticut Mycelium Mutation, speak for themselves. I understand that you may be skeptical of what I have here, but I assure you I can provide proof of identity and additional factual verification upon request; however, I will only do so with the agreement that my identity will be kept safe.

For my own peace of mind, I have not provided my contact information. I will contact you.

#

**Internal CDC communication log, dated
10/8/2019 11:18:52. Date of last update: 10/9/2019
12:09:18**

We received the following from the head of pathology at [redacted] hospital in [redacted], Connecticut on October 8th 2019 at 11:18 PM, EST:

Patient, 42 year old Caucasian female, arrived in ER on 10/8 at approx. 12:52 pm with a series of raised fleshy growths along her right forearm. Upon closer inspection, the growths led all the way up and around the biceps and culminated in a cluster which was concentrated in the patient's armpit.

Initial hypothesis was severe contact dermatitis; however, it soon became apparent that the growths were indeed foreign and not raised welts or boils. A biopsy was requested and the results indicated that the growths were fungal in nature. Additional tests are being done to determine the type and origin of this parasite. No one on our staff has seen anything of this sort before; please advise.

CDC response, sent 11:38 PM, EST:

Quarantine the patient immediately and take all necessary precautions to avoid possible transmission. Send the results of the tests as they come, and prepare a biopsy to send to CDC.

Follow-up from [redacted] hospital, received 12:02 AM, EST:

Patient is secure and every known precaution is in place. Blood tests have returned as highly abnormal: patient's blood is completely saturated with some sort of fungal material. The fungi in question is as of yet unknown, but is most similar in genetic makeup to the common shiitake.

Patient has confirmed she has ingested shiitake within the last several days, but this does not look like any allergic reaction we are familiar with. It appears to be more of a colonization.

Patient's entire arm and collarbone are now covered in the fruiting body of the fungi, and it is continuing to spread.

CDC: 12:09 AM, EST.

We are dispatching a team. Please stand by.

#

The following has been recovered from the case notes of Dr. [redacted] [redacted], head pathologist at [redacted]:

October 9th 2019, 6:15 AM EST:

The patient's upper body is now completely covered in what can only be described as mushrooms. Despite their close genetic relation to the shiitake, they do not look like any shiitake I've seen; they are the same color and texture as the patient's flesh. These mushrooms are now expanding and lifting upward and outward from the patient's body, exposing stems. Attempts to cut them for analysis has been easier than expected, as the mature fruits tend to drop off.

The lower body of the patient is covered in a fine labyrinth of mycelium, and we expect her legs to begin fruiting soon. We are administering high doses of intravenous antifungal medication; however, it seems that her entire body has already been colonized with the parasite. Her organs are beginning to shut down as the mycelium impede their function.

8:51 AM EST:

The antifungals seem to be delaying or halting the progression of the mycelium. The legs have not yet fruited, and we may have successfully prevented them in doing so. We are trying to regulate the patient's body temperature and keep her skin dry, to prevent further colonization.

9:07 AM EST.

A second patient, 31, Caucasian male, was admitted to the hospital at 9:02:14 with symptoms similar to that of the first patient, above, who will now be identified as Patient X. This new patient, who will be identified as Patient Y, has the same fungal growths, though these are lining the neck and the inside of the throat, creating the appearance of overly large lymph nodes. We are collecting samples to compare with that of Patient X, as well as sending a team to Patient Y's home in order to collect the leftover mushrooms in his refrigerator for analysis.

9:52 AM: EST

Third patient, Patient Z, 64 year old Hispanic male, growths located in the spaces between each toe. We have tracked both his and Patient Y's food consumption habits to "The Mush Room, Inc.," specifically their prepackaged fresh shiitakes.

11:12 AM: EST

Lot number 1794 of The Mush Room, Inc.'s product is the common thread linking each patient.

11:21 AM, EST

Patient X is in critical condition. Her organs are shutting down and it appears the initially affected arm is beginning to break down. Perhaps focusing on preventing fruition was a red herring here. Focus is shifting to keeping Patient Y and Z's vital organs stable.

12:01 PM EST:

24 hours after first admitted to the facility, we have lost Patient X.

#

Official transcript of interview with Edson MacGunn, CDC investigator

MacGunn: We arrived at The Mush Room's packaging plant at around 11:52 that morning, October ninth. We spoke with the plant foreman, asked if anything weird happened recently, specifically with Lot 1794. We were told we should check with the farm...

Tape fades in and out

MacGunn: ...We took back some samples and swabbed their equipment, and made the order to sterilize everything. They put out the recall order for Lot 1794, and also threw in the lots immediately before and after as well, just to be cautious. No farm wants to get in trouble with the CDC, and it's not like this is a simple case of E. Coli or whatever. Like, we've got fungus *eating people*...

Tape becomes muffled

MacGunn: ..So we got to the farm around 12:30, I didn't note the exact time. This one guy shows me a few logs that... didn't look so hot. They seemed to be covered in dark stains, so we took some samples. The logs were incinerated, as were any logs within a six foot radius, to prevent contamination.

Interviewer: And the stains?

MacGunn: The substance tested positive as human blood.

Interviewer: Did you locate the origin of contamination?

MacGunn: Yes. After some digging, we were able to uncover the details of the accident with the driller.

Interviewer: The driller?

MacGunn: The machine that drills holes into the logs so they can be filled with the spawn. It drills a few rows of holes down each side, and it seems someone got a bit too close, slipped, and, um, had multiple holes bored into his body, like this.

The sound of paper being slid across the table.

Interviewer: Damn...

MacGunn: Yeah. His blood- and a lot of it, mind you, got onto the next few logs in the production line, which were swept up onto the conveyor belt, filled, plugged, and sent down to the fruiting chamber.

Interviewer: Like nothing had ever happened.

MacGunn: Like nothing had ever happened.

#

MEMO, stamped “internal CDC use only: restricted access,” Date: 10/17/19

General Update on the Status of Case #02734:

The bodies of patients X, Y and Z have been properly disposed of. The hospital has been sterilized accordingly and released from lockdown as of 9:00am this morning, local time.

All remaining individuals exposed to the contaminants in Lot 1794 are currently being held under quarantine at CDC headquarters and are receiving heavy intravenous doses of antifungal and antibiotic medication. Of the twenty-six people taken in for observation, fifteen have evidence of the mutated fungi in their system.

As of today, October 17th, 2019, eight of these fifteen people continue to show no symptoms and are expected to recover fully.

Of the remaining seven individuals, four have exhibited mycelium growth along segments of their skin. Their prognosis remains unknown.

Those three individuals who have already progressed to sprouting the fruiting bodies have a less than 1% chance of survival. We are confident that once the colonization hits this level, the mortality rate is close to 100%.

The latest toxicology reports indicate that the victim of the “driller” accident at The Mushroom, Inc. had been on a mixture of four different prescription and over the counter medications as well as one illegal controlled substance. We are running tests and replicas of the various scenarios in which these chemicals could have altered the shiitake spawn. [Those interested in model replication of this data should contact the pathology lab for details. Proper clearance is required for access to raw data files.]

#

MEMO, stamped "internal CDC use only: restricted access," Date: 10/24/19

General Update on the Status of Case #02734:

Three of the four individuals exhibiting outward mycelium activity with no fruiting bodies are now testing at significantly lower levels of contamination and continue to respond well to treatment.

Patient 4 was lost at 12:56am.

The pathology lab assures us they are close to replicating the chemical and atmospheric conditions which gave rise to this genetic anomaly.

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Scanned Image: newspaper clipping dated 10.27.19

Listeria in Littlewood?

LITTLEWOOD — At least two people were hospitalized this weekend in response to what hospital officials are calling an isolated case of food contamination. The origin of the contamination and the names of the individuals affected have not been released, but health officials stress this is an isolated incident and the public is not at risk.

Scanned Image: Discarded Grocery receipt:

[10/25/19] REG:6 Your Cashier Today is: Hannah

Thank you for shopping at Shop-A-Lot! ☺

Happy Herd Milk, 1 Gal:	\$4.50
Italiano Linguine Pasta - 2 @99¢/box:.....	\$1.98
Feather Farm Eggs, 1 Doz	\$2.50
Shittake ½ lb,(Lot #1794 T.M.R):.....	\$9.50
50% DISCOUNT (Out of Date/Disc.):	
.....	\$-4.75

TOTAL:

.....
\$13.73

[Bottom of image, hand written: Beth's Pot Luck - Saturday]



Angel Snow

Elena Sichrovsky

The first angel on the tree was a gift, albeit an accidental one. Part of the choir ascending after the birth of God's Son, she was but one of many when her wings happened to be struck by the crown of lightning that descended to rapture the Heavenly hosts. Falling between the eaves of sky and down to the earth, she landed on the tip of an evergreen and her back was stabbed through by the point of the branch. From her splintered spine blood trickled down, white like snow, every droplet frozen in the unforgiving winter and whispering away in a flutter, delicate flecks dusting the pine needles and spreading to the uneven ground below.

The last vestige of her dying aurora illuminated the tree, haloing it in a glow that drew the worship of men, women, and children everywhere. They gathered round that day to bow before the pierced corpse and offer their worship to a God who had imparted the gift of one of His own, no doubt to bestow blessing on their coming year.

From that day forth, to honor the reverence of His followers, God deigned for such a sacrifice to be sent down to the people of that hallowed ground every Christmas. But so that Heaven's own would not be taken for granted, He passed on instructions to the priest of the village, rules that must be adhered to in order to earn the yearly angel.

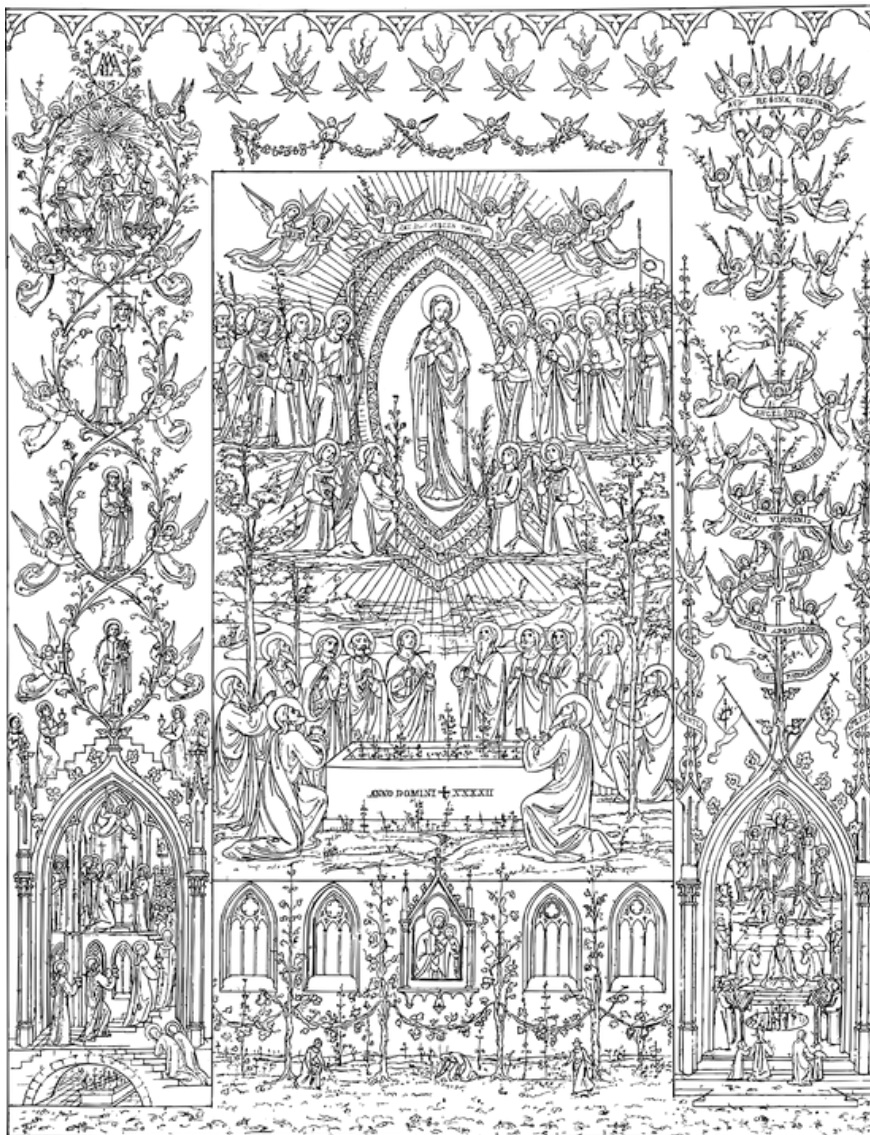
Each year, in the last month, twelve angels will be sent down, children of Heaven who hide among the forest for the children of men to hunt them down. Twelve descend, but only eleven will return to their Father. One child is destined to be caught and impaled upon the tree. It is an annual game of disguise and hunt, and only the human skilled enough to detect the unearthly beings will be worthy of obtaining the celestial prize.

The blade used to kill the child of Heaven must be purified, made of gold refined and dipped in sacred water to slice through the unearthly skin of the child's throat. The angel must be embalmed in robes of linen, diamonds crystalizing her godly light. Her eyelids must not be closed, for her sightless gaze should remain open to face the glory of Christmas Eve. On that holiest of days, when she is hoisted on the shoulders of the strong and carried to her final resting place, all will behold her and the purity therein.

She will be lifted up to the iron spike which has been fixed atop the tree. Over the years the brittle black metal has become crusted white from centuries of blood spilled, of angel's bone and marrow split by the sharp needle. When her body is speared to the crown of the evergreen she will stand tall, her head bound by gold ribbon to gaze up at the light and framed by her lifeless wings, their frozen feathers flapping in the winter cold.

And all will gather by the light of candle flame to watch her bleed out. Her blood, righteous from God's touch and unspoiled in the innocence of her youth, will flow forth, as snowflakes that waft through the branches, dusting the wide-eyed children dancing around the tree in angel snow.

~





The logo for SciPhi Journal features the word "SciPhi" in a bold, stylized font. The letters "Sci" are black, while "Phi" is white. A vertical line divides the logo, with a grey gradient bar on the right side. A small white star is positioned above the "i". The text "JOURNAL" is centered below the main logo in a clean, sans-serif font.

SciPhi
JOURNAL